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# X9 1000 and X9 1100 Combines (North American Edition)

(Serial No. 815001 - )



**JOHN DEERE**

## OPERATOR'S MANUAL

### X9 1000 and X9 1100 Combines

OMHXE162878 ISSUE L0 (ENGLISH)

#### CALIFORNIA

##### Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:



## WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

**John Deere Harvester Works**

North American Edition  
PRINTED IN U.S.A.

# Introduction

## Foreword

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage. This manual and safety signs on your machine may also be available in other languages. (See your John Deere dealer to order.)

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I. N.) in the Specification or Identification Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

THE TIRE MANUFACTURER'S warranty supplied with your machine may not apply outside the U.S.

If you are not the original owner of this machine, it is in your interest to contact your local John Deere dealer to inform them of this unit's serial number. This will help John Deere notify you of any issues or product improvements.

DX,IFC1-19-03APR09

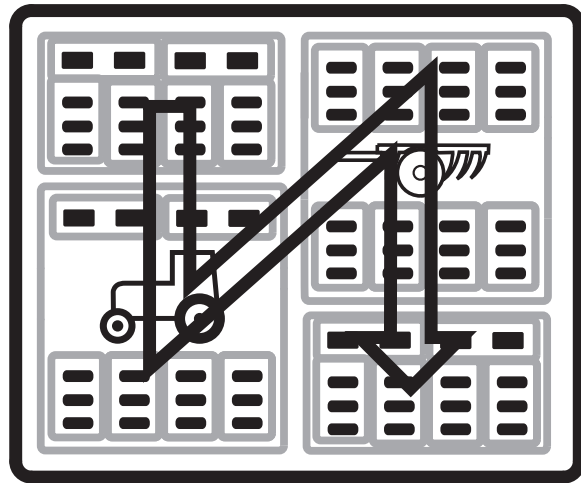
## A Message to Our Customers

We appreciate the confidence placed in us by the purchase of this machine. To ensure that the machine performs at the highest level, countless hours were spent designing and testing, before this machine was

produced. To achieve the maximum performance, it is imperative that this machine is operated in accordance with the procedures outlined in this manual.

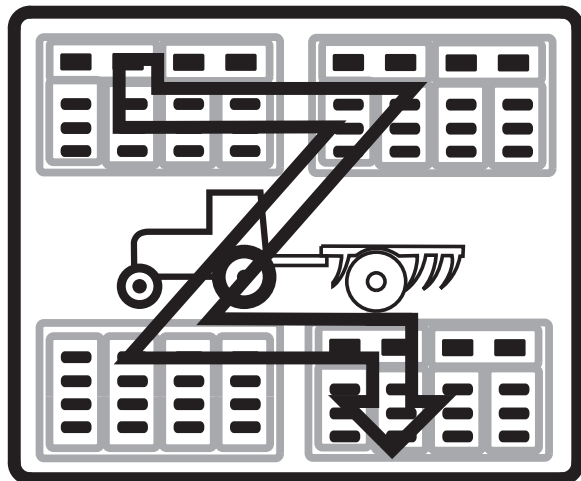
Information in this manual is divided into sections. The section names are identified in the table of contents and at the top of each page. Each section has a unique number and page count. Specific information within each section is organized into topics identified with bold headings.

The topic headings are listed in the table of contents with the section number and page number where the topic begins. Topics and information related to each topic are also referenced in the index along with the section and page number.



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The topic content flows down the left-hand side, then over and down the right-hand side, and repeats on the next page. Images precede the related text in the flow.



A100768—UN—07JUN18

The flow can divide both before and after the images and tables that span the width of a page.

Review this manual often to learn where to look for information.

Thanks again for purchasing this machine.

OUC6075,00049D4-19-08JUN18

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## Emissions Performance and Tampering

### Operation and Maintenance

The engine, including the emissions control system, shall be operated, used, and maintained in accordance with the instructions provided in this manual to maintain the emissions performance of the engine within the

requirements applicable to the engine's category/certification.

### Tampering

No deliberate tampering with or misuse of the engine emissions control system shall take place; in particular with regard to deactivating or not maintaining an exhaust gas recirculation (EGR) or a DEF dosing system. Tampering with an engine's emissions control system will void the European Union (EU) type approval and applicable emissions-related warranties.

DX,EMISSIONS,PERFORM-19-12JAN18

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## Identification View



H132155—UN—30OCT20  
MH69740,0000839-19-30OCT20

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*Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.*



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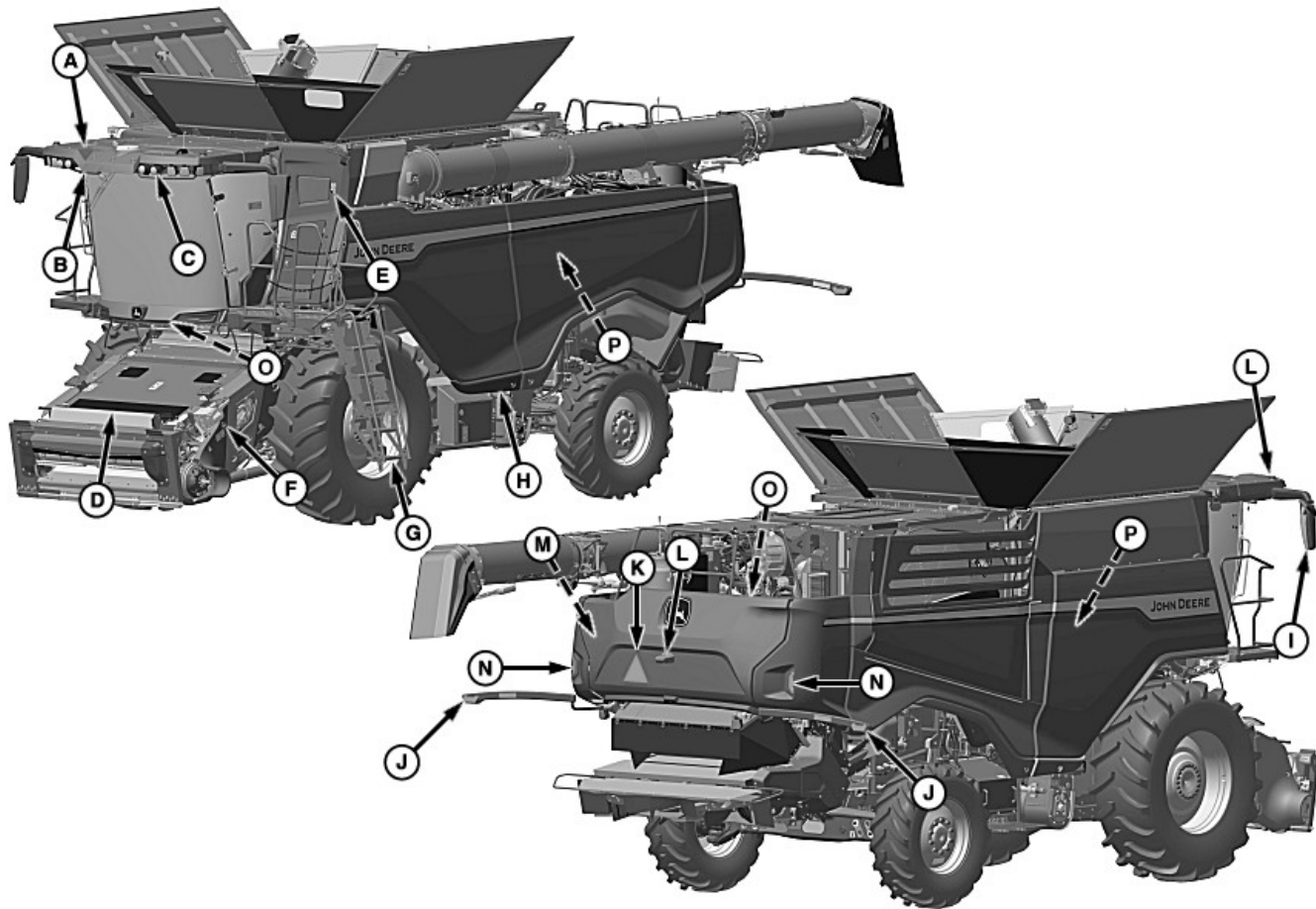
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# Safety Features

## Machine Safety Features



Front View/Rear View Safety Features

H128593—UN—27OCT20

**A—Cab Safety Features:** Operator's Presence System, Electronic Engine Start Lockout, Seat Belts, Horn, Emergency Exit Window, Park Brake, Turn Signals

**B—Handholds**

**C—Headlights**

**D—Slip Resistant Skid Mats**

**E—Safety Signs**

**F—Hydraulic Safety Stop Switch (feeder house)**

**G—Slip Resistant Steps and Platform with Handrails**

**H—Shields**

**I—Rearview Mirrors**

**J—Warning Lights and Reflective Tape**

**K—Slow Moving Vehicle Emblem**

**L—Beacon Lights**

**M—Backup Alarm**

**N—Tail Lights**

**O—Slip Resistant Service Platform with Handrails**

**P—Rotational Alarm Safety Features:** Discharge Light, Stubble Lights, Gullwing Service Lights

In addition to the safety features shown here, other components and systems, safety signs and safety lights on the machine, and safety messages and instructions in the Operator's Manual contribute to the safe operation of this machine when combined with the care and concern of a capable operator.

MH69740,0000870-19-24NOV20

# Safety

## Recognize Safety Information



T81389—UN—28JUN13

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

DX,ALERT-19-29SEP98

## Understand Signal Words



**▲ WARNING**

**▲ CAUTION**

TS187—19—30SEP88

**DANGER;** The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING;** The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION;** The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-05OCT16

## Follow Safety Instructions



TS201—UN—15APR13

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ-19-16JUN09

## French and Spanish Safety Signs and Operator's Manual

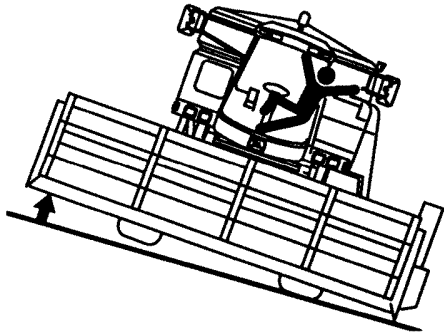


TS201—UN—15APR13

French and Spanish versions of the operator's manual and safety signs are available for this machine through authorized John Deere dealers. See your John Deere dealer.

OOU6075,0004A7E-19-12DEC18

## Driving the Machine



ZX002461

ZX002461—UN—16JUN95

Operate machine only when all guards are correctly installed. Operate machine with door and window (if equipped) closed.

Before moving away, always check immediate vicinity of the machine (example for children). Ensure adequate visibility. Use the horn as a warning immediately before moving away.

Always adapt ground speed to the road or field conditions. Avoid making sharp turns when driving up or down slopes or when driving across a slope. Be especially careful when turning on slopes with a full grain tank.

Follow instructions in header Operator's Manual when attaching or detaching the header.

When making turns, always take into consideration the width of the attachment and the fact that the rear end of the machine swings out. Attachments and ground conditions affect the driving characteristics of the combine.

Reduce ground speed when driving on slopes or over uneven ground and before making sharp turns. Before descending a steep hill, shift to a lower gear.

Avoid holes, ditches, and obstructions which may cause the combine to tip, particularly on hillsides.

OUO6075,0004F12-19-17SEP20

- Never operate machine when distracted, fatigued, or impaired. Proper machine operation requires the operator's full attention and awareness.

DX\_ABILITY-19-07DEC18

## Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.

OUO6075,0000032-19-22JAN01

## Check Machine Safety

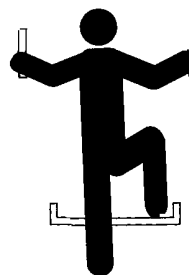
Always check the road and general operating safety of the machine before using.

FX\_READY-19-28FEB91

## Use Handholds and Steps



T6981AN—UN—15JUN89



T133468—UN—15APR13

## Operator Ability

- Machine owners must make sure that operators are responsible, trained, have read the operating instructions and warnings, and know how to operate the machine properly and safely.
- Age, physical ability, and mental capacity can be factors in machine-related injuries. Operators must be mentally and physically capable of accessing the operator station and/or controls, and operating the machine properly and safely.
- Never allow a child or an untrained person to operate the machine. Instruct all operators not to give children a ride on the machine or an attachment.

Falling is a major cause of personal injury.

Prevent falls by facing the machine when getting on and off.

When you get on and off the machine, maintain a 3-point contact with the steps, handholds, and handrails and face the machine. Unfold and use the handrail whenever you climb on top of the engine deck.

Use extra care when mud, snow, or moisture present slippery conditions. Keep the steps clean and free of grease or oil.

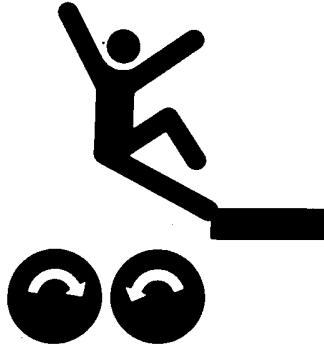
Never jump when exiting the machine. Never mount or dismount a moving machine.

OUC6075,0004E97-19-17JUN20

Observe the maximum permissible axle loads and total weights.

HX,AG,SF6782-19-05FEB99

## Keep Riders and Children Off Machine



TS253—UN—23AUG88

Only allow the operator on the machine. Keep riders off the machine except for periods of training or short periods of observation.

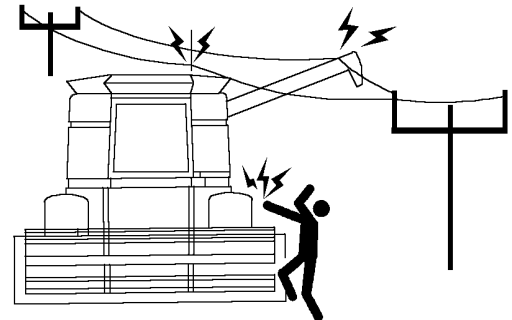
Riders are subject to injury such as being thrown off the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.

Children should never be allowed on the machine or in the combine cab when the engine is running.

The instructional seat should only be used for instruction or short periods of machine observation, and not for the accommodation of children.

HX,AG,SF6904-19-22JUL99

## Avoid Electrical Power Lines



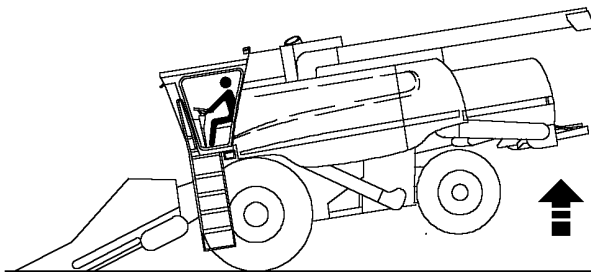
H52022—UN—14APR99

Put the grain tank unloading auger in transport position and lower the grain tank access handrail before driving on public roads.

Secure radio aerial in its transport position before driving on public roads, it may come into contact with low-hanging electrical cables. This would result in the operator suffering a severe electrical shock.

HX,STSSA,D-19-22JUL99

## Ballasting for Safe Ground Contact

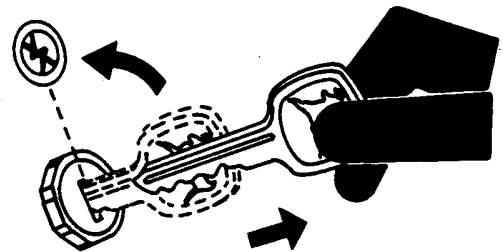


H51907—UN—10FEB99

Operating, steering and braking performance of combine can be considerably affected by heavy front end attachments which alter the center of gravity of the combine.

To maintain the necessary ground contact, ballast the combine at the rear end as necessary.

## Parking and Leaving the Machine



TS230—UN—24MAY89

Lower the combine's front-end equipment to the ground.

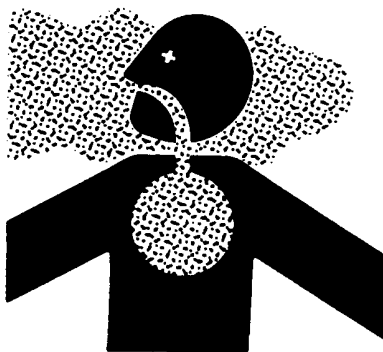
Before leaving the machine, disengage the header and separator. Move the multi-function lever to the neutral position and shut OFF the machine. Apply the park brake, remove key, and lock the operator's cab.

Never leave the machine unattended if the engine is running.

Never leave the operator's cab when driving.

OUC6075,0004E18-19-25JUN20

## Work In Ventilated Area



TS220—UN—15APR13

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

DX,AIR-19-17FEB99

## Handle Fuel Safely—Avoid Fires



TS202—UN—23AUG88

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

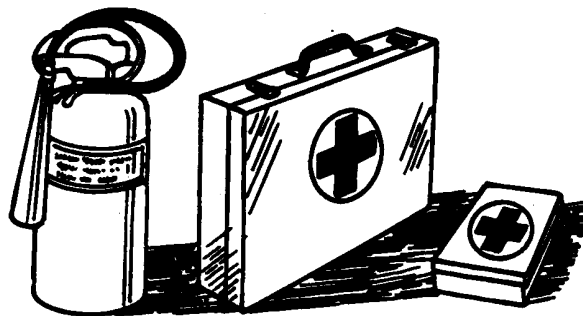
Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.

Do not store fuel container where there is an open

flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1-19-12OCT11

## Prepare for Emergencies



TS291—UN—15APR13

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

DX,FIRE2-19-03MAR93

## Handle Starting Fluid Safely



TS1356—UN—18MAR92

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.

Do not use starting fluid on an engine equipped with glow plugs or an air intake heater.

DX,FIRE3-19-14MAR14

## In Case of Fire



TS227—UN—15APR13



### CAUTION: Avoid personal injury.

Stop machine immediately at the first sign of fire. Fire may be identified by the smell of smoke or sight of flames. Because fire grows and spreads rapidly, get off the machine immediately and move safely away from the fire. Do not return to the machine! The number one priority is safety.

Call the fire department. A portable fire extinguisher can put out a small fire or contain it until the fire department arrives; but portable extinguishers have limitations. Always put the safety of the operator and bystanders first. If attempting to extinguish a fire, keep your back to the wind with an unobstructed escape path so you can move away quickly if the fire cannot be extinguished.

Read the fire extinguisher instructions and become familiar with their location, parts, and operation before a fire starts. Local fire departments or fire equipment distributors may offer fire extinguisher training and recommendations.

If your extinguisher does not have instructions, follow these general guidelines:

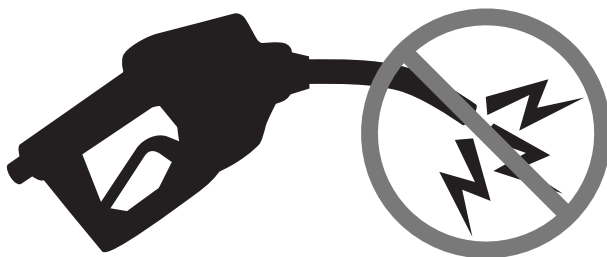
1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

DX,FIRE4-19-22AUG13

## Avoid Static Electricity Risk When Refueling



RG22142—UN—17MAR14



RG21992—UN—21AUG13

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

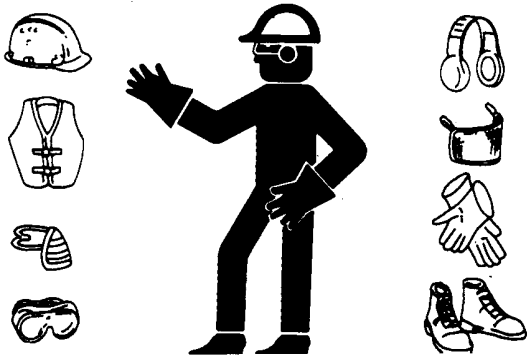
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

DX,FUEL,STATIC,ELEC-19-12JUL13

## Wear Protective Clothing



TS206—UN—15APR13

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

DX,WEAR2-19-03MAR93

## Keep Hands Away From Knives



TS254—UN—23AUG88

Never attempt to clear obstructions in front of or on header unless separator is disengaged, parking brake is set, engine is shut off and key is removed.

Everyone must be clear of machine before starting engine.

OOU6075,00009E6-19-28SEP10

## Stay Clear of Harvesting Units



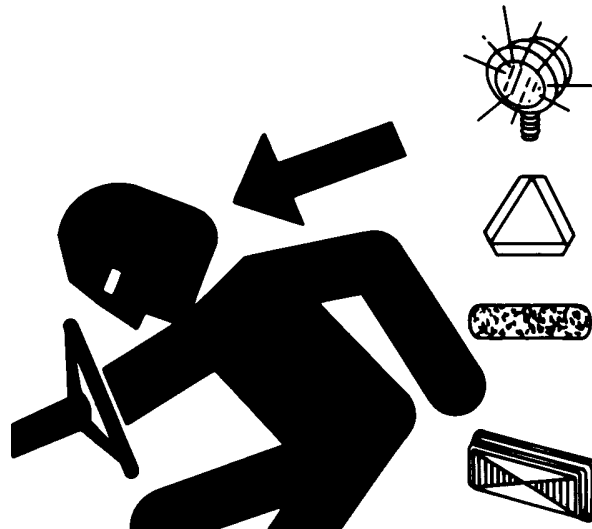
ES 118 704

ES118704—UN—21MAR95

Cutterbar, auger, reel and feed rolls cannot be completely shielded due to their function. Stay clear of these moving elements during operation. Always disengage main clutch, shut off engine, set parking brake and remove key before servicing or unclogging machine.

OOU6075,00009E5-19-28SEP10

## Use Safety Lights and Devices



TS951—UN—12APR90

Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns and use turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible, clean and in good working order. Replace or repair lighting and marking that has been damaged or lost.

HX,STSSA,O-19-22JUL99



## Use Seat Belts



TS1730—UN—24MAY13

Use the seat belt whenever you operate the machine or ride as an observer.

OUO6075,0004E96-19-17JUN20

## Instructional Seat



TS1730—UN—24MAY13

The instructional seat, if so equipped, has been provided only for training operators or diagnosing machine problems.

DX,SEAT,NA-19-22AUG13

## Heated and Ventilated Operator's Seat

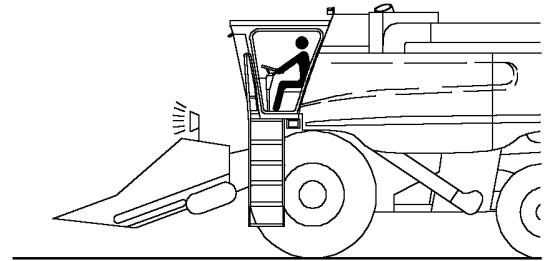


H124189—UN—11MAY18

An overheated seat heater can cause a burn injury or damage to the seat. To reduce the risk of burns, use caution when using the seat heater for extended periods of time, especially if the operator cannot feel temperature change or pain to the skin. Do not place objects on the seat, such as a blanket, cushion, cover, or similar item, which can cause the seat heater to overheat.

DX,SEATHEATER-19-20NOV18

## Transport Combine With Header Safely



H51909—UN—07MAY99

Whenever possible avoid transporting on public roadways with the header attached.

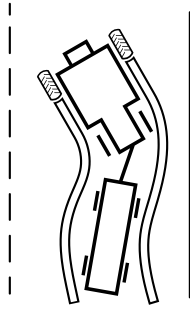
If the combine must be transported with the header attached, make sure that the flashing warning lights on the header are operating and the reflective material is clean and visible.

The use of a spotter or pilot vehicle is recommended on busy, narrow or hilly roads and when crossing bridges.

Drive at a speed that is safe for conditions.

OUO6075,0000034-19-22JAN01

## Tow Loads Safely



H128674—UN—31JAN20

32 km/h (20 mph) Maximum Transport Speed while Towing

Stopping distance increases with speed and weight of towed loads and on slopes. Towed loads that are too heavy for the combine or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

Do not exceed maximum towing capacity of 8000 kg (17 637 lb).

Do not transport at speed exceeding 32 km/h (20 mph) while towing.

Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and on inclines.

OOU6075,0004D81-19-20MAY20

## Prevent Machine Runaway or Unexpected Movement



H58737—UN—08JUL99

Avoid injury or death from unexpected movement of machine or components.

Do not start engine by shorting across starter or solenoid terminals. Machine or components may move if the normal circuitry is bypassed.

AG,OOU1035,792-19-08JUL99

## Practice Safe Maintenance



TS218—UN—23AUG88

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing away from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.

Falling while cleaning or working at height can cause serious injury. Use a ladder or platform to easily reach each location. Use sturdy and secure footholds and handholds.

DX,SERV-19-28FEB17

## Welding Near Electronic Control Units



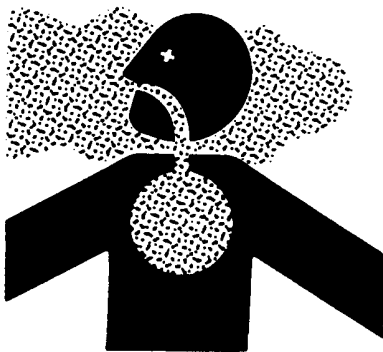
TS953—UN—15MAY90

**IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.**

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.
6. After welding, reverse Steps 1—5.

DX,VW,ECU02-19-14AUG09

## Remove Paint Before Welding or Heating



TS220—UN—15APR13

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.

- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT-19-24JUL02

## Avoid Heating Near Pressurized Fluid Lines



TS953—UN—15MAY90

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.

DX,TORCH-19-10DEC04

## Avoid Contact With Moving Parts



TS256—UN—23AUG88

Keep hands, feet and clothing away from power driven

parts. Never clean, lubricate or adjust machine when it is running.

H01,9000SA,E-19-15JUN90

making adjustments, connections, or performing any type of service on engine or machine driven equipment.

DX,ROTATING-19-18AUG09

## Cleaning Grain Tank and Removal of Blockages Safely



TS256—UN—23AUG88

Avoid serious injury or death from entanglement in the grain tank cross augers. For functional purposes the cross augers cannot be completely covered. Do not enter the grain tank when the engine is running. Before entering the tank to clean out residual grain, always shut off the engine, set parking brake and remove the key

If grain bridges and fails to flow into the cross augers, shut off the engine, remove the key and from a position on the engine compartment door use a rod, broom or shovel to break the bridge and restore grain flow.

OOU6043,00015E2-19-24MAY04

## Stay Clear of Rotating Drivelines



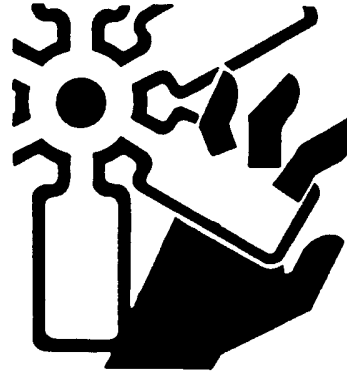
TS1644—UN—22AUG95

Entanglement in rotating driveline can cause serious injury or death.

Keep all shields in place at all times. Make sure rotating shields turn freely.

Wear close-fitting clothing. Stop the engine and be sure that all rotating parts and drivelines are stopped before

## Install All Shields and Guards



TS677—UN—21SEP89

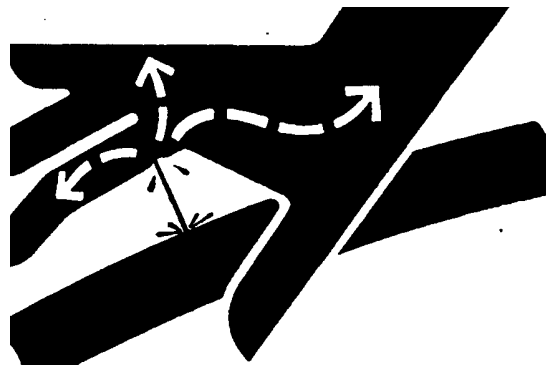
Rotating fans, belts, pulleys, and drives can cause serious injury.

Keep all shields and guards in place at all times during operation.

Wear close-fitting clothes. Stop the engine and be sure fans, belts, pulleys, and drives are stopped before making adjustments, connections, or cleaning near fans and their drive components.

OOU6075,0000C23-19-03MAY11

## Avoid High-Pressure Fluids



X9811—UN—23AUG88

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before

disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

DX,FLUID-19-12OCT11

hydraulic, and air brake systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the pressurized system before removing accumulator.

Relieve pressure from the hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.

DX,WW,ACCLA2-19-22AUG03

## Do Not Open High-Pressure Fuel System



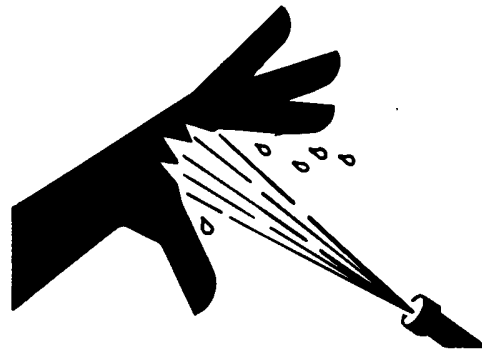
TS1343—UN—18MAR92

High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt repair of fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with High Pressure Common Rail (HPCR) fuel system.

Only technicians familiar with this type of system can perform repairs. (See your John Deere dealer.)

DX,WW,HPCR1-19-07JAN03

## Protect Against High Pressure Spray



TS1343—UN—18MAR92

Spray from high pressure nozzles can penetrate the skin and cause serious injury. Keep spray from contacting hands or body.

If an accident occurs, see a doctor immediately. Any high pressure spray injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

DX,SPRAY-19-16APR92

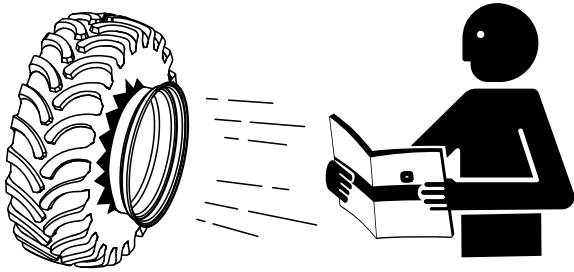
## Service Accumulator Systems Safely



TS281—UN—15APR13

Escaping fluid or gas from systems with pressurized accumulators that are used in air conditioning,

## Follow Tire Recommendations



H111235—UN—13MAY14

Keep your machine in proper working order.

Use only prescribed tire sizes with correct ratings and inflate to the pressure specified in this manual.

Use of other than prescribed tires may decrease stability, affect steering, result in premature tire failure, or cause other durability or safety issues.

DX,TIRE,INFO-19-19MAY14

## Service Tires Safely



RXA0103438—UN—11JUN09

Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

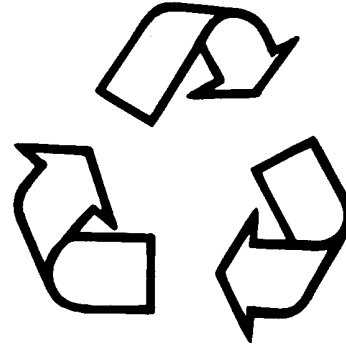
Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.

Wheels and tires are heavy. When handling wheels and

tires use a safe lifting device or get an assistant to help lift, install, or remove.

DX,WW,RIMS-19-28FEB17

## Decommissioning — Proper Recycling and Disposal of Fluids and Components



TS1133—UN—15APR13

Safety and environmental stewardship measures must be taken into account when decommissioning a machine and/or component. These measures include the following:

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air

conditioning refrigerants which could damage the atmosphere if allowed to escape.

- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.

DX,DRAIN-19-01JUN15

## Service Cooling System Safely



TS281—UN—15APR13

Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut OFF engine, set park brake, and remove key.

NEVER add coolant when engine is overheated. Wait for it to cool.

NEVER remove surge tank cap when coolant or engine is hot. Wait until engine coolant is cool to remove cap.

SLOWLY loosen cap to relieve pressure before removing completely.

Add coolant only when engine is shut off.

OUC6075,0004E98-19-26JUN20

## Remove Accumulated Crop Debris



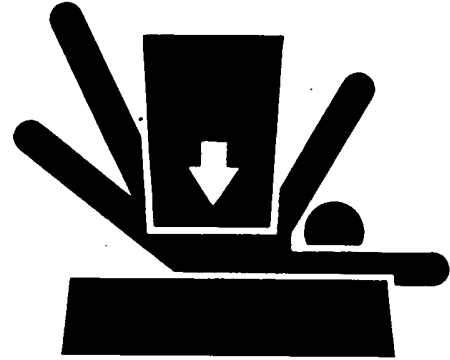
TS227—UN—15APR13

The build up of chaff and crop debris in the engine

compartment, on the engine, and near moving parts is a fire hazard. Check and clean these areas frequently. Before performing any inspection or service, shut off the engine, set the parking brake and remove the key.

HX,9010SA,B-19-23AUG97

## Support Machine Properly



TS229—UN—23AUG88

Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.

DX,LOWER-19-24FEB00

## Store Attachments Safely



TS219—UN—23AUG88

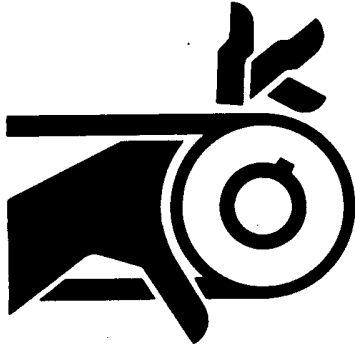
Stored attachments such as dual wheels, cage wheels, and loaders can fall and cause serious injury or death.

Securely store attachments and implements to prevent

falling. Keep playing children and bystanders away from storage area.

DX,STORE-19-03MAR93

## Service Drive Belts Safely



TS285—UN—23AUG88

When servicing drive belts always observe these precautions:

- Avoid serious injury from hand or arm entanglement. Never attempt to clean, check or adjust belts while the machine is running. Always shut off the engine, set the parking brake and remove the key.
- Do not attempt to clean belts with flammable cleaning solvents.

OUO6075,00026A4-19-06FEB03

## Handle Electronic Components and Brackets Safely



TS249—UN—23AUG88

Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

If installing or servicing a RTK base station on a tower or other tall structure, use a certified climber.

If installing or servicing a global positioning receiver

must used on an implement, use proper lifting techniques and wear proper protective equipment. The mast is heavy and can be awkward to handle. Two people are required when mounting locations are not accessible from the ground or from a service platform.

DX,WW,RECEIVER-19-24AUG10

## Avoid Backover Accidents



PC10857XW—UN—15APR13

Before moving machine, be sure that all persons are clear of machine path. Turn around and look directly for best visibility. Use a signal person when backing if view is obstructed or when in close quarters.

Do not rely on a camera to determine if personnel or obstacles are behind the machine. The system can be limited by many factors including maintenance practices, environmental conditions, and operating range.

DX,AVOID,BACKOVER,ACCIDENTS-19-30AUG10

## Backup Alarm



H127818—UN—05MAR20

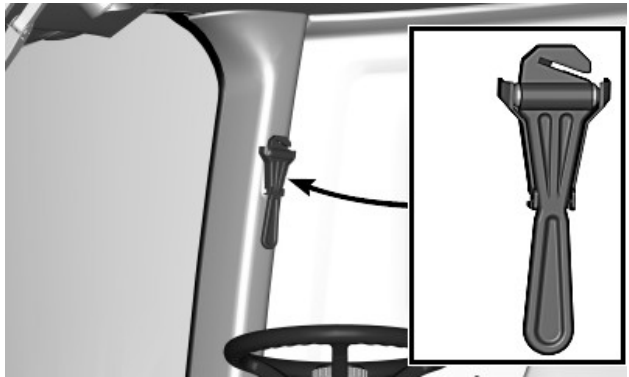
### A—Backup Alarm

If the multi-function lever is moved rearward while the engine is running, backup alarm (A) sends an acoustical signal to warn others around the machine that the operator is backing up.

MH69740,00008E7-19-24NOV20



## Emergency Exit



H121321—UN—21APR17

Seat belt may be cut and window glass broken with hammer to exit cab in an emergency.

OOU6075,0004722-19-21APR17

## Handling Batteries Safely



TS204—UN—15APR13



TS203—UN—23AUG88

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

### Avoid hazards by:

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

### If acid is spilled on skin or in eyes:

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

### If acid is swallowed:

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

DX,WW,BATTERIES-19-02DEC10

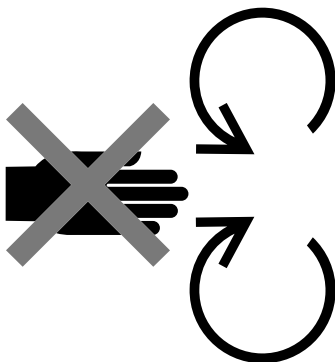
## Clean Exhaust Filter Safely



TS227—UN—15APR13



TS271—UN—23AUG88



TS1693—UN—09DEC09

During exhaust filter cleaning operations, the engine may run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust

filter components reach temperatures hot enough to burn people, or ignite or melt common materials.

Keep machine away from people, animals, or structures which may be susceptible to harm or damage from hot exhaust gases or components. Avoid potential fire or explosion hazards from flammable materials and vapors near the exhaust. Keep exhaust outlet away from people and anything that can melt, burn, or explode.

Closely monitor machine and surrounding area for smoldering debris during and after exhaust filter cleaning.

Adding fuel while an engine is running can create a fire or explosion hazard. Always stop engine before refueling machine and clean up any spilled fuel.

Always make sure that engine is stopped while hauling machine on a truck or trailer.

Contact with exhaust components while still hot can result in serious personal injury.

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

Keep hands, feet, and clothing away from power-driven parts.

Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

Shut off engine and remove key (if equipped) before leaving the machine unattended.

OUO6075,0000E81-19-07FEB12

## Avoid Hot Exhaust



RG17488—UN—21AUG09

Servicing machine or attachments with engine running can result in serious personal injury. Avoid exposure

and skin contact with hot exhaust gases and components.

Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

DX,EXHAUST-19-20AUG09

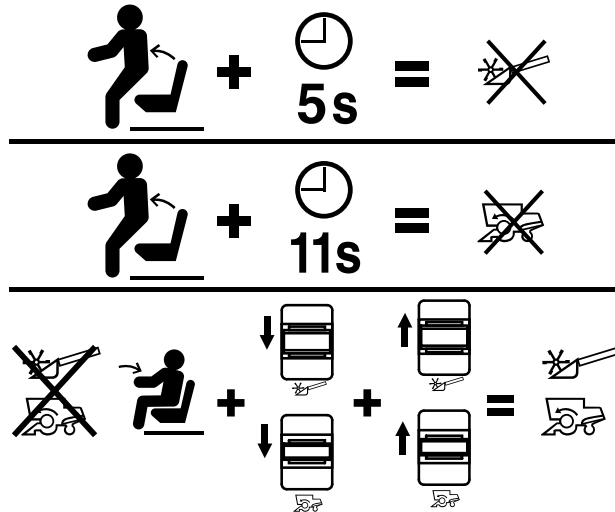
### • Header Height Control

If operator leaves seat with header and or separator engaged for more than 12 seconds, lights flash and an alarm sounds. If operator continues to be out of the seat, harvesting functions stop.

To restart functions, operator must return to seated position and re-engage each function.

OUC6075,0004DBD-19-26FEB20

## Rotational Alarm System



H125008—UN—25SEP18

If operator leaves seat with header and or separator engaged, lights flash and an alarm sounds. If operator continues to be out of the seat, harvesting functions stop.

If harvesting functions are stopped, they need to be restarted before continuing to harvest.

To restart harvesting functions, operator must be in seated position and reset and engage separator and header switches on the armrest console.

OUC6075,0004A2A-19-25SEP18

## Operator Presence System

Operator presence system indicates the presence of the operator.

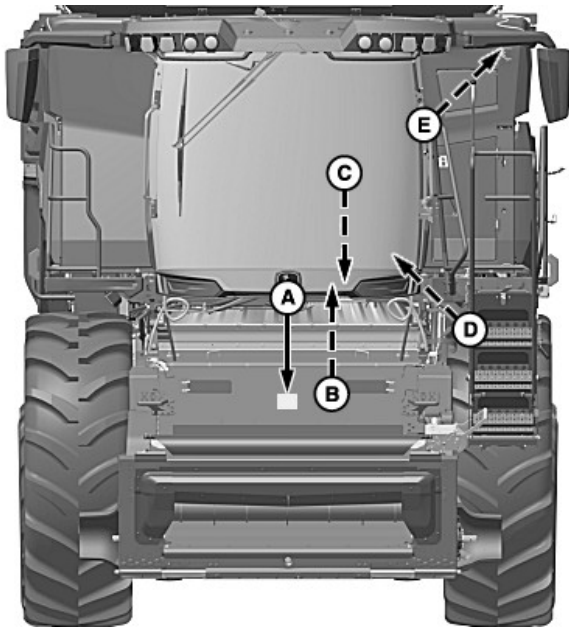
System prevents engagement of the following functions when operator is not present in seat.

- Separator Engage
- Header Engage
- Unloading Auger Engage
- AutoTrac™
- Propulsion
- Feedrate

*AutoTrac is a trademark of Deere & Company*

# Safety Signs

## Front View Decals



H128299—UN—27JAN20



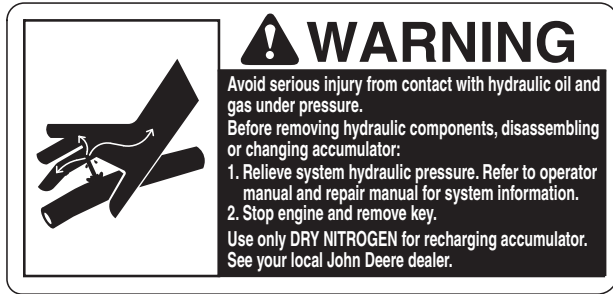
SSHXE137552—19—10MAY18

Decal A (located between the inspection doors)



SSHXE147361—19—28MAR19

Decal B (located on the accumulator on the cab support)



SSHXE28534—19—04AUG10

Decal C (located on the cab support)



SSN372425—19—06APR05

Decal D

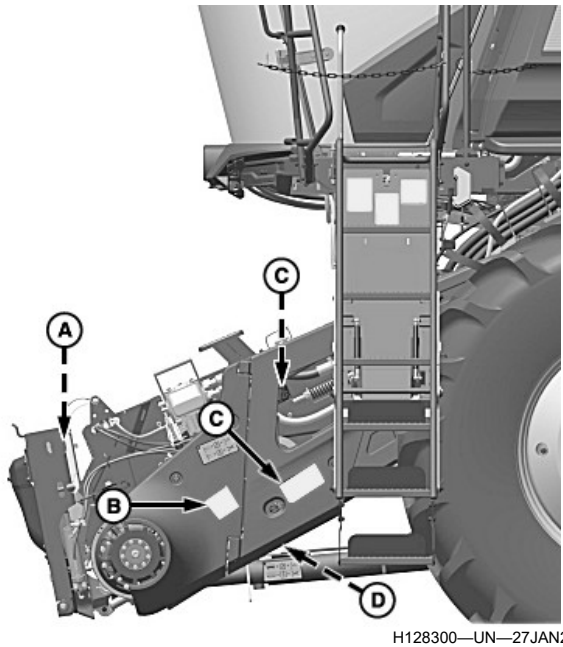


SSH209452XE—19—28OCT20

Decal E

OOU6075,0004D08-19-27OCT20

## Left-Hand View Feeder House Decals



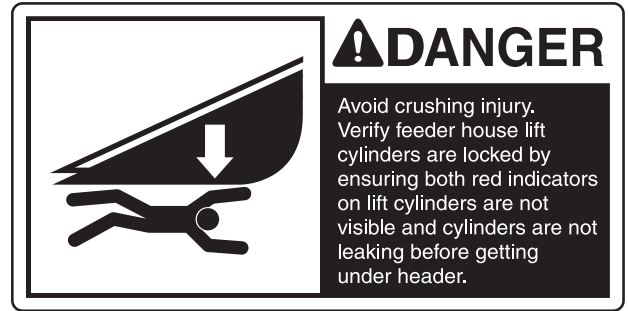
Decal A

SSH151607—19—06APR05



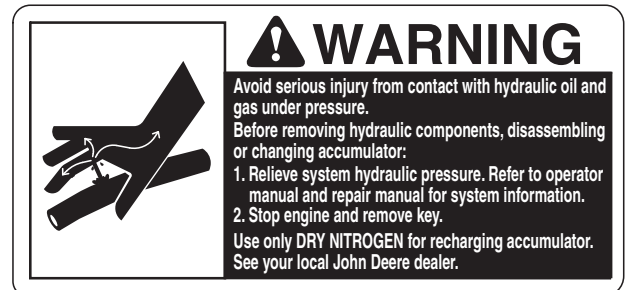
Decal B

SSHXE162836—19—18AUG20



Decal C (two places)

SSHXE119582—19—27JAN20

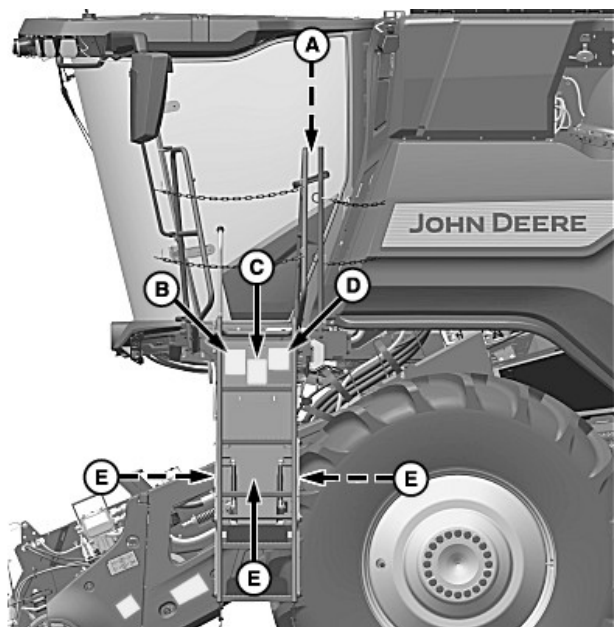


Decal D (located underneath the feeder house near the  
valve block)

SSHXE28534—19—04AUG10

OUO6075,0004D09-19-27OCT20

## Left-Hand Cab View Decals and Cab Ladder Decals



H128301—UN—27JAN20

### CAUTION

The instructional seat is for training operators or diagnosing machine problems. Keep all other riders and children off. Use the seat belt whenever operating the machine or riding as an observer.

Decal A

SSH202640—19—06APR05



Decal B

SSH149064—19—06APR05



Decal C

SSH170654—19—06APR05

### CAUTION

- Keep all shield in place during normal operations.
- Keep hands, feet and clothing away from power-driven parts.
- Disengage power driven parts and shut off engine before unclogging or servicing machine.
- If service procedure requires engine to be running:
  - Only engage power-driven parts required by service procedure.
  - Ensure other people are clear of operator station and machine.
- Do not leave running machine unattended.

Decal D

SSHXE19558XE—19—12NOV20

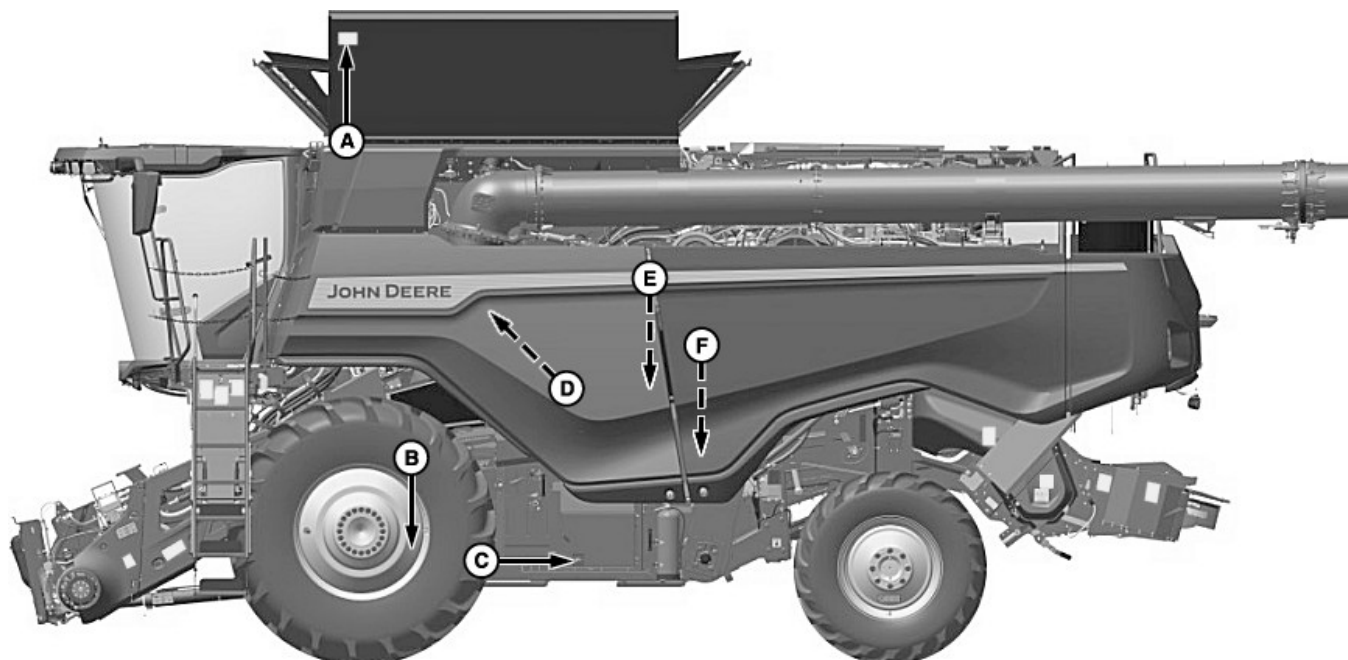


Decal E

SSHXE150931—19—12OCT20

OOU6075,0004D0B-19-12NOV20

## Left-Hand View Decals



H128603—UN—27JAN20



SSHXE17133—19—30JUL10

Decal A



SSHXE162836—19—18AUG20

Decal C



SSHXE137491—19—11JUN18

Decal B (dual wheels only)



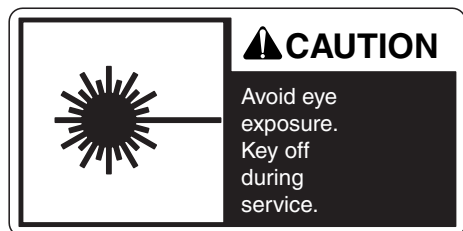
SSH209453XE—19—20AUG20

*Decal D*



SSHXE85220—19—18MAR15

*Decal E (if equipped with air compressor)*



SSHXE150654—19—23APR19

*Decal F (two places)*

OUO6075,0004D66-19-27AUG20



# Left-Hand View Decals Continued



H128604—UN—27JAN20



SSHXE159578—19—20JAN20

Decal A



SSHXE28534—19—04AUG10

Decal C



SSHXE147361—19—28MAR19

Decal B (2 places)

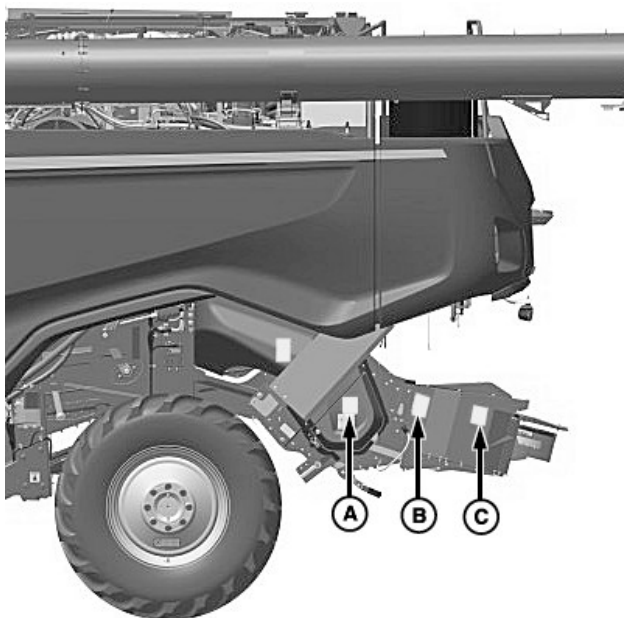


SSH226055—19—12APR06

Decal D

OUC06075,0004D67-19-27OCT20

## Left-Hand View Residue Decals (Chopper)



H128319—UN—27JAN20



SSHXE168824—19—18AUG20

Decal C

OOU6075,0004D14-19-17AUG20



SSHXE162836—19—18AUG20

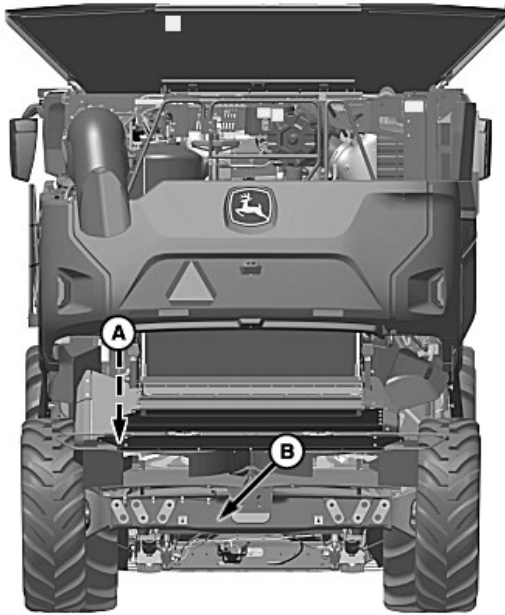
Decal A



SSHXE168825—19—20AUG20

Decal B

## Rear View Decals

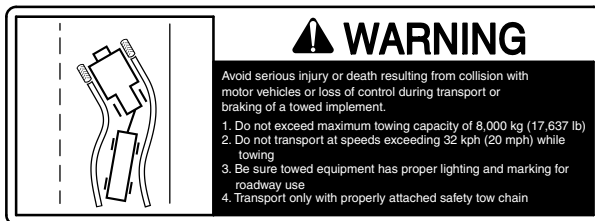


H128629—UN—27JAN20



SSHXE168824—19—18AUG20

*Decal A*

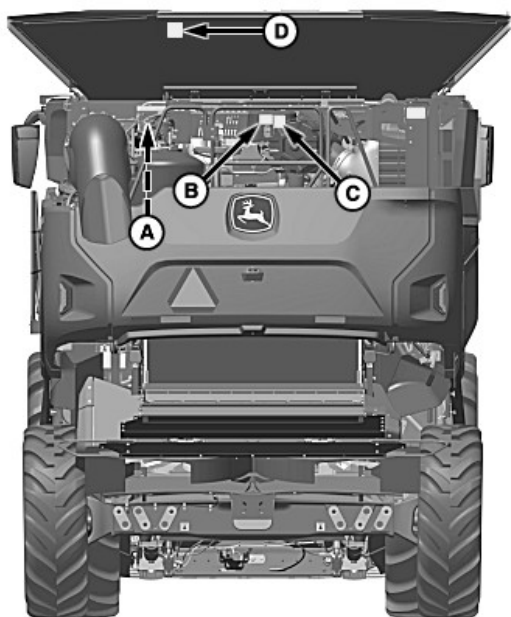


SSHXE157142XE—19—28JAN20

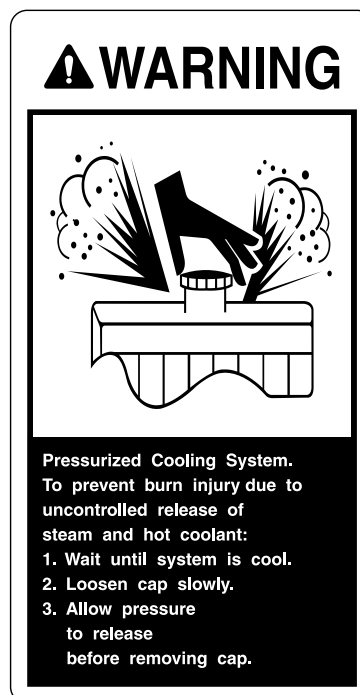
*Decal B (if equipped with rear trailer hitch)*

OUO6075,0004D79-19-17AUG20

## Rear View Engine Decals



H128606—UN—27JAN20



SSHXE123799—19—22JUN17

Decal C



SSH209451XE—19—27AUG20

Decal D



SSHXE28534—19—04AUG10

Decal A (located on the rear of the grain tank frame)

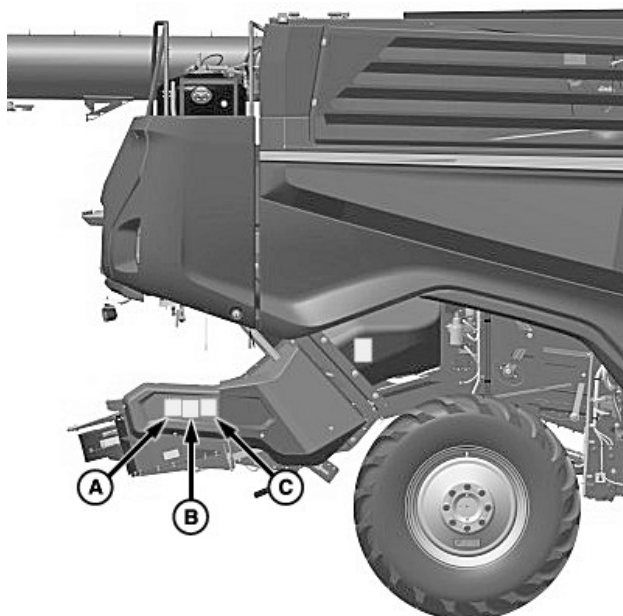


SSH169516REV1—19—05JAN10

Decal B

OOU6075,0004D7A-19-27OCT20

## Right-Hand View Residue Decals (Chopper)



H128320—UN—27JAN20



SSHXE162836—19—18AUG20

Decal C

OUC6075,0004D15-19-17AUG20



SSHXE168824—19—18AUG20

Decal A



SSHXE168825—19—20AUG20

Decal B

## Right-Hand View Decals



H128630—UN—27JAN20



SSH149064—19—06APR05

*Decal A*

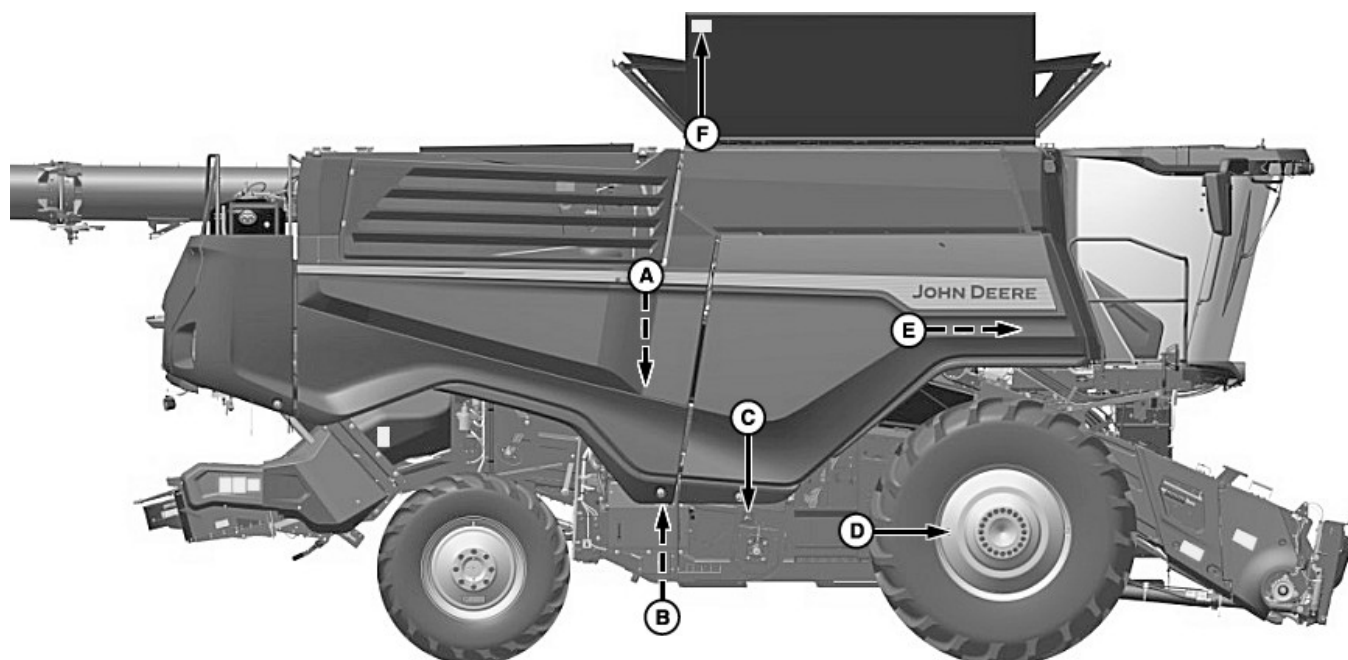


SSHXE159578—19—20JAN20

*Decal B*

OUO6075,0004D7B-19-27FEB20

# Right-Hand View Decals Continued



H128631—UN—27JAN20



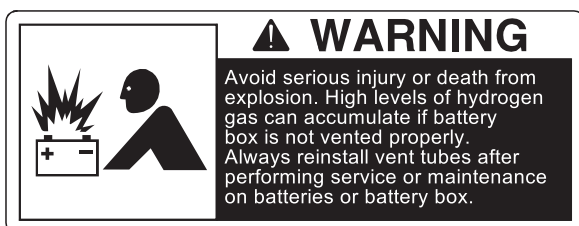
SSH149088—19—06APR05

Decal A



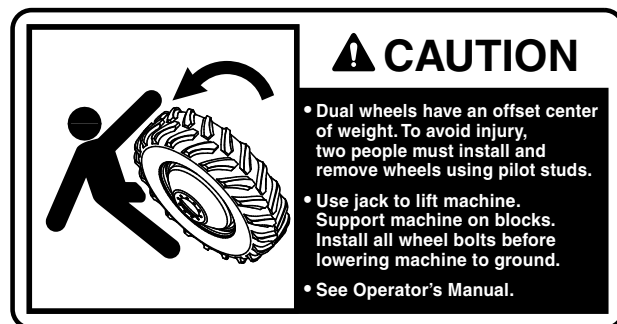
SSHXE162836—19—18AUG20

Decal C



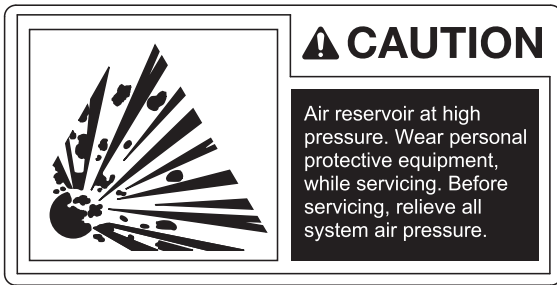
SSHXE137557—19—10MAY18

Decal B



SSHXE137491—19—11JUN18

Decal D (dual wheels only)



SSHXE95272—19—19MAR15  
*Decal E (if equipped with air compressor)*



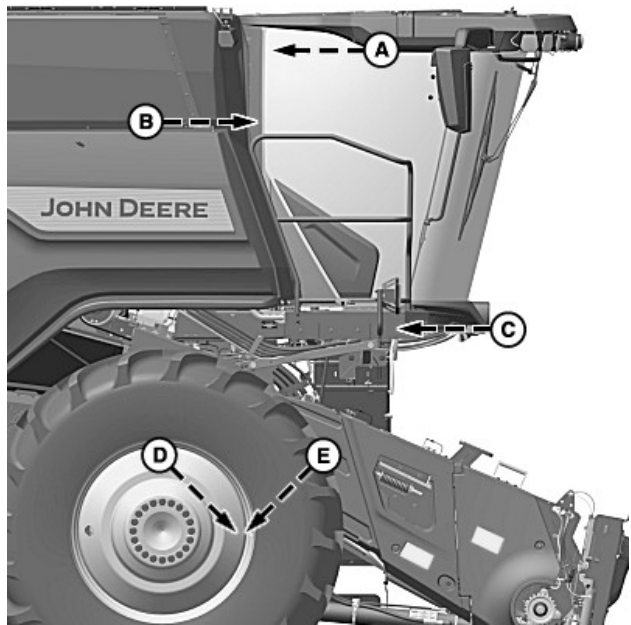
SSHXE17133—19—30JUL10  
*Decal F*

OUC6075,0004D7C-19-27AUG20

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## Right-Hand Cab View Decals and Right-Hand View Decals Continued



H128305—UN—27JAN20



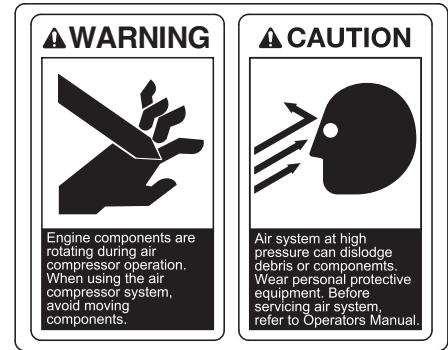
SSHXE160766—19—20JAN20

Decal A



SSHXE161095XE—UN—27FEB20

Decal B (located on the right-hand rear corner post)



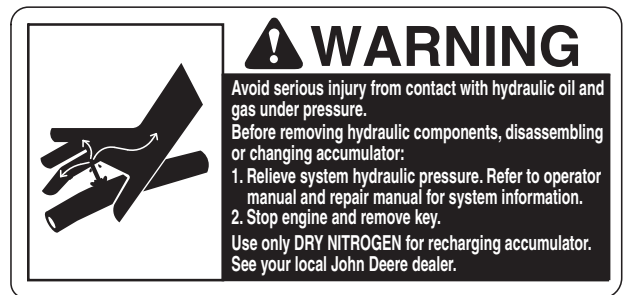
SSHXE85220—19—18MAR15

Decal C (if equipped with air compressor)



SSHXE147361—19—28MAR19

Decal D (located on the transmission accumulator)

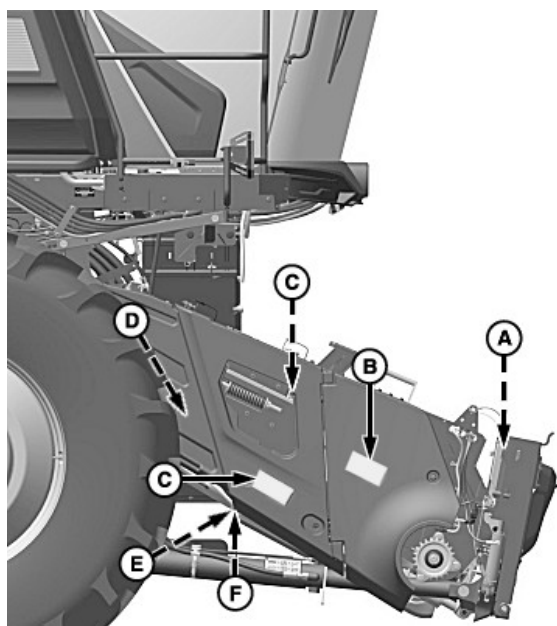


SSHXE28534—19—04AUG10

Decal E (located on the transmission shield)

OOU6075,0004D13-19-27OCT20

## Right-Hand View Feeder House Decals

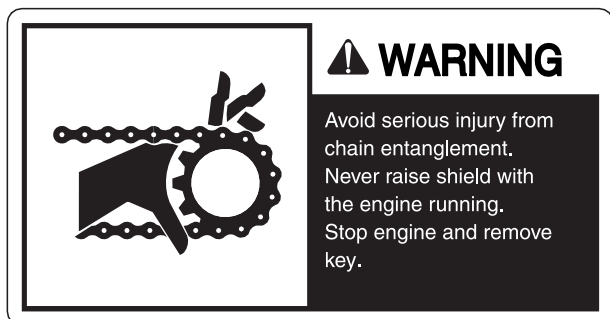


H128306—UN—27JAN20



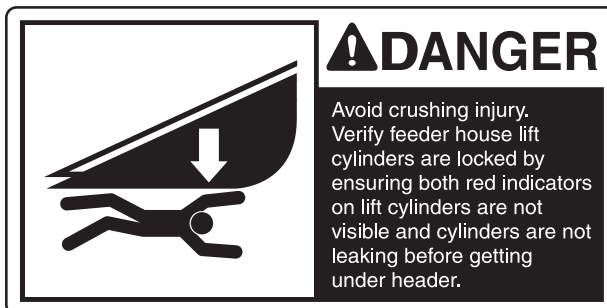
Decal A

SSH151607—19—06APR05



Decal B

SSHXE150650—19—23APR19



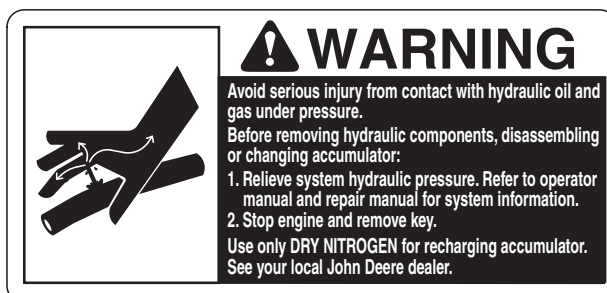
Decal C (2 places)

SSHXE119582—19—27JAN20



Decal D

SSH217664—19—06APR05



Decal E (located underneath the feeder house near the valve block)

SSHXE28534—19—04AUG10

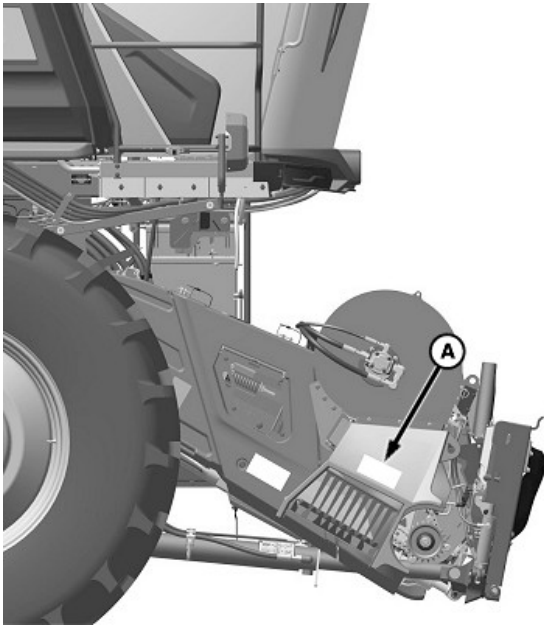


Decal F (located underneath the feeder house on the accumulator)

SSHXE147361—19—28MAR19

OOU6075,0004D10-19-27OCT20

## Right-Hand View Feeder House Dust Fan Decal (If Equipped)



H130470—UN—09JUN20

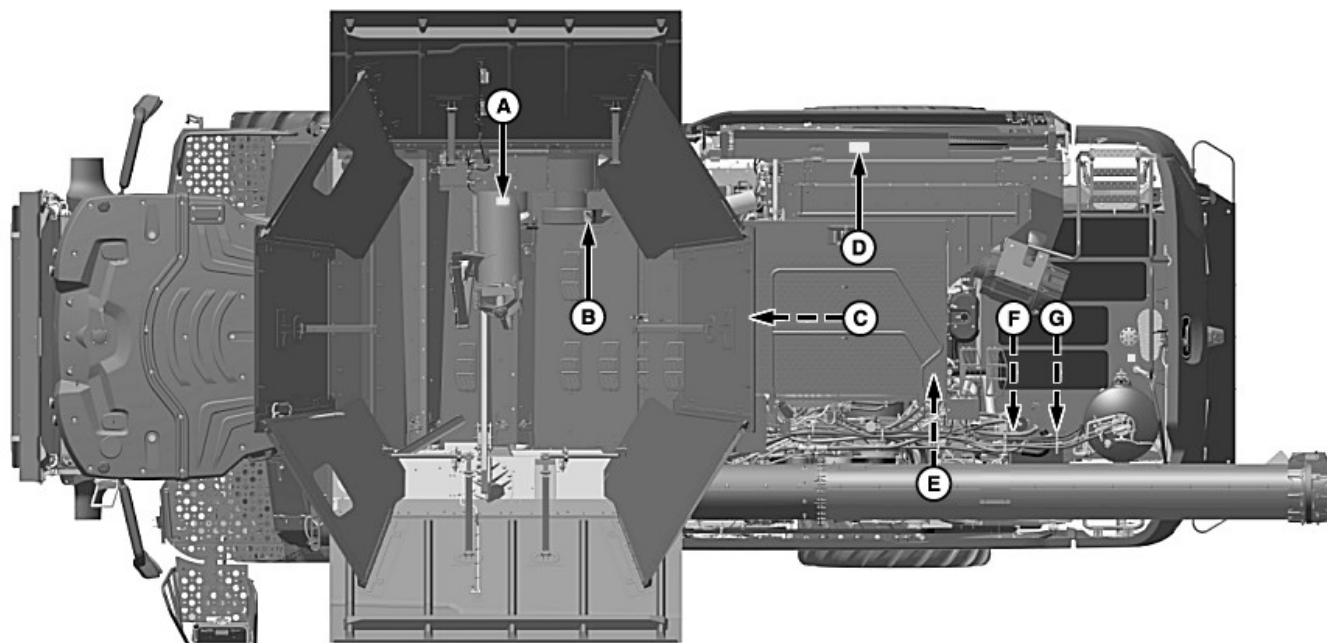


SSHXE167995XE—19—26AUG20

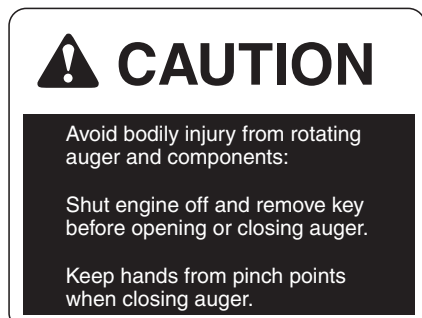
*Decal A (if equipped with dust fan)*

OUO6075,0004E67-19-29JUL20

## Top View Decals



H128344—UN—27JAN20



SSH151397—19—06APR05

Decal A



SSHXE69984—19—01JUL13

Decal C (Final Tier 4/Stage V)



SSH209451XE—19—27AUG20

Decal B



SSHXE160837—19—27JAN20

Decal D



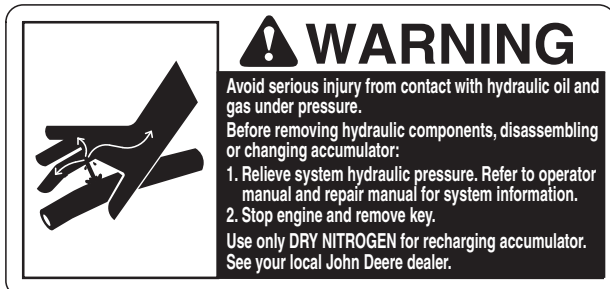
SST146102—19—24JUL13

Decal E (located on the starter)



SSHXE85220—19—18MAR15

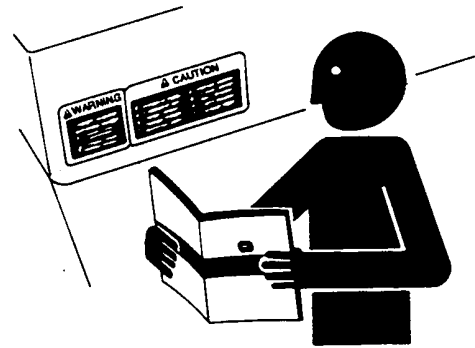
Decal F (if equipped with air compressor)



SSHXE28534—19—04AUG10

Decal G

## Replace Safety Signs



TS201—UN—15APR13

Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

DX,SIGNS-19-18AUG09

OUO6075,0004D11-19-27OCT20

# Operator's Station

## Radio Types (Optional)



H126567—UN—15JUL19

Main Features	Radio	Connection of External Devices	USB (MP3/WMA)	Bluetooth®	Satellite Radio Ready
(A)—Touch Screen Radio	X	X	X	X	United States/ Canada
(B)—AM/FM Radio	X	X		X	Not Available

Bluetooth is a registered trademark of Bluetooth SIG

MH69740,000083A-19-04FEB20

### After Market Radios

**IMPORTANT:** If installing or replacing an aftermarket radio, see your John Deere dealer for further information.

### Program Radio for Local Area Frequency

**NOTE:** If a different tuner frequency is needed for the radio, see your John Deere dealer for further information.

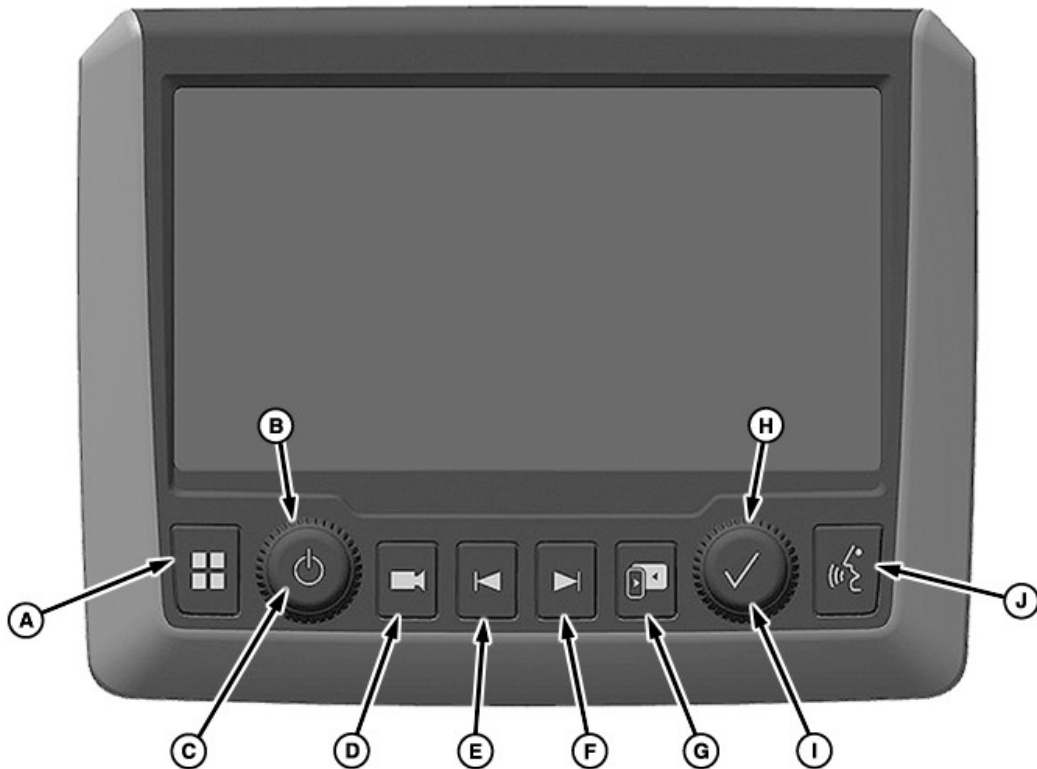
OUC6075,0000B6E-19-21MAR11

Wave Bands (United States/Canada)		Wave Bands (All Other Countries)	
FM	87.7—107.9 MHz	UKW (FM)	87.5—108.0 MHz
AM	530—1710 kHz	MW	522—1629 kHz
WX	162.4—162.55 MHz	LW	153—279 kHz

MH69740,000096D-19-04FEB20

## Radio Controls

### Touch Screen Radio



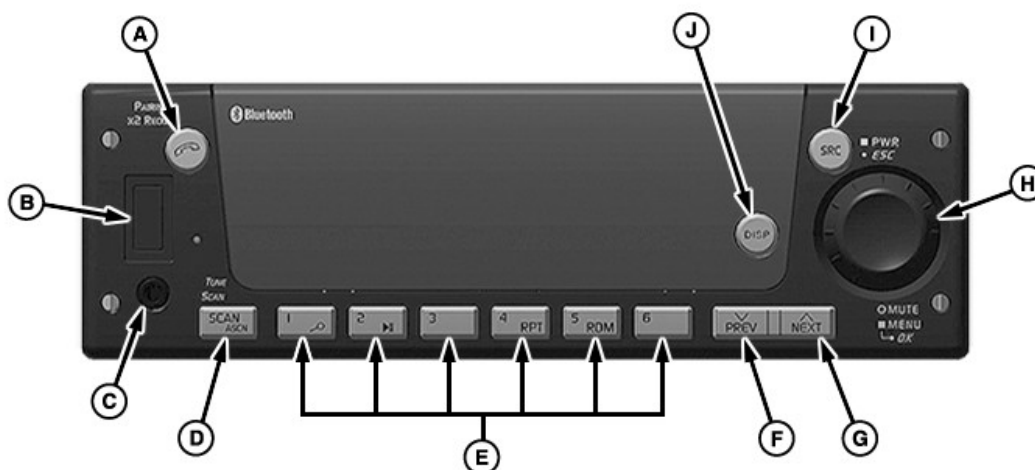
A—Home Page  
B—Volume Control  
C—Power/Mute  
D—Camera Display  
E—Previous/Rewind

F—Next/Forward  
G—Projection Mode  
H—Scroll  
I—Select  
J—Push-to-Talk (PTT)

H127144—UN—05SEP19

*NOTE: See radio Operator's Manual for further information.*

## AM/FM Radio



A—Phone  
B—USB  
C—Front AUX Input  
D—SCAN/ASCN  
E—Key Block (1—6)

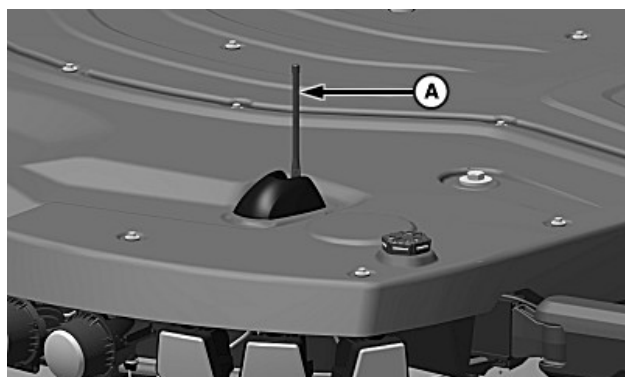
F—PREV  
G—NEXT  
H—Volume/Mute/Menu/OK  
I—Source Select (SRC)/PWR/ESC  
J—DISP

H127145—UN—05SEP19

**NOTE:** See radio Operator's Manual for further information.

MH69740,000083B-19-25FEB20

## Radio Antenna



A—Radio Antenna

H129320—UN—03MAR20

**IMPORTANT:** If the radio is not going to be used, or the machine is being transported, remove the radio antenna and place it in the manual storage location compartment located behind the operator's seat.

Unscrew the radio antenna (A) from the base when the machine is transported and store it in the manual storage location compartment located behind the operator's seat.

OUC6075,0004DC2-19-04MAR20

## Field Operation

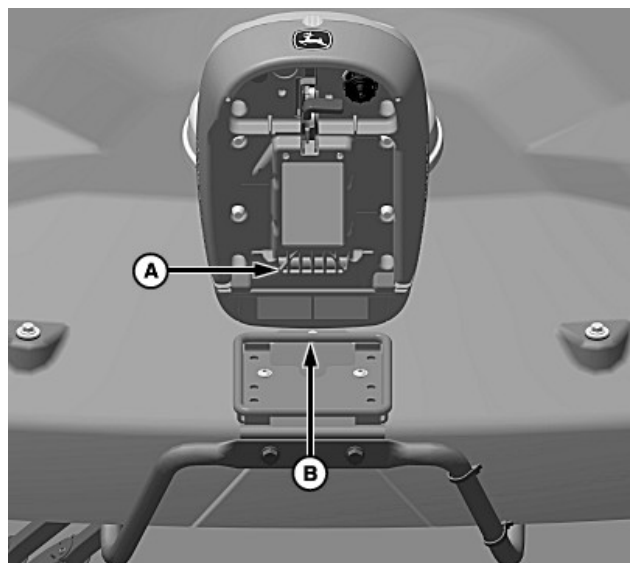
**IMPORTANT:** To prevent damage, screw the radio antenna into the base so it is finger tight.

Screw the radio antenna (A) into the base when the radio is used.

## Road Transport or Trailer Transport



## StarFire™ Position Receiver (If Equipped)

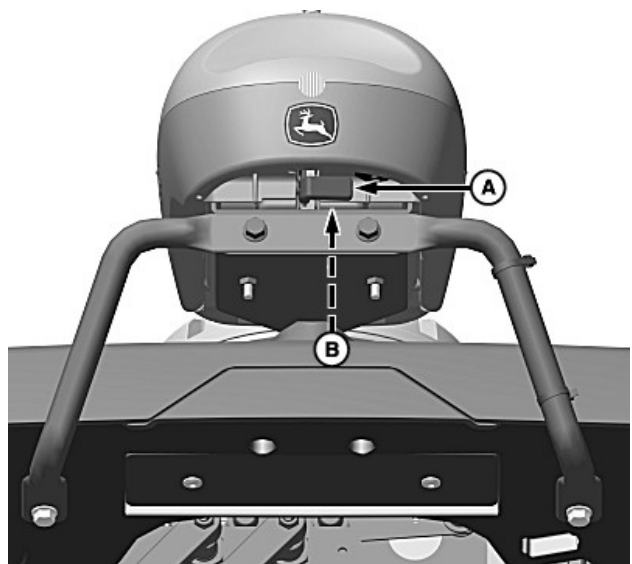


H129944—UN—21APR20

- A—Tab  
B—Cab Bracket

**NOTE:** The position receiver bracket is available as a separate bundle. See your John Deere dealer for further information.

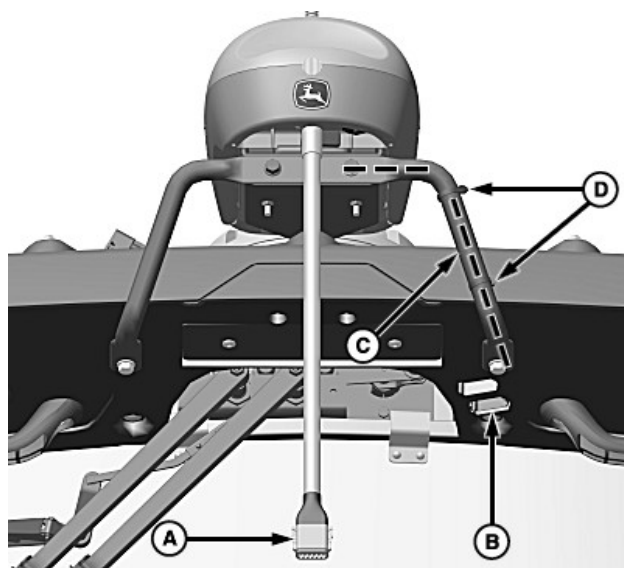
1. Align the tab (A) on the bottom of the position receiver with the cab bracket (B).
2. Slowly lower the position receiver and verify that the tab remains in place on the cab bracket.



H129945—UN—21APR20

- A—Latch  
B—Bracket

3. Press down on the position receiver until the latch (A) locks into place on the bracket (B).



H129946—UN—21APR20

- A—Position Receiver Connector  
B—Cab Connector  
C—Bracket Assembly  
D—Tie Band (2 used)

**NOTE:** Remove protective cap from cab connector.

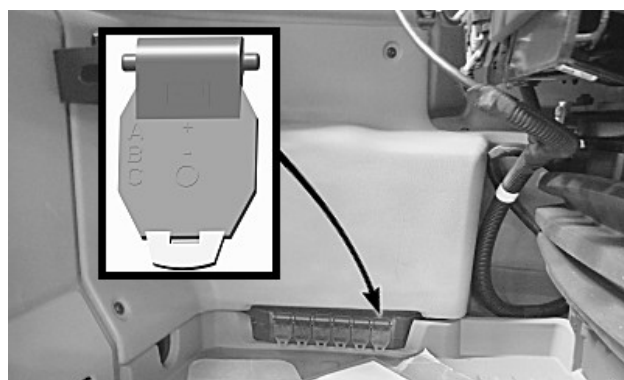
4. Plug the position receiver connector (A) into the cab connector (B).

**NOTE:** The dashed lines represent the harness routing.

5. Route the excess harness along the bracket assembly (C).
6. Retain the wiring harness to the bracket assembly as needed with tie bands (D).

OUC6075,0004E14-19-28APR20

## Communications/CB Radio Wiring



H126578—UN—22AUG19

Auxiliary Power Outlet Strip

**NOTE:** Maximum combined current draw for switch power is 20 amps and unswitched power is 30 amps.

- Spade terminal (A) is direct positive power at all times.
- Spade terminal (B) is ground.
- Spade terminal (C) is auxiliary power (key switch ON).

It is recommended to use spade terminals (A) and (B) to provide power and ground to the 2-way radio with high current draw. This requires the operator to manually power off the 2-way radio or utilize the battery disconnect switch at the end of the day.

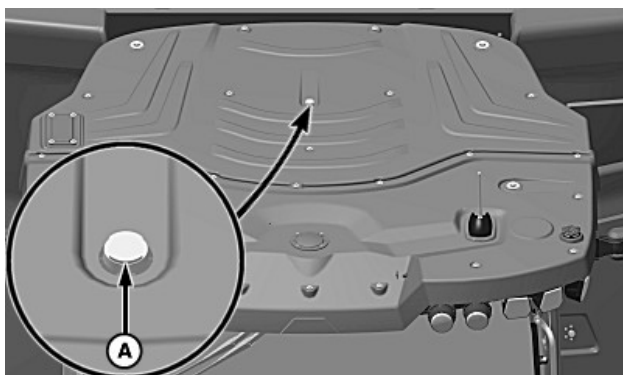
It is recommended to use spade terminals (B) and (C) to provide power and ground to the 2-way radio with normal current draw. When the operator turns the key switch OFF, power to the 2-way radio is also turned OFF.

For additional information, see your John Deere dealer.

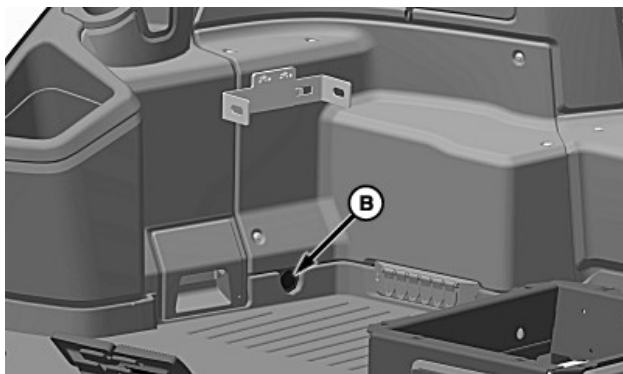
MH69740,000083C-19-28JUN19

## Communications/CB Radio Mounting

### Antenna Mount



H128573—UN—20JAN20



H126579—UN—03JUL19

Antenna Cable Hole

A—Antenna Mount  
B—Plug

**IMPORTANT:** Do not install a radio requiring more than 3 amps or the electrical system may malfunction.

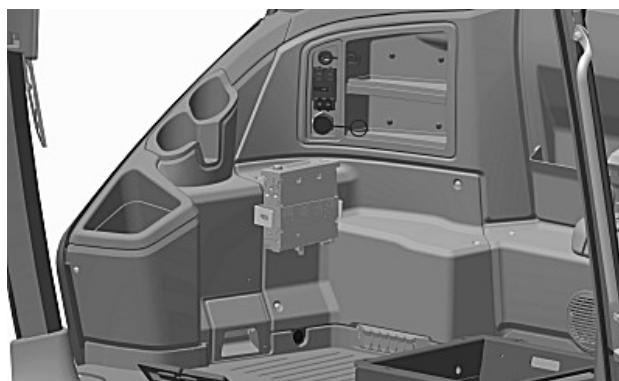
**NOTE:** To install an additional communications radio, see your John Deere dealer for further information.

1. Antenna mount (A) is located in the center of the cab roof.
2. Remove the dust cap from the antenna base.
3. Remove the brass nut from the antenna base.
4. Discard the rubber washer.
5. Reinstall the antenna base with the O-ring facing downward.
6. Install the antenna.

### Antenna Cable

1. The antenna cable is located inside the right-hand console.
2. Remove plug (B).
3. Remove the cup holder and locate the antenna cable.
4. Route the antenna cable through the hole opening.

### CB Radio Mounting



H126580—UN—03JUL19

CB Radio Mount

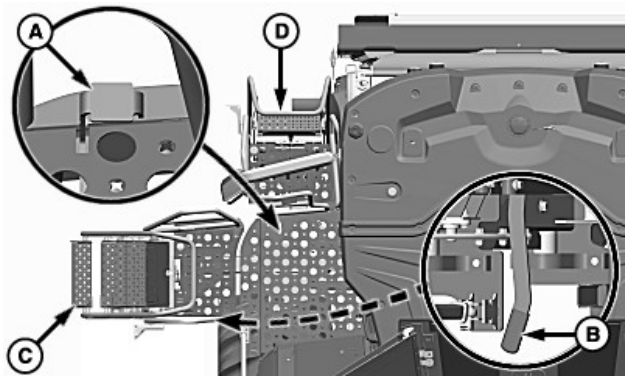
**IMPORTANT:** Corner post cover must be removed before drilling. Be careful not to damage wiring harnesses and coolant hoses in locations shown when drilling holes or installing hardware.

1. Use the bracket supplied by the manufacturer as a template to locate and drill holes as required.
2. Use self-tapping screws or cap screws with nuts to mount the bracket.

**NOTE:** Certain broadcast bands may cause interference with the position receiver. Select a different broadcast band or see your John Deere dealer if signal losses are noticed with the position receiver.

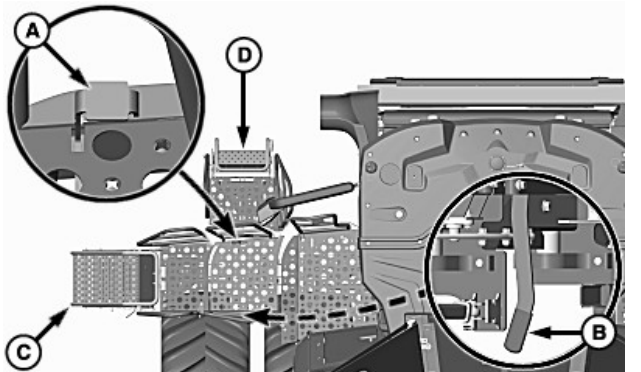
MH69740,000083D-19-04FEB20

## Cab Ladder Positions



H127830—UN—17OCT19

Ladder Positions (single tire configuration)



H127153—UN—22AUG19

Ladder Positions (dual tire configuration)

- A—Lever  
B—Handle  
C—Field Position  
D—Roadway Driving Position

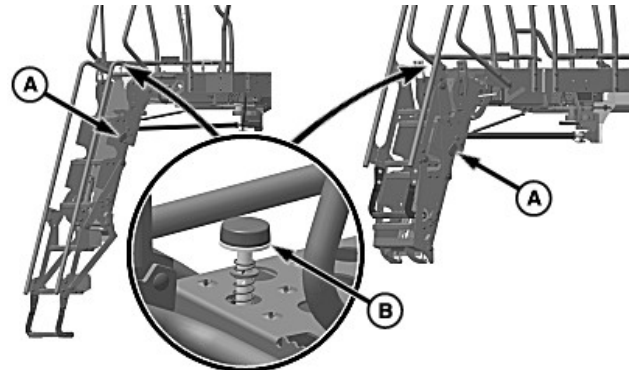
**CAUTION:** Do not ride or attempt to climb the front or rear ladders while the machine is moving.

1. Use lever (A) or handle (B) to change the ladder position.
2. Swing the ladder forward or rearward and lock into the desired position:
  - **Position (C):** is for the normal operating field conditions.
  - **Position (D):** is for transporting the machine on public roadways.
3. Clean out the latch pin area if the ladder latch appears loose. Do not use oil or grease in this area.

**CAUTION:** Always swing the ladder to position (D) before transporting on public roadways in order to reduce the machine width and position marker/hazard light towards oncoming motorists.

**IMPORTANT:** While hooking up the header with the ladder in the transport position, header will interfere or contact the ladder handrails and linkages if the feeder house is raised all the way up.

To avoid damage to the ladder and header, place the ladder in field position while hooking up the header.



H130891—UN—09SEP20

Unfolded/Folded

- A—Handle  
B—Lever

**CAUTION:** Avoid injury to you or others. Keep hands away from moving components while folding or unfolding the ladder. Always use the handrails to fold or unfold the ladder.

**NOTE:** Fold the ladder up when harvesting and during road transport to avoid damage to ladder components due to uneven terrain.

4. Use handle (A) or lever (B) to fold the ladder up or down as needed.

MH69740,000083E-19-11NOV20

## Fire Extinguishers



H92841—UN—16SEP08

General-Purpose Powder/Liquid Fire Extinguisher

**CAUTION:** Fire extinguishers must meet local government laws and regulations. The following extinguishers are required on the machine:

- A general-purpose powder fire extinguisher that is at least 4 kg (8.8 lb)
- A pressurized liquid fire extinguisher with minimum volume of 8 L (2.1 gal)

**NOTE:** Fire extinguishers shown may vary depending on country requirements and fire extinguisher manufacturers.

A general-purpose powder fire extinguisher and a pressurized liquid fire extinguisher with mounting brackets are installed on your machine.

Read label on extinguishers and become familiar with instructions on how to use and maintain them. Once extinguisher is discharged, no matter for how long, it must be recharged or replaced.

**IMPORTANT:** Pressurized liquid fire extinguisher must not be exposed to freezing temperatures unless protected with antifreeze. See instruction decal on extinguisher for further information.

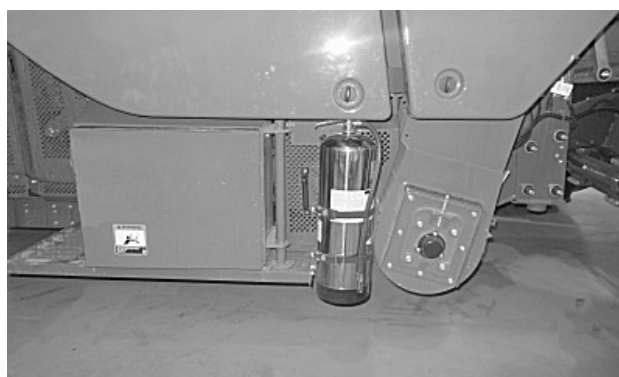
OUC6075,0004C94-19-12NOV20

## Fire Extinguisher Locations



H127415—UN—13SEP19

Fire Extinguisher Location (front)



H126583—UN—03JUL19

Fire Extinguisher Location (left-hand side)

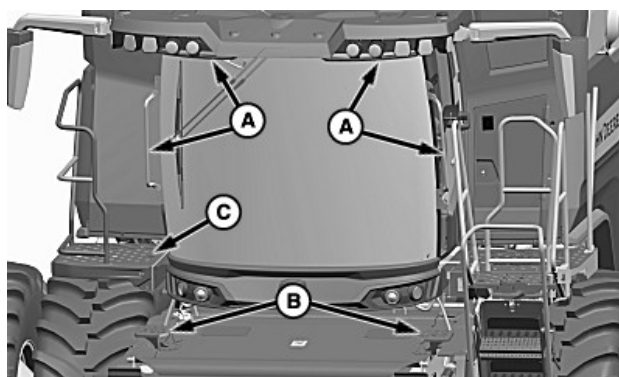
**NOTE:** Fire extinguishers shown may vary depending on country requirements and fire extinguisher manufacturers.

A general-purpose powder fire extinguisher is behind the left-hand front service door.

A pressurized liquid fire extinguisher is on the left-hand side of the machine.

OUC6075,0004C95-19-04FEB20


## Handrails and Right-Hand Landing Access



H127834—UN—16OCT19

A—Handrails

B—Step  
C—Landing

 **CAUTION:** Before accessing the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

**IMPORTANT:** Close the cab door before using the handrail.

**Do not manually move the wiper arm. This could cause damage to the wiper mechanism.**

**If equipped with the feeder house dust fan do not step on the fan to access the right-hand side of the machine.**

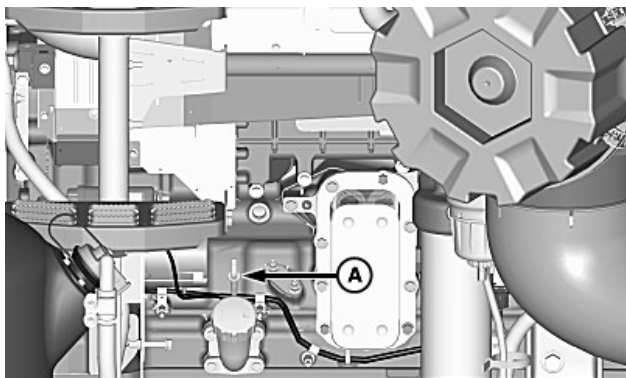
1. Use the ladder and landing to clean the left side of the cab.
2. Access the feeder house by using the step (B) on the left-hand side.
3. Use handrails (A) on either side of the cab and at top of the cab.
4. Stand on the raised feeder house to clean the front cab window and service the headlights or wiper.
5. Use the step and the landing (C) to clean the right side of the cab.

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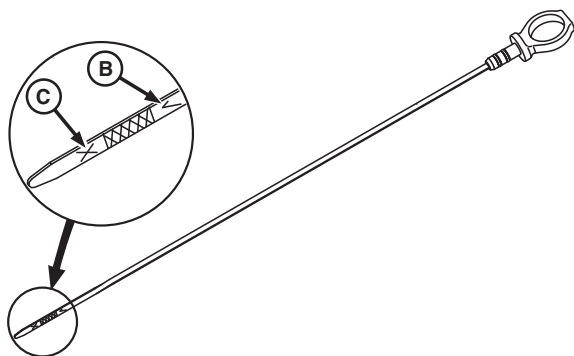
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# Break-In Service

## Breaking-In Engine



H126584—UN—03JUL19



H126677—UN—26AUG19

A—Dipstick  
B—FULL Mark  
C—ADD Mark

Engine is factory filled with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50™ II Oil. See the Fuels and Lubricants section for oil recommendations.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum of 500 hours.

**IMPORTANT: DO NOT add make-up oil until the oil level is BELOW the ADD mark (C) on dipstick. John Deere Break-In Plus™ Oil should be used to make up any oil consumed during this period.**

**DO NOT use Plus-50™ or Plus-50™ II Engine Oil during the break-in period of a new engine or engine that has had a major overhaul. These oils will not allow a new or overhauled engine to properly wear during this break-in period.**

Check engine oil level frequently during the break-in period. If oil must be added during this period, John Deere Break-In Plus™ Oil is preferred.

**IMPORTANT: DO NOT fill above the FULL mark (B). Oil levels anywhere within the cross-hatch marks are considered in the acceptable operating range.**

If John Deere Break-In Plus™ Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following:

- API Service Category CK-4
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

If one of these oils is used during the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum of 250 hours.

*NOTE: Some increase in oil consumption may be expected when low viscosity oils are used. Check the oil levels more frequently.*

Avoid prolonged periods of engine idling or sustained maximum load operation. If the engine idles longer than 5 minutes, stop engine.

After the break-in period, change the engine oil and replace the engine oil filter. Fill the crankcase with John Deere Plus-50™ II or other diesel engine oil. See the Fuels and Lubricants section for oil recommendations.

*NOTE: Verify that the dipstick is inserted completely into the housing before removing to check the oil level.*

Remove dipstick (A) and check the oil level daily. The oil level should be between the ADD mark and the top of cross-hatch area on the dipstick. If the oil level is below the ADD mark, add oil as needed. See the Fuels and Lubricants section for oil recommendations.

Watch for leaks. Do not operate the engine when the oil level is below the ADD mark on the dipstick.



Temperature Indicator

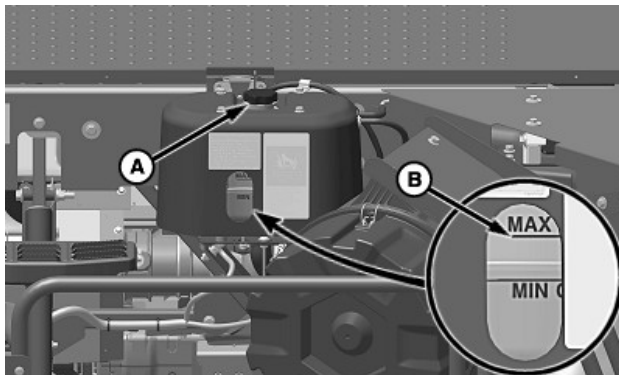
H117823—UN—22DEC16

If the air temperature is below -10°C (14°F), use an engine block heater (if equipped).

The temperature indicator should read in the green zone during normal operation.

**IMPORTANT: Prevent possible engine damage. Do not shut OFF the engine if the temperature warning light comes ON or the bars enter red zone. Shutting OFF the engine causes coolant temperature to rise even higher, resulting in machine damage. Reduce the load and run the engine at a slower speed to lower the coolant temperature. Unless the temperature drops quickly, stop the engine and determine the cause before resuming operation.**

Watch the temperature gauge closely. If the gauge moves into the red zone, reduce the load on the engine and determine the cause before resuming operation.



H132326—UN—10NOV20

A—Surge Tank Cap  
B—Max Cold Line

**CAUTION:** Shut OFF engine, set park brake, and remove key. Avoid being scalded when opening the surge tank cap. Never open the cap when the engine is hot. Open the cap slowly to relieve the pressure.

Check the coolant level periodically and watch for signs of leaks. Remove surge tank cap (A), then pour coolant into the surge tank and fill to the “Max Cold” line (B).

**NOTE:** The coolant level must be between the “Max Cold” and “Min Cold” lines. Add coolant as needed if the coolant is below “Min Cold” line.

MH69740,0000841-19-12NOV20

## Belt Drives Adjustment - First 50 Hours

**CAUTION:** Never check or adjust belt drives with engine running. Shut OFF engine, set parking brake and remove key.

Check all spring loaded belt idler adjustments after first 50 hours of operation. Most belt stretch occurs during the first hours of service.

After initial adjustments, check belt adjustment as required. Washer on spring tensioner should be positioned between end of gauge and bottom of step.

OOU6075,000056C-19-14JAN10

## Break-In Check Before First 100 Hours

Perform the daily or the 10-hour service. See Lubrication and Maintenance section.

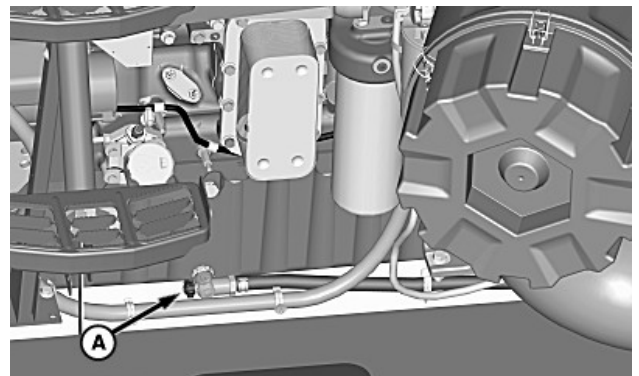
Watch for engine temperature and engine oil pressure diagnostic trouble codes. See Combine Overview Applications Help or Operator’s Station Help for further information.

Check the engine oil level (if needed, add John Deere Break-In Plus™ Engine Oil) and the coolant level frequently and watch for signs of leaks.

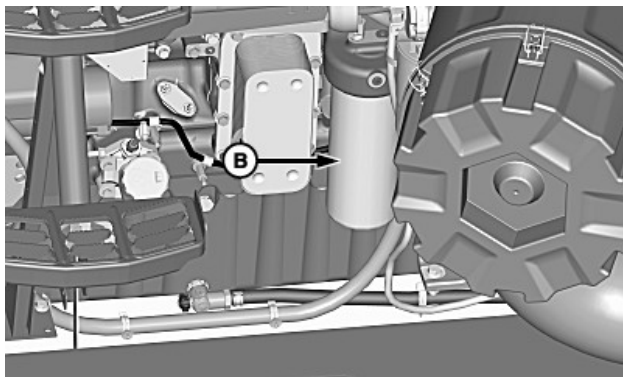
Check the engine air intake clamps for tightness.

OOU6075,0004DA5-19-14FEB20

## Break-In Service After 500 Hours



H126586—UN—03JUL19



H126587—UN—03JUL19

**A—Drain**  
**B—Oil Filter**

1. Drain the crankcase oil by opening drain (A) and close the drain once the oil is drained.
2. Remove and discard the oil filter (B). Dispose of the oil filter properly.
3. Install the replacement oil filter.
4. Fill the crankcase with the proper amount of engine oil. See Fuel and Lubricants section for oil recommendations. See Specifications section for oil capacity.

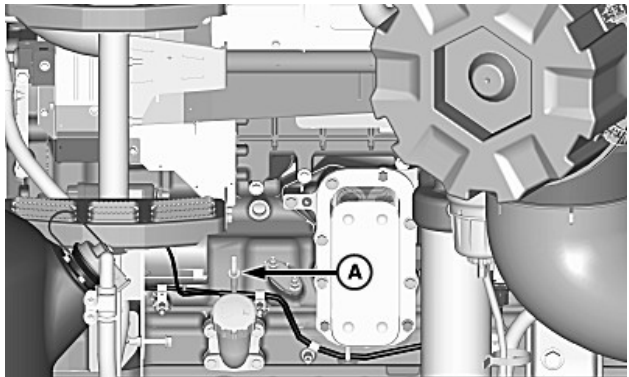
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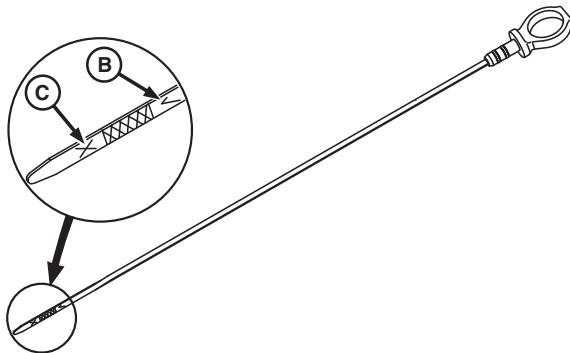


# Prestarting Checks

## Engine Oil Level



H126584—UN—03JUL19



H126677—UN—26AUG19

A—Dipstick  
B—FULL Mark  
C—ADD Mark

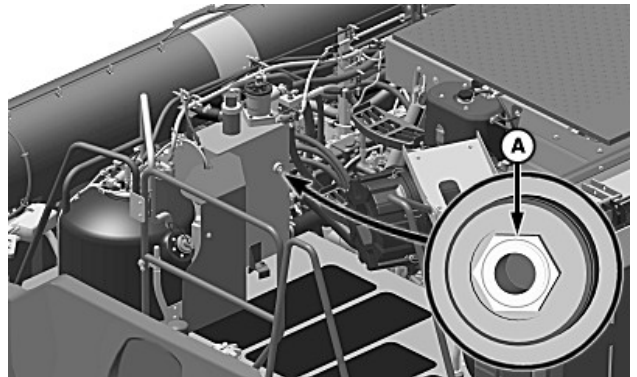
**IMPORTANT:** It is vital to maintain the engine oil at correct levels to ensure a long service life. Check the oil level with the machine parked on level ground.

**NOTE:** Verify that the dipstick is pushed completely into the housing before removing to check the oil level.

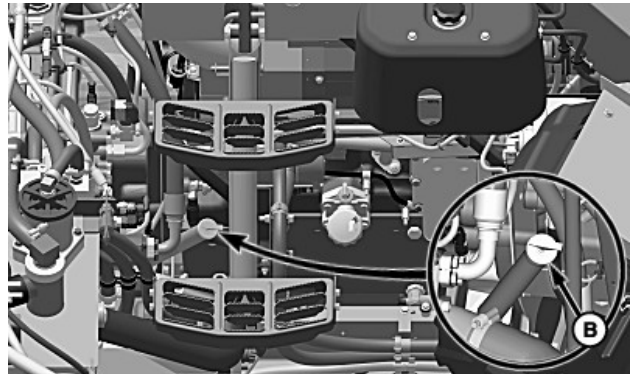
1. Check the engine oil level with dipstick (A) daily. Do not operate the engine when the oil level is below the ADD mark (C) on the dipstick.
2. Remove the dipstick and check the oil level. The oil level should be between the ADD and the FULL mark (B) on the dipstick. If the oil level is below the ADD mark, add oil as needed. See Fuel and Lubricants section for oil recommendations.

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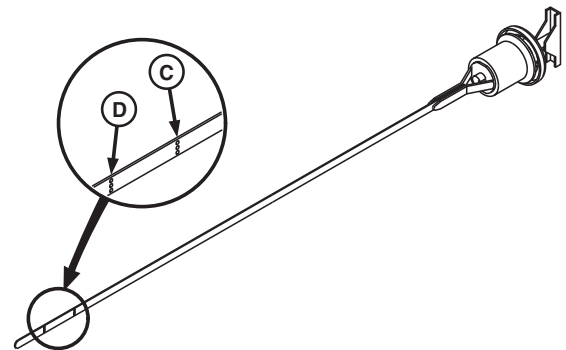
## Hydrostatic/Hydraulic Oil Level



H127396—UN—14FEB20



H127397—UN—14FEB20



H127159—UN—12SEP19

A—Sight Glass  
B—Dipstick  
C—FULL Mark  
D—ADD Mark

**NOTE:** Check the hydrostatic/hydraulic/main engine gear case oil level with the header on the ground and all the cylinders retracted. Oil level must be visible through the sight glass (A) with the feeder house fully lowered. Do not add hydraulic oil at the hydraulic reservoir.

Make all necessary oil level adjustments through the main engine gear case.

1. Check the oil level with the header on the ground.
2. Shut OFF engine, set park brake, and remove key before checking the hydraulic oil level.

3. Inspect sight glass (A) oil level with the feeder house fully lowered.

**Oil level is above the sight glass:**

1. Remove dipstick (B) and check oil level in the main engine gear case.
2. Add oil as needed through the dipstick tube until the oil level is between the ADD mark (D) and the FULL mark (C) on the dipstick. See Fuels and Lubricants section for oil recommendations.

**Oil level is at or below the sight glass (low in the main engine gear case):**

**⚠ CAUTION: Stop engine immediately if diagnostic trouble code is generated.**

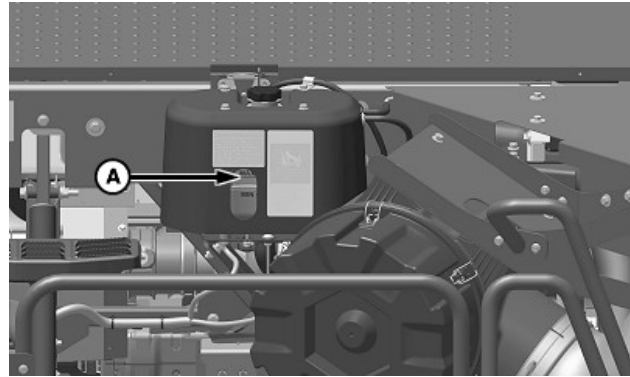
1. Remove dipstick (B) and check oil level in the main engine gear case.
2. Add oil as needed through the dipstick tube until the oil level is between the ADD mark and the FULL mark on the dipstick. See Fuels and Lubricants section for oil recommendations.
3. Start the machine and run the engine for a maximum of 5 minutes.
4. Verify that the oil level covers the sight glass.
5. Remove dipstick and check oil level in the main engine gear case.
6. Add oil as needed through the dipstick tube until the oil level is between the ADD mark and the FULL mark on the dipstick.

**Oil level is at or below the sight glass (high in the main engine gear case):**

1. Remove dipstick (B) and check oil level in the main engine gear case.
2. Start the machine and run the engine for a maximum of 5 minutes.
3. Verify that the oil level covers the sight glass.
4. Remove dipstick and check oil level in the main engine gear case.
5. Add oil as needed through the dipstick tube until the oil level is between the ADD mark and the FULL mark on the dipstick. See Fuels and Lubricants section for oil recommendations.

MH69740,0000845-19-14MAY20

**Coolant Level**



H132321—UN—10NOV20

A—Max Cold Line

**⚠ CAUTION: Shut OFF engine, set park brake, and remove key. Avoid being scalded when opening surge tank cap. Never open cap when engine is hot. Open cap slowly to relieve pressure.**

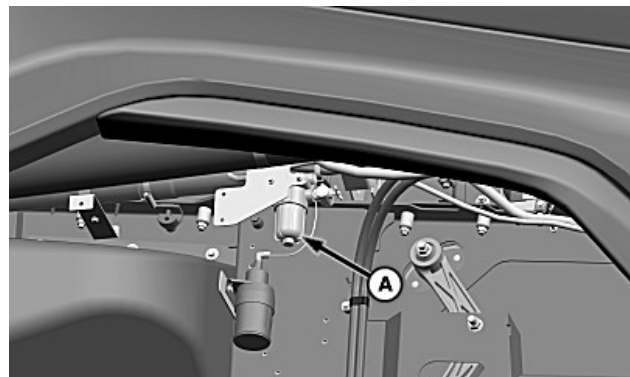
**IMPORTANT: A special cap is used on the surge tank. If cap is damaged or missing, it must be replaced by an equivalent cap.**

Allow engine to cool. Coolant level in the surge tank should be at "Max Cold" line (A).

*NOTE: Coolant level must be between "Max Cold" and "Min Cold" lines. Add coolant as needed if coolant is below "Min Cold" line.*

MH69740,0000846-19-10NOV20

**Fuel System**



H127870—UN—22OCT19

A—Precleaner Bowl

**⚠ CAUTION: Shut OFF engine, set park brake, and remove key before performing maintenance work on fuel filters.**

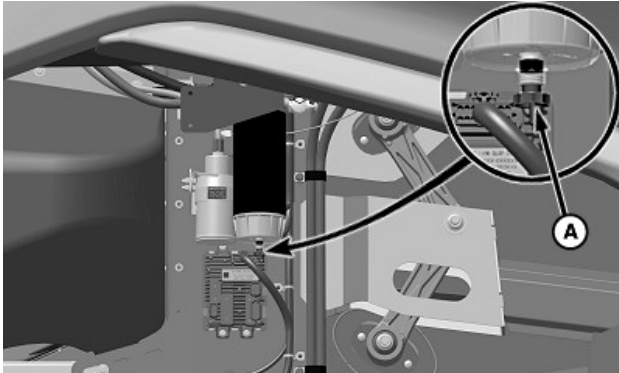
*NOTE: Make sure that precleaner bowl is fully seated to prevent air from entering the fuel system.*

1. Depending on the machine option, clean or drain fuel precleaner.

#### Fuel Precleaner (Style A)

1. Close valve on the fuel precleaner.
2. Remove precleaner bowl (A) and clean screen if dirty fuel was used.

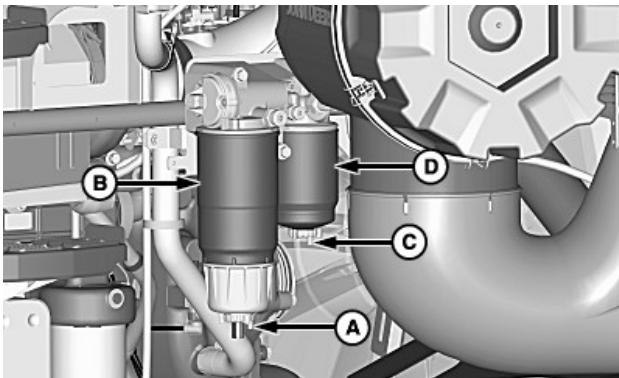
#### Fuel Precleaner (Heavy-Duty Option) (Style B)



H132338—UN—11NOV20

#### A—Drain

1. Close valve on the fuel precleaner.
2. Open drain (A) to inspect the fuel system for water in the fuel precleaner filter.



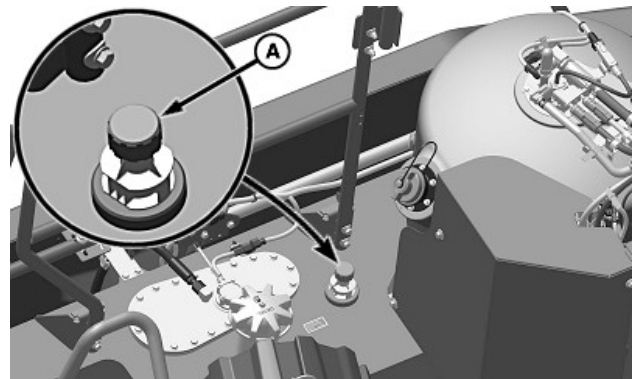
H126593—UN—03JUL19

- A—Drain
- B—Primary Fuel Filter
- C—Drain
- D—Secondary Fuel Filter

2. Open drain (A) to inspect the fuel system for water in the primary filter (B).
3. Open drain (C) to inspect fuel system for water in the secondary filter (D).
4. If the problem persists, change fuel filters. See Maintenance—As Required (Engine Fluids and Filters) section for further information.

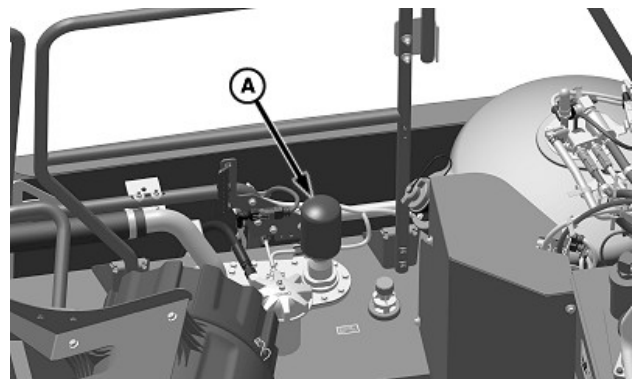
MH69740,0000847-19-12NOV20

#### Fuel Tank Breather



H132261—UN—05NOV20

Fuel Tank Breather (without Fast Fill Fuel System)



H132339—UN—12NOV20

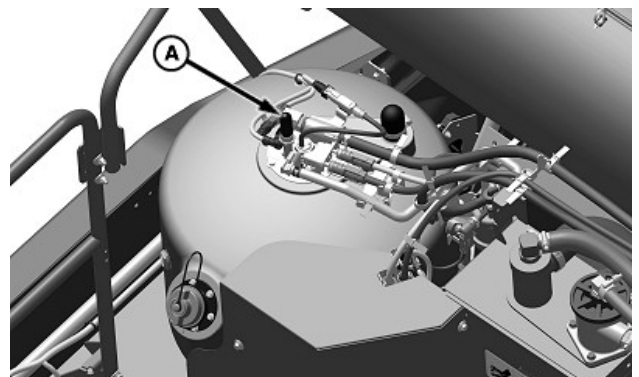
Fuel Tank Breather (with Fast Fill Fuel System)

#### A—Fuel Tank Breather

1. Visually inspect fuel tank breather (A) weekly. Do not allow excessive amounts of chaff or debris to collect on breather.
2. If the breather is covered with debris, it does not allow fuel tank to breathe. Remove fuel tank breather and clean.

MH69740,0000848-19-12NOV20

#### Diesel Exhaust Fluid (DEF) Tank Breather (Final Tier 4/Stage V)



H132262—UN—05NOV20

**A—Diesel Exhaust Fluid (DEF) Tank Breather**

1. Visually inspect diesel exhaust fluid (DEF) tank breather (A) weekly. Do not allow excessive amounts of chaff or debris to collect on breather.
2. If the breather is covered with debris, it does not allow tank to breathe. Remove breather from hose and clean.

MH69740,0000849-19-05NOV20

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**Cleaning Engine Compartment**



H132263—UN—05NOV20

**⚠ CAUTION:** Do not clean engine or engine compartment with engine running. Dirt, oil, chaff, and crop debris in engine compartment and on engine is a fire hazard. Direction of wind, type of crop, and crop moisture content can all have an effect on where and how much chaff and debris accumulate. Check and clean this area frequently.

MH69740,000084A-19-12NOV20

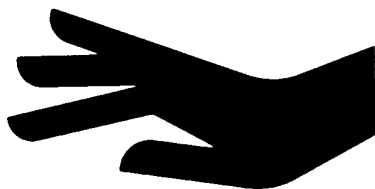
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# Operating the Engine

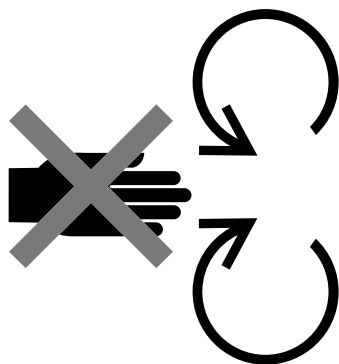
## Clean Exhaust Filter Safely



TS227—UN—15APR13



TS271—UN—23AUG88



TS1693—UN—09DEC09

During exhaust filter cleaning operations, the engine may run at elevated idle and hot temperatures for an extended period of time. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite or melt common materials.

Keep machine away from people, animals, or structures which may be susceptible to harm or damage from hot exhaust gases or components. Avoid potential fire or explosion hazards from flammable materials and vapors near the exhaust. Keep exhaust outlet away from people and anything that can melt, burn, or explode.

Closely monitor machine and surrounding area for smoldering debris during and after exhaust filter cleaning.

Adding fuel while an engine is running can create a fire

or explosion hazard. Always stop engine before refueling machine and clean up any spilled fuel.

Always make sure that engine is stopped while hauling machine on a truck or trailer.

Contact with exhaust components while still hot can result in serious personal injury.

Avoid contact with these components until cooled to safe temperatures.

If service procedure requires engine to be running:

- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

Keep hands, feet, and clothing away from power-driven parts.

Always disable movement (neutral), set the parking brake or mechanism and disconnect power to attachments or tools before leaving the operator's station.

Shut off engine and remove key (if equipped) before leaving the machine unattended.

OUO6075,0000E81-19-07FEB12

## Avoid Hot Exhaust



RG17488—UN—21AUG09

Servicing machine or attachments with engine running can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

Exhaust parts and streams become very hot during operation. Exhaust gases and components reach temperatures hot enough to burn people, ignite, or melt common materials.

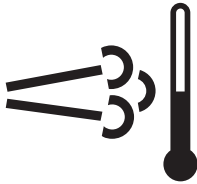
DX,EXHAUST-19-20AUG09

## Aftertreatment Indicators Overview



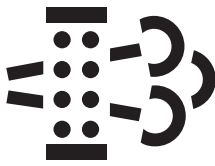
Diesel Exhaust Fluid Indicator

RG22487—UN—21AUG13



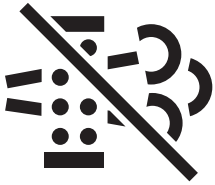
Engine Emissions Temperature Indicator

RG22488—UN—21AUG13



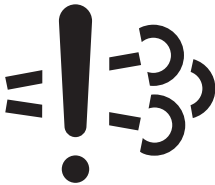
Exhaust Filter Indicator

RG22489—UN—21AUG13



Auto Cleaning Disabled Indicator

RG22490—UN—21AUG13



Engine Emissions System Malfunction Indicator

RG22491—UN—21AUG13



Warning Indicator

RG22492—UN—21AUG13



Engine Stop Indicator

RG22493—UN—21AUG13

**IMPORTANT:** The operator will be informed by the operator warning system when the emission control system does not function correctly and/or an engine malfunction is detected by the engine control unit. Ignoring the operator warning signals will lead to an emission related derate, resulting in an effective disablement of non-road mobile machinery operation.

It is essential to take prompt action to rectify any incorrect operation, use or maintenance of the emissions control system in accordance with the rectification measures indicated by the warnings referenced below.

The Diesel Exhaust Fluid (DEF) indicator illuminates when the DEF is low. Fill DEF tank.

When the DEF indicator is combined with the warning indicator or engine stop indicator engine performance is reduced by the Engine Control Unit (ECU) because the DEF is below a measurable level. Fill DEF tank.

When engine emissions temperature indicator illuminates exhaust gas temperature is high, elevated idle is active, or exhaust filter cleaning is in process. The machine can be operated as normal unless the operator determines the machine is not in a safe location for high exhaust temperatures and disables auto cleaning.

When engine emissions temperature indicator is combined with the warning indicator or engine stop indicator engine performance is reduced by the ECU because the exhaust gas temperature is higher than expected. Follow Diagnostic Trouble Code (DTC) procedure or see your authorized servicing dealer.

When the exhaust filter indicator illuminates the exhaust filter cleaning is in process, aftertreatment system has a fault, or the exhaust filter is in need of cleaning and the operator has disabled auto exhaust filter cleaning. If conditions are safe, the operator should enable the auto exhaust filter clean setting or perform manual service regeneration or follow DTC procedure.

When the exhaust filter indicator is combined with the warning indicator engine performance is reduced by the ECU because there is an aftertreatment system fault or the soot level of the exhaust filter is moderately high. If conditions are safe, the operator should enable the auto exhaust filter clean function. If conditions are not safe, the operator should move the machine to a safe location and engage the auto exhaust filter cleaning mode.



Perform manual service regeneration or follow DTC procedure.

When the exhaust filter indicator is combined with the engine stop indicator engine performance is further reduced by the ECU because there is an aftertreatment system fault or the soot level of the exhaust filter is extremely high. If this combination is present, see your authorized servicing dealer.

The auto cleaning disabled indicator illuminates when the operator has engaged the request to disable the auto exhaust filter cleaning function. This icon remains illuminated until the operator re-engages automatic exhaust filter cleaning from the diagnostic gauge. Disabling auto mode is not recommended for any situation unless it is safety-related or if the fuel tank lacks the required fuel to complete the cleaning process.

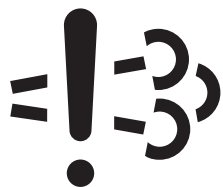
The engine emissions system malfunction indicator illuminates when engine emissions are outside of normal operating range or engine emissions system fault. Follow DTC procedure or see your authorized servicing dealer.

When the engine emissions system malfunction indicator is combined with the warning indicator engine performance is reduced by the ECU because the engine emissions are outside of normal operating range or engine emissions system fault. Follow DTC procedure or see your authorized servicing dealer.

DX,AFTRTREAT,INDCATRS-19-12FEB18

## Required Machine Stop Warning

### Machine Stop Mandate Occurs



RG22491—UN—21AUG13

**IMPORTANT:** In some situations, machine engine power may be reduced as described. On notification, immediately place the machine in a safe state and or move it to a safe location. A mandated machine stop can only be removed by a service technician.

Engine Emissions System Malfunction Indicator illuminates when an emission-related fault occurs.



RG22492—UN—21AUG13

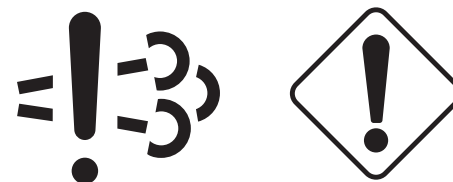
Warning Indicator illuminates when a condition exists which requires operator action.



RG22493—UN—21AUG13

Engine Stop Indicator illuminates when a condition exists which requires immediate operator action and service.

### Emission System Fault Has Occurred



RG26361—UN—04SEP14

30 minutes remaining, Engine Emissions System Malfunction and Warning Indicators are illuminated and alarm sounds to warn operator of emissions-related fault. "Less than 30 minutes to Power Restriction" displayed on machines with display.

- Engine power is normal.
- Machine operation is normal.
- Place machine in a safe state.
- Contact service provider.



RG26972—UN—26MAR15

20 minutes remaining, Engine Emissions System Malfunction and Engine Stop Indicators are illuminated and alarm sounds to warn operator of emissions-related fault. "Less than 20 minutes to Power Restriction" displayed on machines with displays.

- Engine power and torque are reduced.
- Key Off - Key On will temporarily provide full power.
- Place machine in a safe state.
- Contact service provider.



RG26972—UN—26MAR15

2 minutes or less remaining, Engine Emissions System Malfunction and Engine Stop Indicators are illuminated and alarm sounds to warn operator of emissions-related fault which has not been corrected. "Power Restriction" displayed on machines with displays.

- Engine power is idle only.
- Place machine in a safe state.
- Contact service provider.

DX,MACHSTOPWARN,AG-19-02OCT15

## Starting the Engine



H119917—UN—02NOV16

- A—Multi-Function Lever  
B—Header Engage Switch  
C—Separator Engage Switch

**CAUTION:** Before starting engine, make sure that everyone is clear of machine. Sound horn to warn others.

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove exhaust fumes from area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open doors and get outside air into area.

1. Move multi-function lever (A) to neutral position.
2. Verify that header engage switch (B) and separator engage switch (C) are OFF.



Key Switch

H127222—UN—26SEP19

**CAUTION:** Sound horn before starting engine to warn others to stay clear from machine.

To avoid the possibility of personal injury or death, start engine **ONLY** from the operator's seat. Do not start engine by shorting across starter terminals. Machine starts in gear if bypassed.

**IMPORTANT:** To prevent starter damage, do not operate starter for more than 30 seconds at a time. If engine does not start, wait at least 2 minutes before trying again.

**NOTE:** If temperature is below 4°C (40°F), it may be necessary to use cold weather starting aid. See Cold Weather Starting Aid in Operating the Engine section in the Operator's Manual.

When the key switch is turned to **START**, a delay of a couple of seconds will occur. This allows control units to power up, relays to close, and starter solenoid to energize.

Decal under the storage box lid on the armrest shows engine starting information.

3. Sound horn and turn key switch on the steering column to **START** position.

Key positions are:

First Position	OFF
Second Position	Run
Third Position	Start

**NOTE:** Diagnostic Trouble Code (DTC) displays if a stop engine code appears on display. Display stops normal functions, indicating a problem that requires the machine to be stopped and the problem corrected immediately. Codes are displayed until the problem is resolved. If the problem cannot be resolved, see your John Deere dealer.

4. Release key after engine starts and let engine run at slow speed for 5 minutes to warm oil.

MH69740,000084F-19-13FEB20



## Stopping the Engine



H119918—UN—02NOV16

- A—Multi-Function Lever  
B—Slow Speed Engine Switch  
C—Header Engage Switch  
D—Separator Engage Switch

1. Lower header or reel completely to ground.
2. Move multi-function lever (A) to neutral position.
3. Press slow speed engine switch (B).
4. Shut OFF header engage switch (C) and separator engage switch (D).

**IMPORTANT: Cooling of turbocharger and some engine parts is provided by engine oil. Stopping a hot engine might cause damage to these parts.**

5. Before stopping an engine that was operating at working load, idle engine 2—3 minutes to allow turbocharger to cool.

**CAUTION:** Set park brake and remove key before leaving machine.

6. Turn the key switch to the OFF position.

**IMPORTANT: Final Tier 4/Stage V: Do not disconnect battery for at least 90 seconds after machine is shut OFF. Selective Catalyst Reduction (SCR) system automatically purges lines of Diesel Exhaust Fluid (DEF) during this time, immediately after machine is shut OFF. If adequate time is not allowed for lines to be purged, any fluid remaining in lines can crystallize and plug lines. In freezing weather, fluid freezes and possibly burst lines.**

OUO6075,0004931-19-07JUN18

## Handle Starting Fluid Safely



TS1356—UN—18MAR92

**CAUTION:** Starting fluid is highly flammable. DO NOT use near fire, sparks, or flames. Read CAUTION information on container. Protect container against damage. DO NOT carry extra or empty cans inside cab.

If starting fluid is not used for several days, remove can. Check fluid and valve operation by reinstalling and depressing spray nozzle. If no fluid is emitted, use a new can.

To prevent accidental discharge when storing the pressurized can, keep cap on container. Store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.

OUO6075,0000585-19-17MAY10

## Cold Weather Starting Aid (If Equipped)

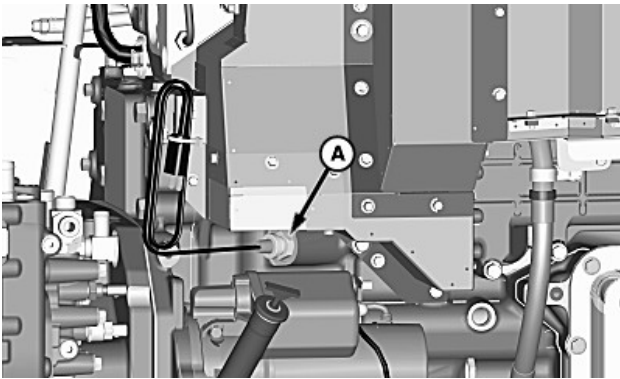
*NOTE: The starting aid is software controlled.*

1. Turn the key switch to start the engine and if the software determines that starting aid is needed, it injects starting aid.
2. When the engine starts, release the key switch.

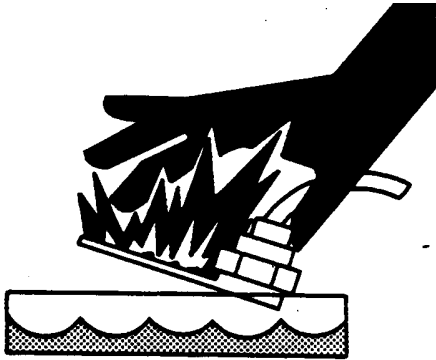
**IMPORTANT: To ensure proper lubrication, operate engine at slow speed with no load for 1—2 minutes. Extend this period to 2—4 minutes when operating at temperatures below freezing.**

MH69740,0000850-19-06FEB20

## Coolant Heater



H127421—UN—16SEP19



TS210—UN—23AUG88

A—Coolant Heater

**⚠ CAUTION:** To avoid shock or hazardous operation, always use a three-wire heavy-duty electrical cord (minimum gauge 10 AWG and no longer than 7.6 m [25 ft]) equipped with three connectors. If a two- or three-prong adapter is used at the wall receptacle, always connect the green wire to a good ground.

Before connecting the heater to the power source, be sure that element is immersed in coolant. **NEVER** energize the heater in the air. Doing so can cause the element sheath to burst, causing personal injury.

Coolant heater (A) mounts in the freeze plug opening (front side or rear side of engine). By warming the engine coolant, the heater reduces oil drag, eases starting, and shortens warm-up time.

### Coolant Heater Types

- 1000 W (110 V)
- 1000 W (220 V) (Export Machines)

MH69740.0000851-19-06FEB20

# CommandCenter™ Display Information

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## Generation 4 Display

For additional information on Generation 4 Display hardware and software functionality, reference the Generation 4 Display Operator's Manual and the Help Center application on the display. To obtain a copy of the Operator's Manual, contact your dealer, use the Help Center application on the display, or visit [techpubs.deere.com](http://techpubs.deere.com).

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DX,PC,DISPLAY,REFERENCE-19-21MAY20

# CommandCenter™ Display Applications

## CommandCenter™ Display Applications

The following information contains the Onscreen Help for each application specific to this machine. This information is also available on the CommandCenter™ display. The section titles of the Operator's Manual match the names of the applications found on the display. To find a feature described in the Operator's Manual on the display, locate the section title at the top of the page. Access the application with the same name on the display.

For information on how to navigate to the desired application on the display, refer to the Access information at the beginning of each section.

N0LMWLO.00001B7-19-05FEB20

## Onscreen Help Navigation

There are three ways to access Onscreen Help through the Generation 4 CommandCenter™ display:

### Access Contextual Help



Help Icon

T8T8739—UN—20JAN20

The help icon is found in the title bar of most pages of the on-screen display. Select the help icon for quick access to information about the functions currently being displayed on-screen.

### Access Help Center



Help

T8T8742—UN—20JAN20

Books in the Help Center are organized according to applications found in the display menu. In addition to specific application help, there are books in the list with information about the display, machine, and implements. These books contain additional content not found in application books and cannot be accessed using contextual help.

To access the Help Center, select Help from the shortcut bar at the bottom of the run page.

### Alternative Procedure to Access Help Center



Menu

H113668—UN—22OCT15

1. Select Menu from the shortcut bar at the bottom of the run page.



Applications

T8T8741—UN—20JAN20

2. Select the Applications tab.



Help

T8T8740—UN—20JAN20

3. Select Help.

### Searching Help Center

Use the search bar to search the Help Center for words or phrases.



Search Bar

H128813—UN—05FEB20

**Search Bar**— Select to enter text in the search bar.



Search

H128815—UN—05FEB20

**Search**— Select to search for help pages containing the search bar text.



Clear

H128814—UN—05FEB20

**Clear**— Delete the text in the search bar.

### Browsing Help Center



Back Button

H128817—UN—05FEB20



Forward Button

H128818—UN—05FEB20

Navigate forward and back to previously viewed pages. These buttons work similar to a web browser.



Help Contents

H128816—UN—05FEB20

Select the Help Contents button to open a complete list of books in the Help Center and browse for more information.

AZ06166,0000739-19-05FEB20

## Alerts and Messages

Display software contains many different alerts and messages designed to notify you of safety warnings, service warnings, hazardous or dangerous conditions, and general messages.



Example Alert

T8T8743—UN—21JAN20

**Alert**— a display window that is normally triggered by a diagnostic trouble code (DTC) and communicates the DTC information to you.



Information Alert

N148316—UN—21JAN20

**Information Alert**— a condition has been detected that may degrade performance of certain functions. The machine or equipment can continue to operate without damage. You should monitor the condition and consider taking the recommended action.



Service Alert

N148317—UN—21JAN20

**Service Alert**— a condition exists which requires operator action to avoid damage, a potential hazard, or significant performance reduction. The machine or equipment may be damaged or significant performance reduction may occur if action is not taken. You should operate in a different manner or service the equipment.



Stop Alert

N148318—UN—21JAN20

**Stop Alert**— a serious or hazardous condition exists which requires operator action. The machine or equipment is being damaged. Primary function cannot be continued or must stop due to a legal requirement. You should stop the engine or system immediately. If the engine is off, do not start the engine.

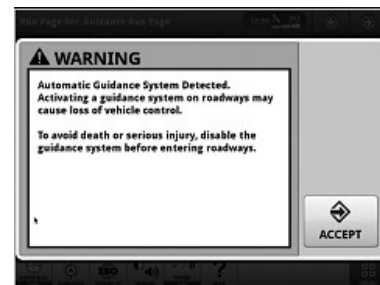


Example Message

N148319—UN—21JAN20

**Message**— a user interface element that communicates information to you and prompts you for a response. It may display as a small or full-screen window.

- Example: Are you sure you want to exit the new track creation sequence?



Example Safety Warning

N148320—UN—21JAN20

**Safety Warning**— a user interface element that communicates a warning to you and requires you to accept the warning before continuing. It may display as a small or full screen window.

- Example: Activating a guidance system on roadways may cause loss of vehicle control.



N148321—UN—21JAN20

*Example Window Shade Message*

**Window Shade Message**— a user interface element that drops down from the top of the screen to communicate a message to you. It usually goes away after a few seconds so that it does not block the user interface.

- Example: Communication to ISOBUS device lost. If you did not disconnect the device on purpose, check harness connection.

AZ06166,000073A-19-06FEB20

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# Controls Setup Application

## Access Controls Setup

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



Controls Setup

H118152—UN—20JAN17

#### 3. Controls Setup

### Access Application Through Navigation Bar:



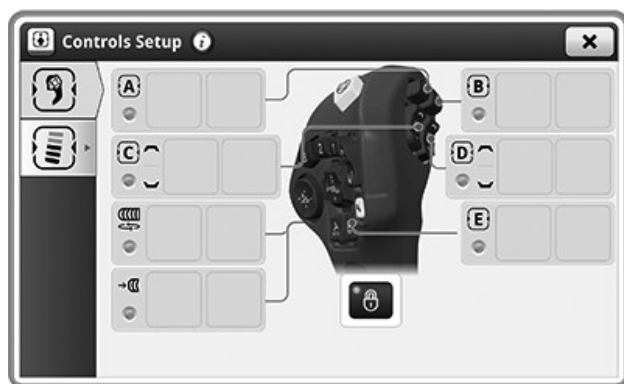
Controls Setup Application Button

H118151—UN—20JAN17

Press Controls Setup button on navigation bar below display.

N0LMWLO,00000D3-19-22NOV19

## Controls Setup Overview



Controls Setup

H119897—UN—20JAN17

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Controls Setup application is used to make new assignments or access custom presets that you previously configured on the Multi-Function Lever or the CommandARM™.

*NOTE: Controls Setup contains no default assignments; the Multi-Function Lever and CommandARM™ reset to a locked state upon key cycle.*

*NOTE: Display must be booted in order for you to disengage the Control Group locks for function assignment. Control Group refers to the reconfigurable buttons on both the Multi-Function Lever and CommandARM™.*

### Alignment Tabs Available in the Controls Setup Application:



Multi-Function Lever Tab

H118141—UN—20JAN17

Multi-Function Lever— select to access the Multi-Function Lever presets.



CommandARM™ Tab

H118139—UN—20JAN17

CommandARM™— select to access the CommandARM™ presets.



Highlighted Tab

H118169—UN—20JAN17

**Highlighted Tab**— indicates which preset is selected.

*NOTE: The on-screen Lock Indicator is illuminated whenever the displayed control group is locked with the Control Group Lock button on the CommandARM™. Applications or Functions setup will not operate.*

CommandARM is a trademark of Deere & Company



Lock Indicator

H118140—UN—20JAN17

**Lock Indicator**— illuminates to indicate that the Control Group Lock button is locked.



Close

H116648—UN—19DEC16

Select to close the Controls Setup application.

NOLMWLO,00000D4-19-25NOV20

## Multi-Function Lever - Controls Setup

Multi-Function Lever Controls Setup is used to assign Applications and Functions to buttons on the Multi-Function Lever.

**Items Accessible on the Multi-Function Lever Controls Setup Page:**



Multi-Function Lever

H118141—UN—20JAN17

**Multi-Function Lever**— allows you to make assignments to the buttons on the Multi-Function Lever.



Programmable Button A

H118143—UN—20JAN17



Programmable Button B

H118147—UN—20JAN17



Programmable Button E

H118149—UN—20JAN17

**Buttons A, B, and E**— are used for applications that require you to select from single position assignments.



Programmable Button C

H118144—UN—20JAN17



Programmable Button D

H118148—UN—20JAN17

**Buttons C and D**— are used for applications that require you to select from multiple positions, to increase or decrease a value, or to make a left-hand or right-hand adjustment.



Scroll Wheel

H118145—UN—20JAN17



Scroll Press Button

H118146—UN—20JAN17

**Scroll Wheel and Scroll Press Buttons**— are used to select function assignments, increase or decrease a value, or make a left-hand or right-hand adjustment.



Lock Indicator

H118140—UN—20JAN17

**Lock Indicator**— illuminates to indicate that the Control Group Lock button is locked.

NOLMWLO,00000D5-19-25NOV20

## Multi-Function Lever

Multi-Function Lever Controls Setup is used to assign Applications and Functions to buttons on the Multi-Function Lever.

**Procedure to Modify:**



Multi-Function Lever

H118141—UN—20JAN17

Select the Multi-Function Lever assignments tab.



Active State

H114656—UN—05JAN17

**NOTE:** As you select the Control Group Lock button all previously assigned custom controls are illuminated "Green" to indicate their active state, and the on-screen Lock Indicator is hidden.



Lock Indicator

H118140—UN—20JAN17

**NOTE:** If there are no custom assignments present, the application does not open upon unlocking the Control Group.





H118143—UN—20JAN17  
Programmable Button A



H118147—UN—20JAN17  
Programmable Button B



H118149—UN—20JAN17  
Programmable Button E

Buttons A, B, and E— are used for applications that require you to select from single position assignments.

**NOTE:** The on-screen Lock Indicator is present whenever the displayed Control Group is locked with the Control Group Lock button on the CommandARM™. Control Group locks re-engage on key cycle.



H118144—UN—20JAN17  
Programmable Button C



H118148—UN—20JAN17  
Programmable Button D

Buttons C and D— are used for applications that require you to select from multiple positions, to increase or decrease a value, or to make a left-hand or right-hand adjustment.



H118145—UN—20JAN17  
Scroll Button



H118146—UN—20JAN17  
Scroll Press Button

**NOTE:** The Scroll Button bypasses the "Select Application" list, offering a limited and distinct number of functional options.

**Scroll Button—** is used to select function assignments, increase or decrease a value, or make a left-hand or right-hand adjustment.

**NOTE:** Assigning functions to either the Scroll Button "roll" or "press" action works the same as other assignments.



Lock Indicator

**Lock Indicator—** illuminates to indicate that the Control Group Lock button is locked.



Close

H116648—UN—19DEC16

Select to close the Controls Setup application.

NOLMWLO,00000D6-19-25NOV20

## CommandARM™ - Controls Setup

CommandARM™ Controls Setup is used to assign Application and Functions to the CommandARM™.

**Items Accessible on the CommandARM™ Controls Setup Page:**



CommandARM™ Button

H118139—UN—20JAN17

**CommandARM™ Button—** allows you to make assignments to the buttons on the CommandARM™.



H118159—UN—20JAN17  
Programmable Button 1



H118161—UN—20JAN17  
Programmable Button 2

**Buttons 1 and 2—** are used for applications that require you to select from multiple positions, to increase or decrease a value, or to make a left-hand or right-hand adjustment.



H118160—UN—20JAN17  
Programmable Button 3



H118162—UN—20JAN17  
Programmable Button 4

**Buttons 3 and 4—** are used for applications that require you to select from single position assignments.



Lock Indicator

H118140—UN—20JAN17

**Lock Indicator—** illuminates to indicate that the Control Group Lock button is locked.

NOLMWLO,00000D7-19-25NOV20

## CommandARM™

CommandARM™ Controls Setup is used to assign Application and Functions to the CommandARM™.

### Procedure to Modify:



CommandARM™

H118139—UN—20JAN17

Select the CommandARM™ assignments tab.



H114656—UN—05JAN17  
Active State



H118140—UN—20JAN17  
Lock Indicator

**NOTE:** When you select the Control Group Lock button, all previously assigned custom controls are illuminated "Green" to indicate their active state, and the on-screen Lock Indicator is hidden.

**NOTE:** If there are no custom assignments present, the application does not open upon unlocking the control group.



H118159—UN—20JAN17  
Programmable Button 1



H118161—UN—20JAN17  
Programmable Button 2

**Buttons 1 and 2—** are used for applications that require you to select from multiple positions, to increase or decrease a value, or to make a left-hand or right-hand adjustment.



H118160—UN—20JAN17  
Programmable Button 3



H118162—UN—20JAN17  
Programmable Button 4

**Buttons 3 and 4—** are used for applications that require you to select from single position assignments.

**NOTE:** The on-screen Lock Indicator is present whenever the displayed Control Group is locked with the Control Group Lock button on the CommandARM™. Control Group locks re-engage on key cycle.



Lock Indicator

H118140—UN—20JAN17

**Lock Indicator—** illuminates to indicate that the Control Group Lock button is locked.



Close

H116648—UN—19DEC16

Select to close the Controls Setup application.

NOLMWLO,00000D8-19-25NOV20

## Create Single Position Assignments

Buttons A and B or 3 and 4 allow you to assign and activate your preferred Applications, then make Function assignments.

**NOTE:** For additional Application and Function information, select the Help Contents button.

### Procedure to Modify:

Use Controls Setup reconfigurable buttons to personalize your machine and perform tasks quickly with the press of a button.

**NOTE:** The example shown is typical for making Application assignments. Select to view a list of available Application or Function assignments.

**Example:** This example will assign the AutoTrac™ Guidance application to button A.



Select Application

H118507—UN—20JAN17

1. Select to activate the Select Application display.



Remove Assignment

H118506—UN—20JAN17

**NOTE:** If an assignment is already present on the Control Setup display, the "Remove Assignment" option is placed at the top of the list. Select to close and clear the assignment.



H118156—UN—20JAN17  
AutoTrac™ Guidance



H118509—UN—20JAN17  
AutoTrac™ Guidance  
Selected

2. Select the AutoTrac™ Guidance application.



H118157—UN—20JAN17  
Center Track



H118510—UN—20JAN17  
Center Track Selected

3. Select Center Track function.

*NOTE: After selecting the function, the control assignment is made.*



Close

H116648—UN—19DEC16

4. Select to close the Controls Setup application.

SS43267,0000913-19-30MAY19

## Create Dual Position Assignments

Buttons C and D or 1 and 2 allow you to assign and activate your preferred Applications, then make Function assignments.

*NOTE: For additional Application and Function information, select the Help Contents button.*

### Procedure to Modify:

Use Controls Setup reconfigurable buttons to personalize your machine and perform tasks quickly with the press of a button.

*NOTE: The example shown is typical for making Application and Function assignments. Select to view a list of available Application or Function assignments.*

Example: This example will assign the Folding Unloading Auger Fold/Unfold function to button C. This will allow you to fold/unfold the auger tip any time you press button C.

*NOTE: Programmable buttons are rocker switches. They are programmed one way. Example: Left = down (close) and right = up (open).*



Select Application

H118508—UN—20JAN17

1. Select to activate the Select Application display.



Remove Assignment

H118506—UN—20JAN17

*NOTE: If an assignment is already present on the Control Setup display, the "Remove Assignment" option is placed at the top of the list. Select to close and clear the assignment.*



H118166—UN—20JAN17  
Folding



H118536—UN—20JAN17  
Folding Selected

2. Select the Folding application.



H118165—UN—20JAN17  
Unloading Auger Top  
Fold/Unfold



H118537—UN—20JAN17  
Folding Unloading Auger  
Fold/Unfold Selected

3. Select Folding Unloading Auger Fold/Unfold function.

*NOTE: After selecting the function, the control assignment is made.*



Close

H116648—UN—19DEC16

4. Select to close the Controls Setup application.

NOLMWLO,00000D9-19-16JAN20

## Scroll Button



Scroll Button

H118504—UN—20JAN17

Scroll Button is used to select Function assignments, increase or decrease a value, or make a left-hand or right-hand adjustment.

**NOTE:** Assigning functions to either the Scroll Button "roll" or "press" action works the same as other assignments.

SS43267,0000915-19-20JAN17

## Application Assignments

Allows you to assign your preferred Application and Functions.

### Application Assignments Available:

**NOTE:** Only application assignments available for your machine will appear.



AutoTrac

H118511—UN—20JAN17

**AutoTrac™ Guidance**— allows you to access functions to make guidance system adjustments.



Folding

H118515—UN—20JAN17

**Folding**— allows you to access functions to Fold/Unfold the Folding Unloading Auger and to Fold/Unfold a Folding Head.



Header

H118514—UN—20JAN17

**Header**— allows you to access functions to adjust front-end equipment.



Residue Management

H118517—UN—20JAN17

**Residue Management**— allows you to access the residue management functions.



Engine

H127004—UN—26SEP19

**Engine**— allows you to access the engine functions.



Display

H118512—UN—20JAN17

**Display**— allows you to access the display.



Transmission

H118516—UN—20JAN17

**Transmission**— allows you to access the transmission functions.



Grain Handling

H127017—UN—26SEP19

**Grain Handling**— allows you to access the grain handling functions.



Combine Advisor™

H128144—UN—17JAN20

**Combine Advisor™**— allows you to access the Combine Advisor™ functions.

N0LMWLO,00000DA-19-25NOV20

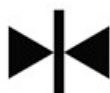
## Function Assignments

The programmable and Scroll buttons allow you to make function assignments, select from multiple positions, to increase or decrease a value, or to make a left-hand or right-hand adjustment. Use the Scroll Button to assign function assignments.

*NOTE: For additional Application and Function information, select the Help Contents button.*

*NOTE: Only function assignments available for your machine will appear.*

### AutoTrac™ Guidance Function Assignments Available:



Center Track

H118518—UN—20JAN17

**Center Track**— select to establish a new track.



Shift Track

H118519—UN—20JAN17

**Shift Track**— select to make left-hand or right-hand adjustments to your track.



Swap Track

H118520—UN—20JAN17

**Swap Track**— select to change from the current guidance system track you are using and change to the next track.

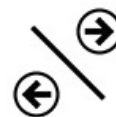
### Display Function Assignments Available:



Close Overlay

H118521—UN—20JAN17

**Close Overlay**— select to close the overlay.



Run Page Swap

H118522—UN—20JAN17

**Run Page Swap**— select to change the displayed run page to the next or previous page in the system.

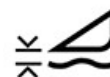
### Header Function Assignments Available:



Reel Speed

H127006—UN—26SEP19

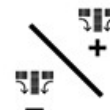
**Reel Speed**— select to change the speed of the reel or the belt pickup as needed.



AHHC Encoder

H118525—UN—20JAN17

**Automatic Header Height Control (AHHC) Encoder**— select to adjust the header height.



Draper Belt Speed

H118526—UN—20JAN17

**Draper Belt Speed**— select to increase or decrease the draper belt speed.



Draper Belt Speed Slow Down

H118527—UN—20JAN17

**Draper Belt Speed Slow Down**— select to slow down the draper belt speed.



Feeder House Tilt

H118528—UN—20JAN17

**Feeder House Tilt**— select to increase or decrease the angle of the feeder house tilt frame.



*Draper Platform Tilt*

H118530—UN—20JAN17

**Draper Platform Tilt**— select to tilt the draper platform up and down.



*Belt Pickup Speed*

H127008—UN—26SEP19

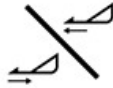
**Belt Pickup Speed**— select to adjust belt pickup speed.



*Gauge Wheel Height*

H127007—UN—26SEP19

**Gauge Wheel Height**— select to adjust the gauge wheel height.



*Cutterbar Extend/Retract*

H118529—UN—20JAN17

**Cutterbar Extend/Retract (Extendable Platform Headers Only)**— select to extend or retract the cutterbar.

**Folding Function Assignments Available:**



*Folding Unloading Auger*

H118532—UN—20JAN17

**Folding Unloading Auger**— select to Fold/Unfold the Folding Unloading Auger.



*Folding Head*

H118533—UN—20JAN17

**Folding Head**— select to Fold/Unfold the Folding Head.



*Platform Stow/Deploy*

H127013—UN—26SEP19

**Platform Stow/Deploy**— select to stow or deploy the platform.

**Transmission Function Assignments Available:**



*ProDrive*

H118534—UN—20JAN17

**ProDrive™ Speed Setpoint**— select to increase or decrease the transmission setpoint.

**Residue Management Function Assignments Available:**



*Residue Direction Swap*

H118535—UN—20JAN17

**Residue Direction Swap**— select to change the direction of the residue discharge from one side to the other side.

**Engine Function Assignments Available:**



*Air Compressor*

H127005—UN—26SEP19

**Air Compressor**— select to enable or disable the air compressor.

**Machine Sync Function Assignments Available:**



*Machine Sync Nudge Left/Right*

H127014—UN—26SEP19

**Machine Sync Nudge Left/Right**— select to nudge left or right.



*Machine Sync Nudge Fore/Aft*

H127015—UN—26SEP19

**Machine Sync Nudge Fore/Aft**— select to nudge fore or aft.

**Grain Handling Function Assignments Available:**



H128678—UN—28JAN20

*Adjustable Spout Fold/Unfold*

**Adjustable Spout Fold/Unfold**— select to fold or unfold adjustable spout.

**Combine Advisor™ Function Assignments Available:**



H128145—UN—17JAN20

*HarvestSmart™ Pause/Resume*

**HarvestSmart™ Pause/Resume**— select to pause or resume HarvestSmart™ operation.

N0LMWLO,00000DB-19-25NOV20

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# Residue Management Application

## Access Residue Management

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



Residue Management

H114082—UN—03JAN17

#### 3. Residue Management

### Access Application Through Navigation Bar:



Residue Management Application Button

H116635—UN—03JAN17

Press Residue Management button on navigation bar below display.

N0LMWLO,00000DC-19-26NOV19

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Residue Management allows you to adjust residue distribution as desired based on machine configuration.

### Items Accessible on Residue Management Main Page:

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Residue Mode

H131657—UN—01DEC20

Residue Mode— select between spreading and premium windrowing functions.



Chopper Position

H116639—UN—03JAN17

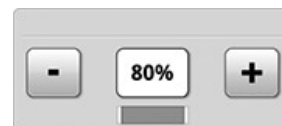
Chopper Position— shows current position of chopper.



Knife Bank

H126977—UN—26SEP19

Knife Bank— slides in and out for better chopping quality of residue or to conserve machine power.

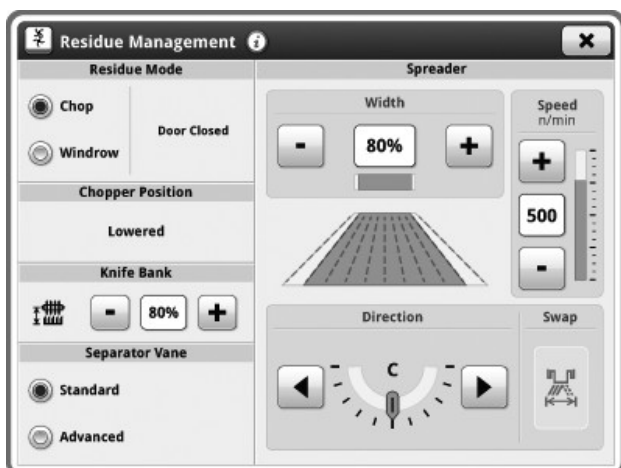


Width

H116988—UN—03JAN17

Width— controls the spread width of chaff and straw by adjusting spreader speed or shroud position based on machine configuration.

## Residue Management



Residue Management

H128117—UN—21NOV19





Speed

H116987—UN—04JAN17

Speed— increases or decreases spreader speed.



Direction

H117001—UN—03JAN17

Direction— changes chaff and straw spreading direction.



Swap

H118304—UN—03JAN17

Swap— quickly adjusts the residue dispersal in the opposite direction.



Total Loss Measurement

H113730—UN—30JAN17

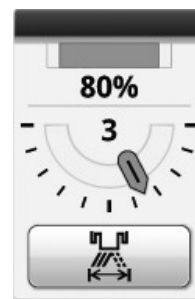
Total Loss Measurement— mode which allows you to drop all residue in a windrow for accurate loss measurement.

Out of Cab Adjustments— mechanical adjustments made outside of the cab.

### Run Page Modules

Modules for this application can be added to run pages using Layout Manager.

Example:



Spread

H128561—UN—20JAN20

**Spread**— controls the width and direction of chaff and straw distribution.

*NOTE: Different modules can be available for your application.*

### Shortcut Keys

Shortcut keys for this application can be added to the shortcut bar using Layout Manager.

Example:



Residue

H116642—UN—03JAN17

**Residue**— use for quick access to change residue dispersal direction. Light is illuminated toward direction of residue dispersal. If no illumination then residue dispersal is centered.

*NOTE: Different shortcut keys can be available for your application.*

N0LMWL0,00000DD-19-24NOV20

### Residue Mode

Select Spread or Windrow Residue Mode option for desired straw and chaff processing.

#### Select Windrow When:

You want to leave a windrow of residue behind the machine.

**Machines Equipped With Premium Residue System Only:** In Windrow mode straw bypasses the chopper while chaff is still being chopped and spread. The straw discharges from the separator into a windrow behind the machine. This leaves a cleaner windrow.

#### Select Spread When:

You want to send residue through the chopper to minimize residue length.

#### Windrow Setup:

**Non-Premium Residue System:** When placed into "Windrow" mode, all other spreader settings are unable to be changed.

*NOTE: Settings return to previous states when changed back to "Spread" mode.*

*NOTE: See Operator's Manual for more information on the following out of cab adjustments.*

**CAUTION:** Shut down the machine prior to performing the recommended adjustments.

1. Place cob deflector in small grains position.
2. Shift chopper drive into neutral position.



3. Select Windrow or place chopper in raised position.

*NOTE: When harvesting low residue volume crops, lower cob deflector into corn position.*



Status indicator shows status of door.

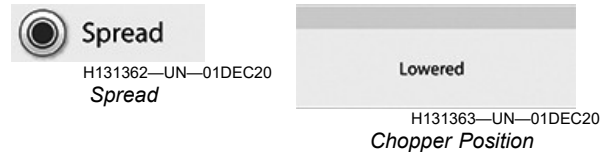


**Premium Residue ONLY:** When an error occurs during a close/open process, the system attempts to return to previously selected state prior to your change request. If it is unable to successfully reach that prior state, the "Tailboard Error" message is displayed, and you must make a mode choice again.

#### Spread Setup:

*NOTE: Spread automatically closes the chop-to-drop door. The chopper cuts the straw discharged from the separator when the chop-to-drop door is closed.*

*NOTE: Separator must be OFF to change the position of the chop-to-drop door.*



Select Spread or place chopper in lower position.

N0LMWLO,00000DE-19-24NOV20

## Separator Vane

Change separator vane position to increase grain savings and improve straw quality.

*NOTE: Separator must be OFF to change the position of the Separator Vane.*

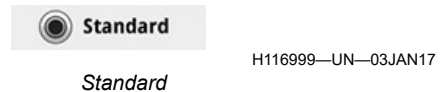
#### Select Standard When:

- You want to reduce grain loss.
- You want to improve crop separating ability.

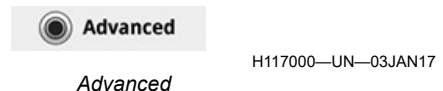
#### Select Advanced When:

- You want to improve straw quality.
- You want to reduce power consumption.

#### Procedure to Modify:



Select Standard.



Select Advanced.

*NOTE: Running separator vanes in advanced position may increase grain losses in certain crops and conditions. Crop dwell time in separator is reduced to improve straw quality.*

N0LMWLO,00000DF-19-26NOV19

## Width

Width adjusts the spread range for chaff and straw by controlling spreader speed or shroud position depending on machine configuration.

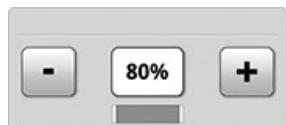
*NOTE: Adjust the spread width setting before adjusting the spreader speed.*

### Modify When:

- Chopped material and chaff are not reaching the full width of the cut mode by header. Increase width.
- Chopped material and chaff are being thrown onto the uncut crop. Decrease width.

### Procedure to Modify:

1. Turn on the machine.
2. Engage separator.



Width

H116988—UN—03JAN17

**NOTE:** Current setting is displayed by bar gauge.

3. Select plus (+) to increase or minus (-) to decrease desired percentage.



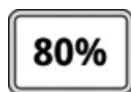
Width Percentage

H118119—UN—03JAN17

**NOTE:** When changes are made to the width percentage, the spreader diagram changes as well.

### Alternative Procedure to Modify:

**NOTE:** When width is changed, the bar gauge representing it turns yellow to match the yellow bounding box of the input field.



Input Field

H113699—UN—03JAN17

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial

2. Use Navigation Bar or Armrest Adjustment Dial to select desired percentage.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.



Close

H114674—UN—06FEB19

3. Select to close.

N0LMWLO,00000E0-19-26NOV19

### Speed

Spreader speed adjustments allow for optimal distribution of material across the width of the spread.

**NOTE:** Adjust the spread width setting before adjusting the spreader speed.

### Modify When:

- Changing crop type.
- Size of material exiting chopper is getting larger or smaller.
- Changing header size.
- Compensating for blowing wind.

### Procedure to Modify:

1. Turn on the machine.
2. Engage separator.

**NOTE:** Current setting is displayed by bar gauge.



Speed

H116987—UN—04JAN17

3. Select plus (+) to increase or (-) to decrease desired speed.

**NOTE:** When changes are made to the spreader speed, the spreader width diagram will not change. It remains filled to previous width setting regardless of spreader speed adjustments.

### Allowable Settings for Corn:

Minimum: 350

Maximum: 550

Default: 500

Increment: 10

### Allowable Settings for Small Grain:

Minimum: 600

Maximum: 800

Default: 700

Increment: 10

### Alternative Procedure to Modify:

**NOTE:** When speed is changed, the bar gauge representing it turns yellow to match the yellow bounding box of the input field.



Input Field

H118126—UN—03JAN17

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial

2. Use Navigation Bar or Armrest Adjustment Dial to select desired speed.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.



Close

H114674—UN—06FEB19

3. Select to close.

N0LMWLO,00000E1-19-26NOV19

- Field changes.
- Terrain changes.

### Procedure to Modify:



Direction

H117001—UN—03JAN17

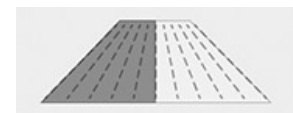
Select to adjust the direction left or right.

**NOTE:** When changes are made to the spread direction, the spreader diagram changes as well.

**NOTE:** If direction is not known, the center marker disappears and dashes appear for the position value.



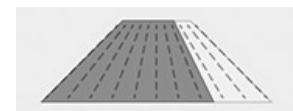
H128562—UN—20JAN20  
Direction



H118128—UN—03JAN17  
Width



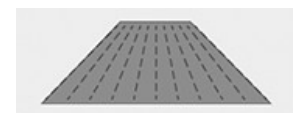
H128563—UN—20JAN20  
Direction



H118129—UN—03JAN17  
Width



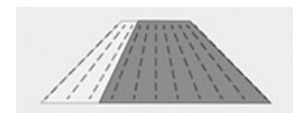
H128564—UN—20JAN20  
Direction



H118130—UN—03JAN17  
Width



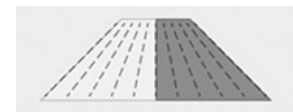
H128565—UN—20JAN20  
Direction



H118131—UN—03JAN17  
Width



H128566—UN—20JAN20  
Direction



H118132—UN—03JAN17  
Width

### Direction

Direction changes the direction of material exiting the chopper for wind compensation.

### Modify When:

- Wind speed changes.
- Wind direction changes.
- Machine direction changes.

### Alternative Procedure to Modify:



Input Field

H118138—UN—03JAN17

NOLMWLO,00000E3-19-26NOV19

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial

2. Use Navigation Bar or Armrest Adjustment Dial to select desired direction.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.



Close

H114674—UN—06FEB19

3. Select to close.

NOLMWLO,00000E2-19-20JAN20

## Swap

Swap allows you to quickly adjust the residue spread in the opposite direction to compensate for wind interference after making a 180 ° turn. Swap is a manual adjustment made by the operator as opposed to Auto Swap which is an automated adjustment.

**NOTE:** Swap is only available when the Direction adjustment is not in the center position.

### Modify When:

Wind is blowing residue and you want to swap residue direction.

### Procedure to Modify:



Swap

H118115—UN—03JAN17

Select to activate and deactivate.

**NOTE:** Messages for spread direction swapping appear whenever the Residue Management application is not open and a swap has been initiated.

## Out-of-Cab Adjustments

Adjustments must be made outside the cab to improve residue management and prevent damage of the machine. See your Operator's Manual for further crop settings and adjustment procedures.

**CAUTION:** Shut down the machine prior to performing the recommended adjustments.

### Out-of-Cab Adjustments Page:

**Knife Bank**— select a knife bank position to achieve desired residue length.

**IMPORTANT:** Knife bank must be fully disengaged for corn.

**NOTE:** The more engagement, the more power is consumed by the chopper.

**Chopper Drive Speed**— select high speed for small grains and soybeans and low speed for corn.

NOLMWLO,00000E4-19-24NOV20

## Knife Bank

Knife bank is an optional, in-cab adjustable system which slides the knife bank in-and-out for better chopping quality or to save machine power.

### Modify When:

- You want to improve chopping quality. Increase the knife bank setting to improve chopping quality.
- You want to conserve power for use elsewhere on the machine. Reduce the knife bank setting to conserve power.

**NOTE:** This optional system is available only if the machine is equipped with a chopper option.

### Procedure to Modify:



Knife Bank Adjustment

H126977—UN—26SEP19

**Knife Bank Adjustment**— the adjustment is in 25% increment and decrement sizes.



Increase Knife Bank

H126979—UN—26SEP19

**Increase Knife Bank**— select the increment button (plus symbol) to slide the knife bank inward.



Decrease Knife Bank

H126978—UN—26SEP19

**Decrease Knife Bank**— select the decrement button (minus symbol) to slide the knife bank outward, pulling the knives away from the chopper.

#### Active Cleanout Mode Procedure:

Active Cleanout Mode automatically cleans the knife bank by opening and closing the knife bank. Active Cleanout Mode is performed after the separator has been disengaged 25 times. Active Cleanout Mode cannot be adjusted.

NOLMWLO,00000E5-19-24NOV20

#### Auto Swap

Auto Swap automatically adjusts the residue spread in the opposite direction from what you have set after making a 180° turn.

#### Procedure to Modify:



Menu

H113668—UN—22OCT15

1. Select to open Menu.



Machine Settings

N119118—UN—23SEP16

2. Select Machine Settings tab.



Residue Management

H114082—UN—03JAN17

3. Select to open Residue Management.



Auto Swap ON/OFF

H125280—UN—01FEB19

4. Select to enable or disable Auto Swap.

**NOTE:** If Auto Swap is disabled, you must manually swap the spread direction.



Direction

H128567—UN—20JAN20

5. Select to adjust the direction left or right.

NOLMWLO,00001B6-19-24NOV20

#### Total Loss Measurement

Total Loss Measurement drops all residue in a windrow for accurate loss measurement with the premium residue configuration.

#### Total Loss Measurement Prerequisites:

Separator Status	Disengaged
Chopper Position	Fully Raised

#### Procedure Overview:



ON/OFF

H113730—UN—30JAN17

1. Select the ON/OFF button under Total Loss Measurement to open the procedure.

2. Follow the messages on-screen to complete all necessary adjustments prior to measurement.



Next

H127522—UN—08OCT19

3. Confirm the out-of-cab adjustments were completed by selecting Next.

a. Disassemble the rear curtain.

b. Raise the chopped fully.

c. Put the chopper gear case in neutral.

**IMPORTANT: Failure to put the chopper gear case in neutral will cause damage to the chop-to-drop door.**

- d. Assemble the rear curtain by fastening to the chop-to-drop door and chopper inlet.



*Cancel*

A92067—UN—16MAR18

Select the Cancel button to return to the residue management main page.



*Accept*

H127523—UN—08OCT19

4. Select the Accept button to continue with total loss measurement.



*Cancel*

A92067—UN—16MAR18

Select the Cancel button to return to the previous screen.



*OK*

H114654—UN—05JAN17

5. If all prerequisites have been met, select the OK button to enable Total Loss Measurement mode.

*NOTE: Any prerequisites not met will appear on-screen with an error symbol. OK button will become available once all requirements have been met.*



*Cancel*

A92067—UN—16MAR18

Select the Cancel button to return to the previous screen.

6. The screen will prompt you to engage the separator to begin total loss measurement.

PR79369,0000101-19-24NOV20

# Header Application

## Access Header

### Access Application Through Display:



Menu

H113668—UN—22OCT15

1. Menu



Machine Settings

N119118—UN—23SEP16

2. Machine Settings tab



Header

H113541—UN—19DEC16

3. Header

### Access Application Through Navigation Bar:



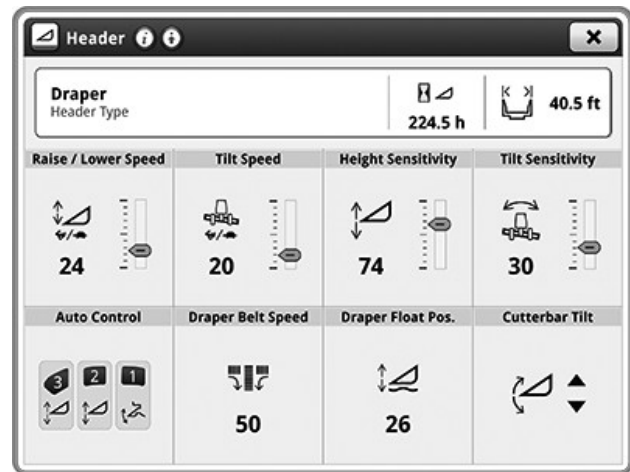
Header Application Button

H117904—UN—22JAN20

Press Header button on navigation bar display.

N0LMWLO,00000E6-19-26NOV19

## Header Main Page



Header

H120312—UN—20DEC16

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Header Main Page shows available features that can be adjusted for your attached header.

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*

### Items Accessible on Header Main Page:



Header Type

H116126—UN—19DEC16

**Header Details**— change header settings such as width, minimum reel speed, and row width.

### [Header Type]

Header Type

Header Type

H113542—UN—19DEC16

**Header Type**— automatically determined by the front end equipment attached.

*NOTE: If system does not recognize the type of header connected, Unknown Header is displayed.*



224.5 h

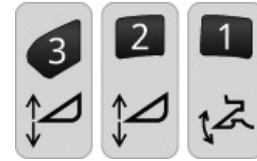
Hours

H113543—UN—19DEC16



**Hours**— number of hours per header type recorded by the combine.

*NOTE: Hours are stored on certain model year 2021+ headers. Hours are not editable on these headers.*



Auto Control

H127440—UN—26SEP19

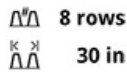
Auto Control— indicates status of which header configurations are enabled.



Cut Width

H113544—UN—19DEC16

**Cut Width**— measured width setting appears when platform type headers are detected.



Row Width

H116127—UN—19DEC16

**Width**— number of rows and row width settings appear when row type headers are detected.



Raise/Lower Speed

H127438—UN—26SEP19

Raise/Lower Speed— controls speed of feeder house raise/lower function when in manual mode.



Tilt Sensitivity

H127441—UN—26SEP19

Tilt Sensitivity— controls sensitivity to changes in terrain of the feeder house lateral tilt movements when in automatic sensing and automatic float modes.



Tilt Speed

H127442—UN—26SEP19

Tilt Speed— controls speed of lateral tilt movements when in manual mode.



Height Sensitivity

H127439—UN—26SEP19

Height Sensitivity— controls sensitivity to changes in terrain of header raise/lower in automatic mode.



Fore/Aft Tilt

H127443—UN—26SEP19

Fore/Aft Tilt— controls the angle of the front face of the feeder house.



Advanced Settings Icon

N118004—UN—22OCT15

Advanced Settings— allows you to access further adjustments and less common settings.



HydraFlex™ Pressure

H127472—UN—26SEP19

HydraFlex™ Pressure— controls cutterbar pressure for optimal ground following ability.



Draper Belt Speed

H127445—UN—26SEP19

Draper Belt Speed— controls the speeds of the side draper belts.



Deck Plate Spacing

H127448—UN—26SEP19

Deck Plate Spacing— displays the deck plate spacing.



Draper Float Position

H127444—UN—26SEP19

Draper Float Position— controls the pressure in the cylinders for the gauge wheel float arms.



Backshaft Speed

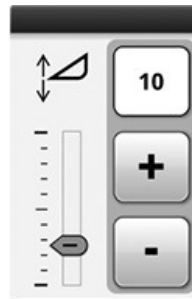
H127449—UN—26SEP19

Backshaft Speed— displays backshaft speed.

### Run Page Modules

Modules for this application can be added to run pages using Layout Manager.

Example:



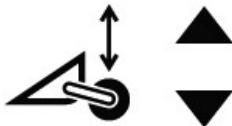
Height Sensitivity

H116668—UN—20DEC16

**Height Sensitivity**— controls sensitivity to changes in terrain of header raise/lower in automatic mode.

*NOTE: Different modules can be available for your application.*

NOLMWLO,00000E7-19-01DEC20



Gauge Wheels

H127473—UN—26SEP19

Gauge Wheels (If Equipped)— allows you to raise or lower gauge wheels on the hinged draper.



Cutterbar Tilt

H127446—UN—26SEP19

Cutterbar Tilt— controls the angle of the cutterbar in relation to the rest of the platform.

### Header Details

Header Details includes settings such as width, minimum reel speed, and row width.

*NOTE: Each header type has factory default settings for all header settings. Connecting a header of a given type for the first time automatically loads the factory default settings. You can change header settings while the header is connected. Connecting any header of the same type automatically uses settings for that header type, but will not automatically change the settings or hours.*

## Items Accessible on the Header Details Page:

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Width

H113523—UN—19DEC16

Width— set the cut width.



Width

H113525—UN—19DEC16

Width— set the number of rows.



Row Width

H113526—UN—19DEC16

Row Width— spacing between rows.



Work Recording

H113521—UN—19DEC16

Work Recording— set the recording stop height.



Hours

H113522—UN—19DEC16

Hours— number of hours per header type recorded.



Minimum Reel Speed

H113524—UN—19DEC16

Minimum Reel Speed— set the minimum reel speed.



Added Equipment

N118434—UN—22JAN20

**Added Equipment**— select to indicate to the system that the header has additional equipment not typically installed on the header.

Example:

If you have a corn head that normally does not have a reel installed, you would select this to tell the machine that a reel is installed.



Header Suspension Service Mode

H116669—UN—30JAN17

Header Suspension Service Mode— select to release pressure from the hinged draper suspension systems.

N0LMWLO,00000E8-19-01DEC20

## Width

Width allows the cut width to be changed when not utilizing full width of the header.

*NOTE: Width is not editable on certain model year 2021 + headers.*

## Modify When:

- Not utilizing full width of the header.
- Using for point rows.
- Changing header size.
- Changing cut width for AutoTrac™ and mapping purposes.

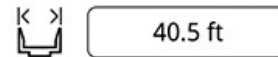
## Procedure to Modify:



Header Type

H116649—UN—19DEC16

1. Select Header Type screen area to open Header Details page.



Width

H116131—UN—19DEC16

2. Select to open number pad and enter desired cut width.



OK

H116132—UN—19DEC16

AutoTrac is a trademark of Deere & Company

3. Select OK to save value.



Close

H116648—UN—19DEC16

4. Select to close.

N0LMWLO,00000E9-19-24NOV20

## Width Corn Head

Width allows the number of rows to be changed when not utilizing all rows of the header.

**NOTE:** Width is not editable on certain model year 2021 + headers.

### Modify When:

- Not utilizing all rows of the header.
- Using for point rows.
- Changing the header size.
- Changing row width for AutoTrac™ and mapping purposes.

### Procedure to Modify:



Header Type

H116650—UN—19DEC16

1. Select Header Type screen area to open Header Details page.



Rows

H116171—UN—19DEC16

2. Select to open number pad and enter desired rows.



OK

H116132—UN—19DEC16

3. Select OK to save value.



Close

H116648—UN—19DEC16

4. Select to close.

N0LMWLO,00000EA-19-24NOV20

## Row Width

Row Width allows the spacing between rows to be changed.

**NOTE:** Row width is not editable on certain model year 2021+ headers.

### Modify To:

**NOTE:** Modifying row width affects yield mapping.

- Adjust row width spacing to match the header configuration.

### Procedure to Modify:



Header Type

H116650—UN—19DEC16

1. Select Header Type screen area to open Header Details page.



Row Width

H118576—UN—19DEC16

2. Select to open number pad and enter desired row width.



OK

H116132—UN—19DEC16

3. Select OK to save value.



Close

H116648—UN—19DEC16

4. Select to close.

N0LMWLO,00000EB-19-24NOV20

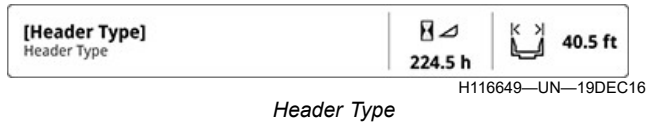
## Minimum Reel Speed

Minimum Reel Speed allows you to set the minimum speed at which the reel operates.

### Modify When:

- Picking up downed crop. Minimum speed varies based on condition and operator.

### Procedure to Modify:



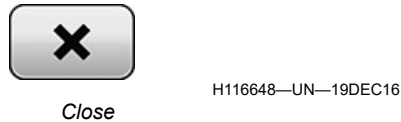
1. Select Header Type screen area to open Header Details page.



2. Select to open number pad and enter desired minimum reel speed.



3. Select OK to save value.



4. Select to close.

N0LMWLO,00000EC-19-26NOV19

## Work Recording

Work Recording allows you to set the stop height for turning recording ON/OFF.

*NOTE: Work Recording automatically turns OFF above preset height and turns ON below preset height, provided all other conditions are met (separator/header engaged, engine at high idle, and farm/field is set up).*

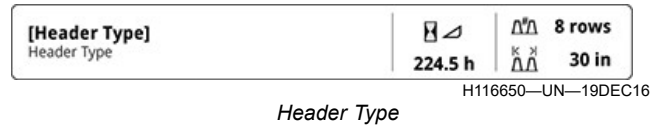
*NOTE: If Header Height Sensing or Feeder House Float are active, record stop height setting is irrelevant and Work Recording turns ON, provided all other conditions are met (separator/header engaged, engine at high idle, farm/field is set up).*

### Modify When:

- Changing crop conditions (taller vs. shorter).
- Changing header types.
- Changing fields and terrain.
- Recording stays on while out of crop or doesn't turn on when in crop.

### Procedure to Modify:

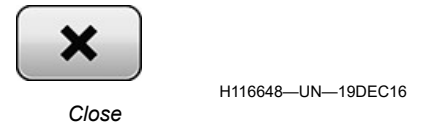
1. Raise or lower header to desired record stop height.



2. Select Header Type screen area to open Header Details page.



3. Select Set to Current height button.



4. Select to close.

N0LMWLO,00000ED-19-26NOV19

## Hours

Hours allows you to set the total number hours for the header type attached.

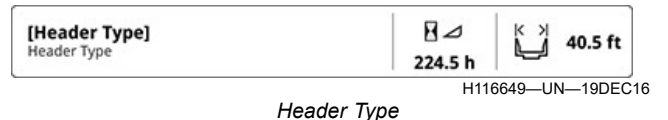
*NOTE: Combine stores hours by header type. If multiple headers of the same type are used on the same combine, you have to enter the appropriate hours for the attached header.*

*Hours are stored on certain model year 2021+ headers. Hours are not editable on these headers.*

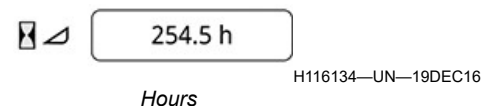
### Modify When:

- You want to track the amount of run time for a particular field or fields.
- You have multiple heads that may be moved to different combines.
- You want to zero the hours at the beginning of the season.

### Procedure to Modify:



1. Select Header Type screen area to open Header Details page.



2. Select to open number pad and enter desired hours.



OK

H116132—UN—19DEC16

3. Select OK to save value.



Close

H116648—UN—19DEC16

4. Select to close.

N0LMWLO,00000EE-19-24NOV20

## Raise/Lower Speed

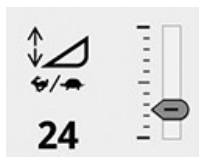
Raise/Lower Speed controls the speed which the feeder house raises or lowers when using the manual raise/lower buttons on the multi-function lever.

### Modify When:

*NOTE: Calibration is needed when changing header regardless of size and type unless previously calibrated.*

- Header size and type affect raise/lower speed.
- Increase Raise/Lower Speed if the header is slow to react to changing ground conditions.
- Decrease Raise/Lower Speed if the header over-compensates in changing ground conditions.
- Loading/unloading the header from trailer requires lower raise/lower speed.

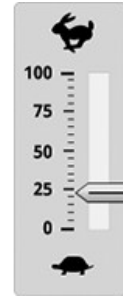
### Procedure to Modify:



Raise/Lower Speed

H113728—UN—19DEC16

1. Select screen area under Raise/Lower Speed to open Raise/Lower Speed page.



Slide Bar

H113513—UN—20DEC16

*NOTE: Slide bar displays current speed.*



Adjustment

H116141—UN—20DEC16

2. Select plus (+) to increase or minus (-) to decrease desired speed.

Minimum: 0

Maximum: 100

Default: 50

Increment: 1



Close

H116648—UN—19DEC16

3. Select to close.

### Alternative Procedure to Modify:



Input Field

H116140—UN—19DEC16

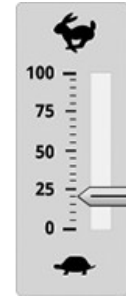
1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial



Slide Bar

H113514—UN—20DEC16

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

Minimum: 0

Maximum: 100

Default: 50

Increment: 1

N0LMWLO,00000EF-19-26NOV19

## Tilt Speed

Tilt Speed controls rate of the lateral tilt feeder house movements when in manual rate mode.

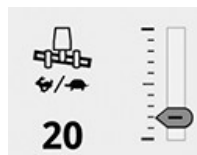
*NOTE: Manual Tilt Speed function only works on closed center hydraulic machines equipped with lateral tilt feeder house.*

### Modify When:

*NOTE: Calibration is needed when changing header regardless of size and type unless the specific header was previously calibrated.*

- Header size and type affect tilt speed.
- The header is slow to react to changing ground conditions. Increase Tilt Speed.
- The header overcompensates in changing ground conditions. Decrease Tilt Speed.
- Loading/unloading the header from trailer requires slower tilt speed

### Procedure to Modify:



Tilt Speed

H113545—UN—19DEC16

1. Select screen area under Tilt Speed to open Tilt Speed page.

*NOTE: Slide bar displays current speed.*



Adjustment

H116141—UN—20DEC16

2. Select plus (+) to increase or minus (-) to decrease desired speed.

Minimum: 0

Maximum: 100

Default: 50

Increment: 1



Close

H116648—UN—19DEC16

3. Select to close.

### Alternative Procedure to Modify:



Input Field

H116140—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial

NOTE: Slide bar displays current sensitivity.



Adjustment

H118578—UN—20DEC16

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

NOLMWLO,00000F0-19-26NOV19

## Height Sensitivity

Height Sensitivity controls the speed of which the feeder house will raise/lower in automatic mode to accommodate the terrain.

NOTE: Increasing sensitivity causes feeder house to respond faster to changing terrain features.

### Modify When:

- Header is slow to react to changing ground conditions. Increase Height Sensitivity.
- Header is leaving wavy stubble off the ground or pulsing up and down while on the ground. Decrease Height Sensitivity.

2. Select plus (+) to increase or minus (-) to decrease desired sensitivity.

Minimum: 0

Maximum: 100

Default: 50

Increment: 1

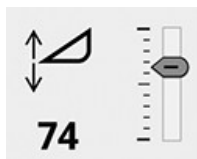
NOTE: Start with 50 and adjust in steps of 5. Avoid setting over 75 and under 25. Height sensitivity needs to be set lower when achieving higher ground speeds.



Close

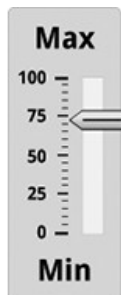
H116648—UN—19DEC16

### Procedure to Modify:



Height Sensitivity

H114074—UN—19DEC16



Slide Bar

H113515—UN—20DEC16

3. Select to close.

### Alternative Procedure to Modify:



Input Field

H116140—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial

1. Select screen area under Height Sensitivity to open Height Sensitivity page.

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.



- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

Minimum: 0

Maximum: 100

Default: 50

Increment: 1

**NOTE:** Start with 50 and adjust in steps of 5. Avoid setting over 75 and under 25. Height sensitivity needs to be set lower when achieving higher ground speeds.

NOLMWLO,00000F1-19-26NOV19

**NOTE:** Slide bar displays current sensitivity.



Adjustment

H116141—UN—20DEC16

## Tilt Sensitivity

Tilt Sensitivity controls the speed at which the feeder house tilts to accommodate changes in terrain. Increasing sensitivity causes feeder house to react faster.

**NOTE:** If operating 600F, 600FD, or 700FD HydraFlex™ Pressure settings may also affect header height sensitivity.

### Modify When:

- Header is slow to react to changing ground conditions. Increase Tilt Sensitivity.
- Header is leaving wavy stubble off the ground or pulsing up and down while on the ground. Decrease Tilt Sensitivity.

2. Select plus (+) to increase or minus (-) to decrease desired sensitivity.

Minimum: 0

Maximum: 100

Default: 50

Increment: 1

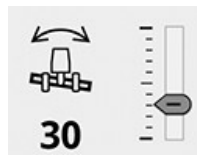
**NOTE:** Start with 50 and adjust in steps of 5. Avoid setting over 75 and under 25. Tilt sensitivity needs to be set lower for wider heads and when achieving higher ground speeds.



Close

H116648—UN—19DEC16

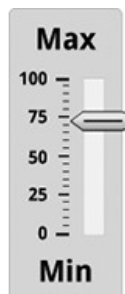
### Procedure to Modify:



Tilt Sensitivity

H113546—UN—19DEC16

1. Select screen area under Tilt Sensitivity to open Tilt Sensitivity page.



Slide Bar

H113515—UN—20DEC16

3. Select to close.

### Alternative Procedure to Modify:



Input Field

H116140—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



Navigation Bar Adjustment Dial

H115035—UN—14MAR16



Armrest Adjustment Dial

H115034—UN—28MAR16

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

NOLMWLO,00000F2-19-26NOV19

## Fore/Aft Tilt

Fore/Aft Tilt allows you to quickly move the feeder house face fore and aft to achieve optimal cutting performance of the header in challenging conditions.

**NOTE:** Fore/Aft Tilt minimum and maximum settings are different for each header type.

### Modify When:

- You want to prevent pushing or dragging wet or dense residual residue.
- You want to better attach or detach the header.
- You want to optimize conveying of crop material into the feeder house.

### Tilt Feeder House Fore:

- Picking up downed crop.
- Cutting closer to the ground.

### Tilt Feeder House Aft:

- Material is being pushed by the cutter bar. Move aft to reduce lost material.
- For standing crop, tilting aft can optimize feeding/conveying material into the machine.

### Procedure to Modify:

**NOTE:** If operating 600F, 600FD, or 700FD platforms, HydraFlex™ Pressure settings also affect header height sensitivity.



Fore/Aft Tilt

H116129—UN—19DEC16

1. Select screen area under Fore/Aft Tilt to open Fore/Aft page.



Adjustment

H116141—UN—20DEC16

2. Select plus (+) to increase or minus (-) to decrease desired position.

**NOTE:** Minimum and maximum settings will be affected by header type and calibration. See Calibrations application for more information on calibration procedures.



Close

H116648—UN—19DEC16

3. Select to close.

### Alternative Procedure to Modify:



Input Field

H116140—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



H115035—UN—14MAR16  
Navigation Bar  
Adjustment Dial



H115034—UN—28MAR16  
Armrest Adjustment Dial

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

NOLMWLO,00000F3-19-26NOV19

## Auto Header Control

Auto Header Control shows the status of Control Preview, Header Automation, and Resume Preferences.



Auto Control

H116962—UN—19DEC16

Select screen area under Auto Control to open.

**NOTE:** Auto Header Control icons change depending on how they are set up and which header is attached to the machine.

### Items Accessible on Auto Header Controls Page:

Control Preview— displays status of available features.

Header Automation— displays available automated functions.

Resume Preferences— displays available resume functions.

SS43267,00007EB-19-27JAN17

## Control Preview



Control Preview

H116968—UN—20DEC16

Control Preview displays status of available features.

**NOTE:** Header Automation and Resume features (listed as icons under the activation buttons 1, 2, and 3) activate when corresponding button is pressed.

SS43267,00007EC-19-26NOV19

## Header Automation

Enable or disable header automation functions.

**NOTE:** Some items below are only displayed if machine is equipped with the associated option.



Defaults

H116995—UN—19DEC16

**Defaults**— select to use defaults of header type connected.



Custom

H116995—UN—19DEC16

**Custom**— select to choose which automated systems you want to enable based on your personal operating preferences.

**NOTE:** ON/OFF toggles are unable to be switched until the "Custom" option is selected.



Alert

H116168—UN—19DEC16

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert icon button.



Height Resume

H116161—UN—19DEC16

**Height Resume**— select position of the feeder house relative to machine chassis and return to that position automatically.



Feeder House Float

H116160—UN—19DEC16

**Feeder House Float**— allows a rigid header to be operated in contact with the ground and maintain a set pressure.

### HydraFlex™ Pressure (Off Ground) Items



H113720—UN—19DEC16

Height Sensing (Off Ground)

Height Sensing (Off Ground)— select the position of the header relative to the ground and return to that position automatically.

### HyrdaFlex™ Pressure (On Ground) Items



H113720—UN—19DEC16

Height Sensing (On Ground)

Height Sensing (On Ground)— adjust cutterbar ground pressure and return to that setting automatically.

### Hinged Draper Items



H113720—UN—19DEC16

Height Sensing

Height Sensing— select the position of the header relative to the ground and return to that position automatically.

### Lateral Tilt Feeder House Items



H113721—UN—19DEC16

Lateral Tilt

Lateral Tilt— maintain the header position relative to ground.

NOLMWLO,00000F4-19-29JAN20

## Height Resume

Height Resume allows you to select position of the feeder house relative to the machine and return to that position automatically.

### Modify When:

- Changing crop height throughout the same field.
- Changing the header type.
- Ground terrain changes.

- Changing from cutting on-ground to cutting off-ground.

### System Is Enabled When:

- Properly equipped header is connected to the machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Height Resume system is ON.
- Header is engaged.

### Procedure to Modify:



H116962—UN—19DEC16

Auto Control

1. Select Auto Control on Header application main screen.



H116165—UN—19DEC16

ON/OFF

2. Select to turn Height Resume ON/OFF.

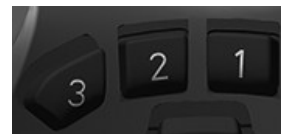


H116168—UN—19DEC16

Alert Icon

**NOTE:** If the automation option has issues preventing it from being enabled, the ON/OFF toggle is replaced with an alert icon. Selecting this button brings up information to aid in troubleshooting the issues.

**NOTE:** NOTE: Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



H116346—UN—19DEC16

Activation Buttons

3. Press the desired activation button.

**NOTE:** Height Resume will return to last known adjustment setting.



Height Resume

H116353—UN—19DEC16

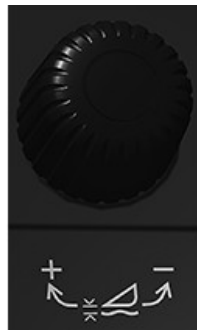
**NOTE:** Height Resume icon appears on the corner post display.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.

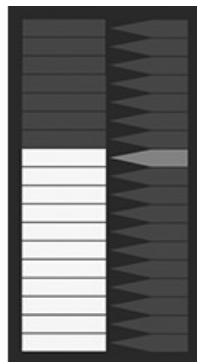


Adjustment Dial

H116347—UN—20DEC16

#### 4. Adjust height using header adjustment dial.

- Turn header adjustment dial clockwise to raise the header and setpoint.
- Turn header adjustment dial counterclockwise to lower the header and setpoint.



Bar Graph

H116356—UN—20DEC16

Bar graph on the corner post display shows the header's

relative position based on header height sensor linked to the header.



Numeric Display

H118305—UN—19DEC16

Numeric display on the corner post display shows the header's relative position based on header height sensor linked to the header.



Raise/Lower

H116348—UN—19DEC16

Using the header raise/lower switch temporarily deactivates system.

**NOTE:** Pressing and holding the header raise/lower switch for 5 seconds disables the system.

Press activation buttons 1, 2, or 3 to reactivate system. Header automatically moves to last known setting.



Close

H116648—UN—19DEC16

#### 5. Select to close.

NOLMWLO,00000F5-19-26NOV19

### Height Sensing—Off Ground

Allows you to select the position of the header relative to the ground and return to that position automatically.

#### Modify When:

**NOTE:** Calibration is required when platform is initially connected to the combine. If a different platform of the same type is connected, the calibration should be repeated.

- Header is not following contour of ground.
- Cutting off the ground using height sensing arms. HydraFlex™ Pressure can be increased to lock the header in a rigid position.

HydraFlex is a trademark of Deere & Company

- Header appears to be cutting too low. Raise height setting.
- Header rides over the top or leaves uncut crop. Lower height setting.
- Changing header type.
- Ground terrain changes.

#### System Is Enabled When:

- Properly equipped header is connected to the machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Height Sensing system is ON.
- Header is engaged.

#### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main page.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Height Sensing ON/OFF.



Alert Icon

H116168—UN—19DEC16

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert icon button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



Activation Buttons

H116346—UN—19DEC16

3. Press the desired activation button.

**NOTE:** Height Sensing returns to last known adjustment setting. Each activation button can save a different reel position. Press and hold the desired button for 2 seconds to save the reel position.



Height Sensing

H116358—UN—19DEC16

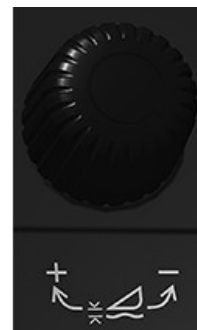
**NOTE:** Height Sensing icon appears on the corner post display.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.

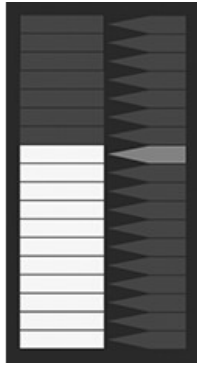


Adjustment Dial

H116347—UN—20DEC16

4. Change the height setpoint by pressing desired activation button and adjust height using header adjustment dial.

- Turn header adjustment dial clockwise to raise the header and setpoint.
- Turn header adjustment dial counterclockwise to lower the header and setpoint.



Bar Graph

H116356—UN—20DEC16

Bar graph on the corner post display shows the header's relative position based on header height sensor linked to the feeder house.



Numeric Display

H118305—UN—19DEC16

Numeric display on the corner post display shows the header's relative position based on header height sensor linked to the feeder house.



Raise/Lower

H116348—UN—19DEC16

Using the header raise/lower switch temporarily deactivates system.

**NOTE:** Pressing and holding the header raise/lower switch for 5 seconds disables the system.

**NOTE:** Header lower switch can be set to immediately disable system until activation button is pressed. See your John Deere dealer for further information.

**NOTE:** Header lower switch can be set not to reactivate system when header lower switch is pressed. See your John Deere dealer for further information.

Press activation buttons 1, 2, or 3 to reactivate system. Header automatically moves to last known setting.



Close

H116648—UN—19DEC16

5. Select to close.

N0LMWLO,00000F6-19-26NOV19

## Height Sensing—On Ground

On ground Height Sensing allows you to adjust cutterbar ground pressure and return to that setting automatically.

### Modify When:

**NOTE:** Calibration is needed when changing the header regardless of size and type unless previously calibrated.

- Cutterbar is not following contour of the ground.
- Cutterbar appears to be pushing. Increase HydraFlex™ pressure.
- Cutterbar rides over the top or leaves uncut crop. Decrease HydraFlex™ pressure.
- Changing header type.

### System Is Enabled When:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Height Sensing system is ON.
- Header is engaged.

### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main page.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Height Sensing ON/OFF.



Alert Icon

H116168—UN—19DEC16

HydraFlex is a trademark of Deere & Company

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert icon button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



H116346—UN—19DEC16

Activation Buttons

3. Press the desired activation button.

**NOTE:** Height Sensing returns to last known adjustment setting. Each activation button can save a different reel position. Press and hold the desired button for 2 seconds to save the reel position.



H116358—UN—19DEC16

Height Sensing

**NOTE:** Height Sensing icon appears on the corner post display.



H116354—UN—19DEC16

Activation Number

Activation number on the corner post display indicates which button was selected.

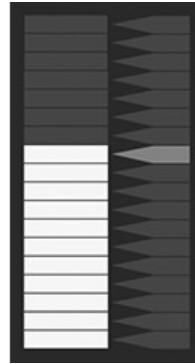


H116347—UN—20DEC16

Adjustment Dial

4. Change the height setpoint by pressing desired activation button and adjust height using header adjustment dial.

- Turn header adjustment dial clockwise to increase HydraFlex™ pressure.
- Turn header adjustment dial counterclockwise to decrease HydraFlex™ pressure.



H116356—UN—20DEC16

Bar Graph

Bar graph on the corner post display shows the header's relative position based on header height sensor linked to the feeder house.



H118305—UN—19DEC16

Numeric Display

Numeric display on the corner post display shows pressure setpoint based on pressure in the cutterbar on the platform.



H116348—UN—19DEC16

Raise/Lower

Using the header raise/lower switch temporarily deactivates system.

**NOTE:** Pressing and holding the header raise/lower switch for 5 seconds disables the system.

- Manually adjusting the header height with header lower switch temporarily overrides system until released. Once switch is released, system returns back to automatic mode.



**NOTE:** Header lower switch can be set to immediately disable system until activation button is pressed. See your John Deere dealer for further information.

- Manually adjusting the header height with header raise switch temporarily deactivates system until header lower switch is pressed. Once switch is pressed, system reactivates.

**NOTE:** Header lower switch can be set not to reactivate system when header lower switch is pressed. See your John Deere dealer for further information.

Press activation buttons 1, 2, or 3 to reactivate system. Header automatically moves to last known setting.



Close

H116648—UN—19DEC16

- Select to close.

N0LMWLO,00000F7-19-26NOV19

## Height Sensing (Hinged Draper)

Height Sensing allows you to adjust the cut height by selecting the position of the header relative to the ground and setting the system to automatically return to that position.

**NOTE:** If the operator desires a change between on-ground and off-ground cutting, this is done through adjustment of the Gauge Wheel Position. No other adjustments need to be made.

### Modify When:

#### If Cutting Off The Ground:

- Header appears to be cutting too low. Extend the gauge wheels.
- Header rides over the top or leaves uncut crop. Retract the gauge wheels.
- Ground terrain changes.

#### System Is Enabled When:

- No active fault codes.
- Properly equipped header is connected to the machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Height Sensing system is ON.
- Header is engaged.

### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

- Select Auto Control on Header application main page.

**NOTE:** Feeder house float mode is disabled when operating a hinged draper. It is recommended to run height sensing mode with the hinged draper.



ON/OFF

H116165—UN—19DEC16

- Select to turn Height Sensing ON/OFF.

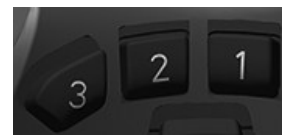


Alert Icon

H116168—UN—19DEC16

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert icon button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



Activation Buttons

H116346—UN—19DEC16

- Press the desired activation button.

**NOTE:** Height Sensing returns to last known adjustment setting. Each activation button can save a different reel position. Press and hold the desired button for 2 seconds to save the reel position.



Height Sensing

H116358—UN—19DEC16

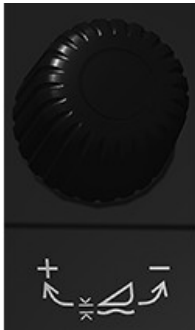
**NOTE:** Height Sensing icon appears on the corner post display.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.

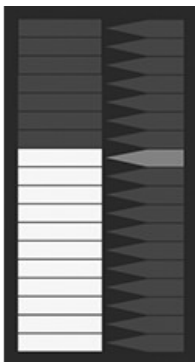


Adjustment Dial

H116347—UN—20DEC16

4. Change the height setpoint by pressing desired activation button and adjust height using header adjustment dial.

- Turn header adjustment dial clockwise to raise the header and setpoint.
- Turn header adjustment dial counterclockwise to lower the header and setpoint.



Bar Graph

H116356—UN—20DEC16

Bar graph on the corner post display shows the header's relative gauge wheel position.



Numeric Display

H118305—UN—19DEC16

Numeric display on the corner post display shows the header's relative position based on header height sensor linked to the feeder house.



Raise/Lower

H116348—UN—19DEC16

Using the header raise/lower switch temporarily deactivates system. Pressing and holding the header raise/lower switch for 5 seconds disables the system.

**NOTE:** Header lower switch can be set to immediately disable system until activation button is pressed. See your John Deere dealer for further information.

**NOTE:** Header lower switch can be set not to reactivate system when header lower switch is pressed. See your John Deere dealer for further information.

Press activation buttons 1, 2, or 3 to reactivate system. Header automatically moves to last known setting.



Close

H116648—UN—19DEC16

5. Select to close.

AZ06166,0000738-19-24NOV20

## Feeder House Float

Feeder House Float allows you to select how firmly a rigid header contacts the ground and maintains a set pressure.

### Modify When:

- Ground conditions are firm and the head is leaving taller stubble or not following the ground as desired. Decrease pressure.
- Ground conditions are soft and the head is pushing material or not following the ground as desired. Increase pressure.

### System Is Enabled When:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Feeder House Float system is ON.
- Header is engaged.



Feeder House Float

H116972—UN—19DEC16

## Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main screen.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Active Header Float ON/OFF.

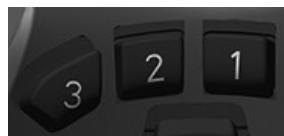


Alert Icon

H116168—UN—19DEC16

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



Activation Buttons

H116346—UN—19DEC16

3. Press the desired activation button.

**NOTE:** Header Height Float will return to last known adjustment setting.

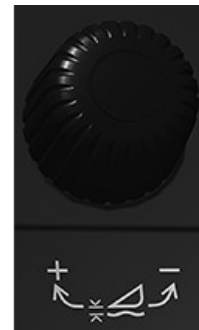
**NOTE:** Header Height Float icon appears on the corner post display.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.

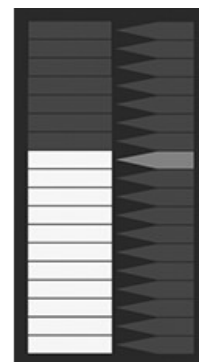


Adjustment Dial

H116347—UN—20DEC16

4. Change pressure by pressing desired activation button and adjust the height using header adjustment dial.

- Turn header adjustment dial clockwise to raise the header lift cylinder pressure and setpoint.
- Turn header adjustment dial counterclockwise to lower the lift cylinder pressure and setpoint.



Bar Graph

H116356—UN—20DEC16

Bar graph display shows the actual header float pressure.



H118305—UN—19DEC16

Numeric Display

Numeric display shows the actual header float pressure.



H116348—UN—19DEC16

Raise/Lower

**NOTE:** Pressing and holding the header raise/lower switch for 5 seconds disables the system.

Press activation buttons 1, 2, or 3 to reactivate system. Header automatically moves to last known setting.



H116648—UN—19DEC16

Close

5. Select to close.

N0LMWLO,00000F8-19-02DEC19

## Lateral Tilt

Lateral Tilt allows you to maintain header position relative to the ground using the lateral tilt system to equalize the distance to the ground at each end of the header.

### Modify When:

- **ON:** For headers equipped with the appropriate sensors use lateral tilt to maintain a uniform cut height across the width of the head while cutting on or off the ground.
- **OFF:** You may disable lateral tilt if it is preferred to tilt the head manually by pressing the lateral tilt button on the multi-function lever. Disable lateral tilt if the header is not equipped with the appropriate sensors.

### System Is Enabled When:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Header was calibrated.
- Lateral Tilt system is ON.
- Header is engaged.

### Procedure to Modify:



H116962—UN—19DEC16

Auto Control

1. Select Auto Control on Header application main screen.



H116165—UN—19DEC16

Lateral Tilt

2. Select to turn Lateral Tilt ON/OFF.

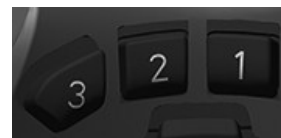


H116168—UN—19DEC16

Alert Icon

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



H116346—UN—19DEC16

Activation Buttons

3. Press the desired activation button.



H116359—UN—19DEC16

Lateral Tilt

**NOTE:** Lateral Tilt will return to last known adjustment setting.

**NOTE:** Lateral Tilt icon appears on the corner post display.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.



Raise/Lower

H116348—UN—19DEC16

**NOTE:** Pressing Lateral Tilt switch overrides system. When the switch is released within 5 seconds, system returns to automatic mode.

Press right side of switch to tilt the header to the right or press left side of switch to tilt the header to the left.

Press activation buttons 1, 2, or 3 to reactivate system. Header automatically returns to last known setting.



Close

H116648—UN—19DEC16

4. Select to close.

NOLMWLO,00000F9-19-26NOV19

## Resume Preferences

Enable or disable automatic resume of header automation functions.

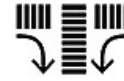
**NOTE:** Some items below are only displayed if machine is equipped with the associated option.



Auto Reel Speed

H113524—UN—19DEC16

Auto Reel Speed— automatic control of reel speed or belt pickup speed relative to ground speed.



Auto Draper Belt Speed

H131361—UN—02SEP20

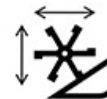
Auto Draper Belt Speed— automatic control of draper side belt speed relative to ground speed.



Fore/Aft Resume

H113717—UN—19DEC16

Fore/Aft Resume— select fore/aft position and return to that position automatically.



Reel Position Resume

H116163—UN—19DEC16

Reel Position Resume— select reel position and return to that position automatically.



Deck Plate Position Resume

H113532—UN—19DEC16

Deck Plate Position Resume— select position of the deck plates and return to that position automatically.

NOLMWLO,00000FA-19-01DEC20

## Fore/Aft Resume

Fore/Aft Resume allows you to program a saved fore/aft tilt position of the feeder house frame to any of the Activation buttons 1, 2, or 3 on the multi-function lever.

**NOTE:** You may have a standard position for harvesting standing crop and then another for downed crop. This allows you to quickly switch back and forth.

### Modify When:

- Riding over wet or dense residual residue.
- You want to better attach or detach the header.
- You want to optimize conveying of crop material into the feeder house.

### Tilt Feeder House Fore When:

- Picking up downed crop.
- Cutting closer to the ground.

### Tilt Feeder House Aft When:

- Material is being pushed by the cutterbar. Move aft to reduce lost material.
- For standing crop, tilting aft can optimize feeding/conveying material into the machine.

### System Is Enabled When:

- Engine is running.
- Road transport disconnect switch is in field position.
- Hydraulic Feeder House Fore/Aft Resume system is ON.
- Multi-function lever switches are functionally assigned.
- Head is engaged.

### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main screen.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Fore/Aft Resume ON/OFF.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



Programmable Buttons

H118577—UN—19DEC16

3. To change fore/aft tilt setpoint, press desired

programmable button C or D and adjust fore/aft tilt using hydraulic feeder house fore/aft tilt switches.



Activation Buttons

H116346—UN—19DEC16

4. Press and hold the desired activation button for 2 seconds to enter desired setting into memory.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.

5. Push and hold top of switch to tilt feeder house forward or push and hold bottom of switch to tilt feeder house rearward.

Armrest display shows the feeder house fore/aft tilt position based on a sensor linked to the feeder house.

Manually moving hydraulic feeder house fore/aft tilt switches on multi-function lever deactivates system.

Press activation buttons 1, 2, or 3 to reactivate system. Hydraulic feeder house fore/aft tilt automatically moves to preselected position.

**NOTE:** When the feeder house is raised and the header is engaged, feeder house fore/aft tilt automatically moves forward. This allows the feeder house safety stop to be engaged. Feeder house fore/aft tilt automatically returns to last known position when lowering.

When the header is disengaged, feeder house fore/aft tilt automatically moves forward upon raising. Feeder house fore/aft tilt will not return to last known position when lowering.



Close

H116648—UN—19DEC16

6. Select to close.

N0LMWL0.00000FC-19-22JAN20

## Reel Position Resume

Reel Position Resume allows you to select position of

the reel relative to belts, auger, cutterbar, floor and so forth and return to that position automatically.

### Modify To:

- Harvest standing crop of different heights in the same field.
- Assist in picking up downed crop.
- Clean off the cutter bar at the end of a cut.

### Set to optimize crop flow:

**Standing Crop (with Height Sensing Active)**— position the reel above the cutterbar so that it slightly touches the grain heads. This helps the crop fall into the platform.

In small grain crops, place the reel slightly in front of the auger to allow the crop fall into the auger. Position the reel tines straight down or slightly forward. If the crop starts to turn with the reel, the reel position setting is too low. If you see crop being hit by the reel and bouncing back and forth before being cut, reduce the reel speed. Too fast of a reel speed will result in header losses.

**Down Crop (with Float Mode Active)**— place the reel in front of the cutterbar so that the reel can rake up the crop. Position the reel tines backward to help with lifting the crop. Consider the use of crop lifters if they are available for your platform type.

**Headland Turns (with Height Resume Active)**— position the reel as close as possible to the cutterbar. This prevents crop from falling out of the platform during a headland turn.

### System Is Enabled When:



Reel Position Resume

H116361—UN—19DEC16

**NOTE:** Reel Position Resume icon appears on the corner post display.

- Properly equipped header (with reel position sensors) is connected to machine and is calibrated.
- Engine is running.
- Feeder house is engaged.
- Road transport disconnect switch is in field position.

### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main screen.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Reel Position Resume ON/OFF.

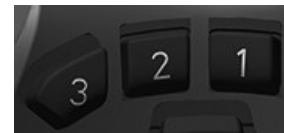
**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



Reel Lift

H116349—UN—19DEC16

3. Use reel lift switch to obtain desired reel height position.



Activation Buttons

H116346—UN—19DEC16

4. Press and hold the desired activation button for 2 seconds to enter desired setting into memory.

**NOTE:** Each activation button can save a different reel position. Press and hold the desired button for 2 seconds to save the reel position.



Reel Position Resume

H116361—UN—19DEC16

**NOTE:** Reel Position Resume icon flashes indicating setpoint is saved.



Activation Number

H116354—UN—19DEC16

Activation number on the corner post display indicates which button was selected.

Manually moving reel lift switch on the multi-function lever deactivates reel position.

Press activation buttons 1, 2, or 3 to reactivate system. Reel automatically moves to preselected height.



Close

H116648—UN—19DEC16

5. Select to close.

N0LMWLO,00000FD-19-26NOV19

## Deck Plate Position Resume

Deck Plate Position Resume allows you to select spacing of the hydraulic deck plates and return to that position automatically.

### Modify When:

#### Decrease Deck Plate Spacing When:

- Ear shelling at deck plates.
- For an area that has smaller stalks due to flooding or low nutrient level.
- To reduce grain loss and damage at the header if the condition exists.

#### Increase Deck Plate Spacing When:

- Excessive trash intake from the corn head causes shelled corn to come out of rear of combine.
- Pulling up corn stalks and ears. Gradually open deck plates until stalks feed through rolls more freely.
- For less material other than grain to reduce shoe load.
- For picking up downed corn to improve feeding and reduce the amount of trash the machine takes in.
- To clean out any buildup of material around the deck plates when coming to an end of cut.

### System Is Enabled When:

- Properly equipped header (with the deck plate sensors) is connected to machine and is calibrated.
- Engine is running.
- Feeder house is engaged.

- Road transport disconnect switch is in field position.

### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main screen.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Deck Plate Position Resume ON/OFF.

*NOTE: Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.*



Reel Lift and Fore/Aft

H116349—UN—19DEC16

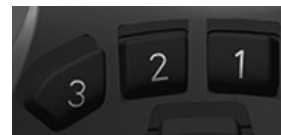
3. Use reel fore/aft switch to obtain desired deck plate spacing.

- Left side of switch increases spacing.
- Right side of switch decreases spacing.

Minimum: 0

Maximum: 9

Increment: 1



Activation Buttons

H116346—UN—19DEC16

4. Press and hold the desired activation button for 2 seconds to enter desired setting into memory.





H116362—UN—19DEC16

Deck Plate Position Resume

**NOTE:** Deck Plate Position Resume icon appears on the corner post display.



H116354—UN—19DEC16

Activation Number

Activation number on corner post display indicates which button was selected.

Manually moving fore/aft switch on the multi-function lever deactivates deck plate resume.

Press Activation Buttons 1, 2, or 3 to reactivate system. Deck plates automatically move to preselected position.

NOLMWLO,00000FE-19-26NOV19

## Auto Reel Speed

Auto Reel Speed allows you to program a saved reel speed or belt pickup speed to any of the header activation buttons on the multi-function lever. You may have a standard reel speed for harvesting standing crop and then another for downed crop. This allows you to quickly switch back and forth.

**NOTE:** Auto reel speed setting is automatically saved when Header Automation is active.

### Modify When:

- Picking up downed crop. Minimum speed varies based on condition and operator.
- Crop is being "threshed" by the reel. Slow down the reel by decreasing the auto reel speed.
- Crop is being pushed over by the reel. Speed up the reel by increasing the auto reel speed.

### System Is Enabled When:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Auto reel speed system is ON.
- Header and separator are engaged.
- Ground speed is greater than 0.25 km/h (0.16 mph).

### Procedure to Modify:



H116962—UN—19DEC16

Auto Control

1. Select Auto Control on Header application main screen.



H116165—UN—19DEC16

ON/OFF

2. Select to turn auto reel speed ON/OFF.



H116168—UN—19DEC16

Alert Icon

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



H116346—UN—19DEC16

Activation Buttons

3. Press the desired activation button.

**NOTE:** Auto reel speed returns to last known adjustment setting.



H116360—UN—19DEC16

Auto Reel Speed

**NOTE:** Auto reel speed icon appears on the corner post display.



Reel Speed Dial

H116352—UN—20DEC16

4. Change speed using the Reel Speed dial.

- Turn the adjustment dial clockwise to increase speed.
- Turn the adjustment dial counterclockwise to lower/decrease speed.

Minimum: 0

Maximum: 50

Increment: 1

**NOTE:** Suggested ratio for standing crop is 4.  
Suggested ratio for down crop is 11.



Numeric Display

H118305—UN—19DEC16

Numeric display on the corner post display shows current speed ratio setting.



Reel Speed Dial

H116352—UN—20DEC16

**NOTE:** Changing speed using the Reel Speed dial changes preselected setting. To return back to the preselected setting, press the programmed activation button.

**NOTE:** The larger the ratio number selected, the faster the reel operates with respect to the machine ground speed.



Close

H116648—UN—19DEC16

5. Select to close.

MM95366,00005C1-19-01DEC20

## Auto Draper Belt Speed

Auto Draper Belt Speed allows you to program a saved side belt speed to any of the header activation buttons on the multi-function lever. You may have a standard side belt speed for harvesting standing crop and then another for downed crop. This allows you to quickly switch back and forth. Draper belt speed is proportional to the machine ground speed.

**NOTE:** Auto draper belt speed is used for draper platforms only. For more information on belt speed resume preferences for belt pickup platforms, see Auto Reel Speed.

Auto draper belt speed setting is automatically saved when Header Automation is active.

### Modify When:

- Feeding performance is poor.
- It is desired to increase belt speed.

### System Is Enabled When:

- Properly equipped header is connected to machine.
- Engine is running.
- Road transport disconnect switch is in field position.
- Auto draper belt speed system is ON.
- Header and separator are engaged.
- Ground speed is greater than 0.25 km/h (0.16 mph).

### Procedure to Modify:



Auto Control

H116962—UN—19DEC16

1. Select Auto Control on Header application main screen.



ON/OFF

H116165—UN—19DEC16

2. Select to turn auto belt speed ON/OFF.

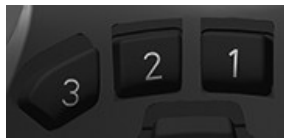


Alert Icon

H116168—UN—19DEC16

**NOTE:** When a given automation option has issues preventing it from being enabled, the toggle switch is replaced with a generic issue alert button. Selecting this button brings up a message dialogue with information to aid in troubleshooting the issues.

**NOTE:** Depending on machine configurations and the setup of your configurable switches and buttons on the multi-function lever, many combinations exist.



Activation Buttons

H116346—UN—19DEC16

3. Press the desired activation button.

**NOTE:** Auto draper belt speed returns to last known adjustment setting.



Header Application

H113541—UN—19DEC16

4. Access the Header Application



Belt Speed

H131361—UN—02SEP20

5. From the Header main page, select the Belt Speed icon. The Draper Belt Speed window opens.



H116148—UN—20DEC16

6. Change speed using the soft keys on the display.

- Press the plus (+) soft key to increase speed.
- Press the minus (-) soft key to lower/decrease speed.

Minimum: 0

Maximum: 10

Increment: 1



Input Box

H116149—UN—19DEC16

Input box on the display shows current speed ratio setting.

**NOTE:** Changing speed using the soft keys changes preselected setting. To return back to the preselected setting, press the programmed activation button.

**NOTE:** The larger the ratio number selected, the faster the belt operates with respect to the machine ground speed.



Close

H116648—UN—19DEC16

7. Select to close.

MM95366,00005C2-19-01DEC20

## HydraFlex™ Pressure

HydraFlex™ Pressure helps optimize platform ground-following performance and allows you to vary the cutterbar ground pressure without affecting the cutting height of the crop.

### Modify When:

HydraFlex is a trademark of Deere & Company

- Cutting off the ground using height sensing arms. HydraFlex™ Pressure can be increased to lock the cutterbar in a rigid position.
- Increase pressure when cutterbar is pushing.
- Decrease pressure when cutterbar rides over the top or leaves uncut crop.

- 7584 kPa (76 bar) (1100 psi) for firm ground conditions.
- 8963 kPa (90 bar) (1300 psi) for normal ground conditions.
- 11 721 kPa (117 bar) (1700 psi) for soft ground conditions.

#### Procedure to Modify:



HydraFlex™ Pressure

H114076—UN—19DEC16

1. Select screen area under HydraFlex™ Pressure to open HydraFlex™ Pressure page.



Adjustment

H116142—UN—20DEC16

2. Select plus (+) to increase or minus (-) to decrease desired pressure.

- Minimum: 0
- Maximum: 20 684 kPa (207 bar) (3000 psi)
- Increment: 345 kPa (4 bar) (50 psi)
- No default



Close

H116648—UN—19DEC16

3. Select to close.

#### Recommended Settings (600FD and 700FD):

- 6894 kPa (69 bar) (1000 psi) for firm ground conditions.
- 8963 kPa (90 bar) (1300 psi) for normal ground conditions.
- 11 031 kPa (110 bar) (1600 psi) for soft ground conditions.

#### Recommended Settings (600F):

#### Alternative Procedure to Modify:



Input Field

H116143—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



Navigation Bar Adjustment Dial

H115035—UN—14MAR16



Armrest Adjustment Dial

H115034—UN—28MAR16

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

N0LMWLO,00000FF-19-26NOV19

#### Draper Belt Speed

Draper Belt Speed controls the speeds of the side draper belts. Set belt speed for prevailing crop conditions and adjust for an even distribution of crop material across the side draper belts.

**NOTE:** It is generally best to start with the maximum belt speed and reduce speed if you encounter feeding problems.

#### Increase Belt Speed When:

- Heavy loading of side belts occurs.
- Heavy loading of material along sides of the center belt occurs.
- Excessive plugging of the feed drum and/or feeder house occurs.
- Crops are pulled under the platform by side draper belts.
- Too much material builds up on belts, blocking the knife, and leaving standing uncut crop.

### Decrease Belt Speed When:

- Crops are feeding under opposing side draper belt.
- You want to reduce shatter loss for long green straw/ stems.

Increment: 10 rpm

No default



Close

H116648—UN—19DEC16

### Procedure to Modify:



Draper Belt Speed

H114075—UN—19DEC16

1. Select screen area under Draper Belt Speed to open Draper Belt Speed page.



Standard

H116145—UN—19DEC16

2. Use toggle button to select desired belt mode.



Reduced Speed

H116144—UN—19DEC16

**NOTE:** Use Reduced Speed when not harvesting with the full width of platform.

**NOTE:** In Reduced Speed mode, belts slow down to a factory default setting and a turtle icon flashes below the draper belt speed icon.

**NOTE:** Increasing belt speed overrides Reduced Speed.



Adjustment

H116146—UN—20DEC16

3. Select plus (+) to increase or minus (-) to decrease desired speed.

Minimum: 0

Maximum: 240 rpm

4. Select to close.

### Recommended Settings:

160—220 n/min

Faster belt speeds are typically required in tougher crop conditions.

### Alternative Procedure to Modify:



Input Field

H116147—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



Navigation Bar Adjustment Dial

H115035—UN—14MAR16



Armrest Adjustment Dial

H115034—UN—28MAR16

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

NOLMWLO,0000100-19-26NOV19

### Draper Float Position

Draper Float Position controls the pressure in the cylinders for the gauge wheels and center section.

**NOTE:** Higher numbers make the header lighter, which increases oil pressure to gauge wheels/center section float. Lower numbers make the header heavier with less pressure in the float system.

### Modify When:

#### For off ground cutting only:

- You want to reduce unwanted ground contact. Increase float setting.

- You want to reduce wavy cutting. Decrease float setting.
- The head is slow to react to changing ground conditions. Decrease float setting.

#### Downed crop:

- The header begins to push material in front of the cutterbar as can sometimes be seen in soft ground conditions. Increase float setting.
- The header begins to leave uncut crop behind the cutterbar as can sometimes be seen in firm ground conditions. Decrease float setting.

#### Procedure to Modify:



Draper Float Position

H116130—UN—19DEC16

1. Select screen area under Draper Float Position to open Draper Float Position page.



Adjustment

H116148—UN—20DEC16

2. Select plus (+) to increase or minus (-) to decrease desired position.

Minimum: 1

Maximum: 10

Default 5

Increment: 1



Close

H116648—UN—19DEC16

3. Select to close.

#### Alternative Procedure to Modify:



Input Field

H116149—UN—19DEC16

1. Select to activate Navigation Bar and Armrest Adjustment Dials.



Navigation Bar Adjustment Dial

H115035—UN—14MAR16



Armrest Adjustment Dial

H115034—UN—28MAR16

2. Use Navigation Bar or Armrest Adjustment Dial to select desired setting.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

N0LMWLO,0000101-19-26NOV19

## Cutterbar Tilt

Cutterbar Tilt adjusts angle of the cutterbar in relation to the rest of the platform to optimize harvesting capabilities.

#### Modify To:

##### Tilt the cutterbar forward:

- Assist in picking up downed crop.
- Harvest closer to the ground.

##### Tilt the cutterbar rearward:

- Prevent picking up rocks, dirt, and foreign objects. Level out the head while cutting on the ground.
- Prevent cut crop buildup falling from the cutterbar or loss of grain heads at cutterbar.

#### Procedure to Modify:



Cutterbar Tilt

H114077—UN—19DEC16

1. Select screen area under Cutterbar Tilt to open Cutterbar Tilt page.



Adjustment

H116155—UN—20DEC16

2. Select to tilt the cutterbar up or down.



Close

H116648—UN—19DEC16

3. Select to close.

NOLMWLO,0000102-19-26NOV19

## Deck Plate Spacing

Deck Plate Spacing adjusts deck plate opening in order to match changes in crop conditions.

### Modify When:

- Switching fields, or conditions vary in the same field.

### Decrease Deck Plate Spacing When:

- Ear shelling at deck plates.
- Header loss has been identified as grain shelling at the base of the ear.
- Grain damage is recognized in the corn head.  
Reduce deck plate spacing to provide a cushion for the ears.
- You want to optimize feeding for narrow stalks.

### Increase Deck Plate Spacing When:

- Excessive trash intake from the corn head is causing shelled corn to come out of the rear of the combine.
- The corn head is pulling up corn stalks and ears.  
Gradually open deck plates until stalks feed through rolls more freely.
- The corn appears to be pushing stalks over.
- You want to optimize feeding for large diameter stalks.

### Procedure to Modify:



Deck Plate Spacing Switch

H116349—UN—19DEC16

- Press left side of switch to increase spacing.
- Press right side of switch to decrease spacing.



Deck Plate Spacing

H116362—UN—19DEC16

**NOTE:** Pressing left or right side of switch on multi-function lever activates the Deck Plate Spacing icon on corner post display.

Minimum: 0

Maximum: 9

Increment: 1

**NOTE:** To provide Deck Plate Spacing adjustment for heads with electric deck plate spacing - operators will have to go through Advanced Settings and select the option for 3rd Party Deck Plate Override.

Once enabled, this option allows operators to tap on the Deck Plate Spacing frame of the application to bring up an adjustment overlay with conditionally available readout.

NOLMWLO,0000103-19-26NOV19

## Backshaft Speed

Adjusting Backshaft Speed allows you to optimize the feed rate of the header to the travel speed and volume of material the machine is harvesting.

### Modify When:

### Increase Backshaft Speed When:

- Flagging of stalk.
- Pulling stalk out of the ground.

**NOTE:** Higher backshaft speeds are recommended for faster harvesting speeds and taking in large volumes of material to reduce loading on drive components.

### Decrease Backshaft Speed When:

- Snapping off stalk and ingesting into separator.
- Butt shelling because ear hits deck plate too fast.

**NOTE:** Reducing the backshaft speed can reduce ears bouncing and the generation of free grain in the header when harvesting lower volumes of material.

#### Procedure to Modify:



H116349—UN—19DEC16

Backshaft Speed Switch

- Press top of the switch to increase gear selection or backshaft speed.
- Press bottom of the switch to decrease gear selection or backshaft speed.



H118498—UN—19DEC16

Numeric Display

**NOTE:** Pressing left or right side of switch on multi-function lever activates Numeric Display on corner post display.

**NOTE:** Only for CommandTouch™ Multi-Speed Feeder House Drive.

Feeder House Lower Shaft Speeds	
Fixed Speed (if equipped)	520 rpm
Variable Speed (if equipped)	520-780 rpm

N0LMWLO,0000104-19-01DEC20

- Increased terrain following response is desired. Select a firmer ground condition setting. Header down force on the ground increases with firmer ground condition settings. Accelerated component wear can occur in firmer ground condition settings.
- Ground conditions are soft, the head is pushing material or dampening header response to abrupt terrain features is desired. Select a softer ground condition setting. Header down force on the ground decreases with softer ground condition settings. Reduced terrain following response can occur in softer ground condition settings.
- Ground conditions are abrasive (hard, dry, sandy or rocky), and increased component life is desired. Select a softer ground condition setting.

#### Procedure to Modify:



H127444—UN—26SEP19

Ground

1. Select screen area under Ground to open Ground Conditions page.

**NOTE:** Ground conditions cannot be adjusted if active faults are present or prerequisites have not been met. Once faults are cleared or prerequisites have been met, the screen will advance automatically to the adjustments screen.



Adjustment

H127474—UN—26SEP19

## Ground Conditions

Ground Conditions allows you to select presets for header down force. Ground conditions can only be changed when running in Height Sensing mode. Header down force on the ground increases with firmer ground condition settings.

**NOTE:** Ground conditions are optimized for off-ground or on-ground cutting based on the position of the gauge wheels and the auto header height setpoint.

#### Modify When:

CommandTouch is a trademark of Deere & Company

2. Select a preset to adjust the total header down force based on the current ground conditions. Typical is the standard ground condition setting. This setting can be used for the majority of ground conditions. Select Firm or Very Firm to increase header down force on the ground for increased terrain following response. Select Soft or Very Soft to reduce the header down force on the ground for soft, muddy or abrasive conditions.





Close

H116648—UN—19DEC16

3. Select to close.

#### Alternative Procedure to Modify:



Advanced Tuning

H116669—UN—30JAN17

1. Select Advanced Tuning to make specific adjustments to the header down force.

N0LMWLO,0000108-19-23NOV20

## Gauge Wheels

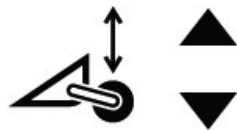
Gauge Wheels allows you to raise or lower the gauge wheels on the hinged draper.

**IMPORTANT: Avoid over-lowering the feeder house.** Even with the gauge wheels lowered, the independent attachment frame and feeder house can continue to lower. Further lowering of the feeder house drives the attachment frame and center draper pan into the ground causing draper pan damage.

#### Modify To:

- Cut the crop closer to the ground; raise the gauge wheels.
- Cut the crop higher off the ground; lower the gauge wheels.

#### Procedure to Modify:



Gauge Wheels

H127473—UN—26SEP19

1. Select screen area under Gauge Wheels to open Gauge Wheels page.



Adjustment

H116155—UN—20DEC16

2. Select to raise or lower the gauge wheels to the desired position.



Close

H116648—UN—19DEC16

3. Select to close.

#### Alternative Procedure to Modify:

*NOTE: This method is useful when stubble is higher than desired when cresting terraces or hills. These types of terrain features may require you to manually adjust the cutterbar position by raising and lowering the gauge wheels to maintain a consistent cut height.*

1. Ensure that Height Sensing mode is active.



Header Raise/Lower Switch

H116348—UN—19DEC16

2. Press the bottom of the header raise/lower switch to raise the gauge wheels and lower the feeder house. This will decrease the cut height. This cut height is only temporary.
3. Release the header raise/lower switch. The gauge wheels and feeder house will return to their original positions and the original cut height will be restored.

N0LMWLO,0000109-19-01DEC20

## Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

**NOTE:** Some items below are only displayed if machine is equipped with the associated option.

#### Items Accessible on Advanced Settings Page:



Check Box

N118434—UN—22JAN20

**Installed Optional Equipment**— select each piece of optional header equipment that is currently installed on the header.

**NOTE:** Selecting the installed options ensures appropriate suspension behavior.



ON/OFF

H116165—UN—19DEC16

**Limp Home Mode**— use the toggle to enable and disable.



Ground Conditions Advanced Tuning

H116669—UN—30JAN17

**Ground Conditions Advanced Tuning**— select to make specific adjustments to the header down force.



Header Suspension Service Mode

H116669—UN—30JAN17

**Header Suspension Service Mode**— select to enter service mode when service or maintenance is necessary.



Check Box

H114786—UN—10JAN17

**Deck Plate Override**— allows deck plate spacing adjustment for heads with electric deck plate spacing adjustment. Once enabled, this option allows you to select on the Deck Plate Spacing icon in the Header application to bring up an Deck Plate Spacing adjustment page.

N0LMWLO,0000105-19-01DEC20

## Ground Conditions Advanced Tuning

Ground Conditions Advanced Tuning allows you to make specific adjustments to the header down force within the selected preset range. Adjustments to advanced tuning impact all height sensing setpoints (header activation button 2 or 3).

**NOTE:** The header is sensitive to weight changes.

Aftermarket accessories such as air reels, side knives, and crop lifters can change the balance of the header. Adjustments may be required to avoid poor performance. Start by changing the *Installed Optional Equipment* settings on the *Advanced Settings* page of the Header application.

#### Items Accessible on Ground Conditions Advanced Tuning Page:

##### Distributed Down Force

##### Modify When:

- The desired down force is between two ground conditions settings.
- Increased terrain following response is desired. Increase the distributed down force. Accelerated component wear can occur at higher distributed down force settings.
- Ground conditions are soft, the head is pushing material or dampening header response to abrupt terrain features is desired. Decrease the distributed down force. Reduced terrain following response can occur at lower distributed down force settings.
- Ground conditions are abrasive (hard, dry, sandy or rocky), and increased component life is desired. Decrease the distributed down force.
- Advanced tuning adjustments have led to issues with terrain following. Press the Reset button and return to the default settings. From the default settings, make further adjustments as needed.



Distributed Down Force

H127389—UN—26SEP19

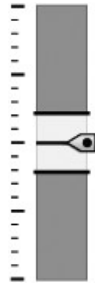
**Distributed Down Force**— adjusts down force which spans the entire header.



Reset

H127429—UN—26SEP19

**Reset**— push button to reset to the default value for the active preset.



Slider Gauge

H127431—UN—26SEP19



Slider Gauge

H127430—UN—26SEP19

**Slider Gauge**— indicates current down force value. Values are restricted to the range of the selected preset.

**Slider Gauge**— indicates current down force value for each side of the header.



Adjustment

H127432—UN—26SEP19



Adjustment

H127433—UN—26SEP19

**Adjustment**— push plus (+) to increase or minus (-) to decrease down force.

**Adjustment**— push plus (+) to increase or minus (-) to decrease down force for either side of the header.

## Wing Down Force

### Modify When:

- The head is leaving taller stubble near the end of the wings or the head is pushing material near the center of the head. Increase the wing down force.
- The head is leaving taller stubble near the center of the head or the head is pushing material near the end of the wing. Increase the wing down force.



Wing Down Force

H127388—UN—26SEP19

**Wing Down Force**— adjusts down force isolated to either side of the header.

N0LMWLO,000025E-19-24NOV20

## Limp Home Mode

Allows you to continue to fold, actuate, drive, or transport machine when a system fault is recognized.

**NOTE:** To access the Advanced Settings and Limp Home Mode, the Header button on the Navigation Bar **MUST** be pressed.

### Available Limp Home Modes:

- Fore/Aft Tilt
- Reel and Cutterbar
- Folding Corn Head
- Wing Control

### Modify When:

Select Limp Home mode check box if machine faults occur and machine components still need to function in order for:

- Harvesting to continue.
- Transporting on roadways. Loading on to a trailer.
- Placing the machine into a building.

### Procedure to Modify:

**NOTE:** Limp Home Mode only appears if a sensor fails or fault code exists.



Advanced

N118004—UN—22OCT15

1. Select Advanced Settings to access further adjustments and less common settings.



ON/OFF

H116165—UN—19DEC16

2. Select to turn Limp Home Mode ON/OFF.

**CAUTION:** You accept the risk of collisions of machine components when turning Limp Home Mode ON.



Close

H116648—UN—19DEC16

3. Select to close.

AZ06166,000079E-19-01DEC20

## Modulated Feeder House Reverser

Use the feeder house control buttons on the right to alternate between forward and reverse motions to clear any blockage.

**NOTE:** When clearing a feeder house plug on X-Series machines, the speed will gradually increase or decrease when reversing and forwarding the feeder house.

### Modify When:

- You notice a buildup or plug.

### Procedure to Modify:



Header Engagement Switch

H117923—UN—22DEC16

1. Push the header engagement switch into the rear detent position.

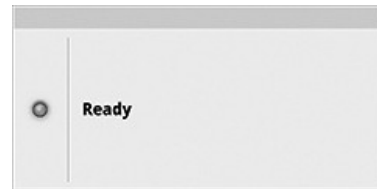


Slowing Machinery

H125457—UN—01FEB19

2. On-screen status will display "slowing machinery".

**NOTE:** If the status displayed says "not ready", select the area below Status for more information.



Ready

H125458—UN—01FEB19

3. Machine reaches "ready" state.

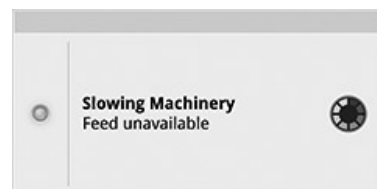


Feed/Reverse

H125459—UN—01FEB19

4. Press and hold on one of the directional controls.

**NOTE:** The status updates to reflect the selected direction. The opposite direction's control is disabled.



Slowing Machinery; Feed Unavailable

H125460—UN—01FEB19

5. On-screen status will display "slowing machinery; feed unavailable".

**NOTE:** The machinery requires a period of slowdown after a control is released in order to resume directional change.



6. The system is ready for a new direction.

### Disengage Modulated Feeder House Reverser:

1. Return the header engagement switch to the neutral/forward position. Doing so dismisses the overlay.



2. The screen will prompt "Disengaging Feeder House Reverser" on the display screen.

**NOTE:** The "Disengaging Feeder House Reverser" window shade times out after 7 seconds.



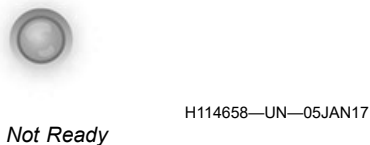
3. Machinery reaches a "ready" state and the modulated feeder house reverser is disengaged.

NOLMWLO,000010C-19-01DEC20

### Feeder House Reverser Mode Status

Feeder House Reverser Mode Status lists specific prerequisites when clear blockage mode has unmet requirements.

**Items Accessible on Feeder House Reverser Mode Status Page:**



**Not Ready**— indicates one or more operational prerequisites with unmet conditions.



Unavailable

H114657—UN—05JAN17

**Unavailable**— indicates a fault is present on both valves.



Prerequisite Met

H114662—UN—05JAN17

**Prerequisite Met**— indicates that the corresponding prerequisite has been met.



Prerequisite Unmet

H114663—UN—05JAN17

**Prerequisite Unmet**— indicates that the corresponding prerequisite has not been met.



Diagnostics Center

H118541—UN—30JAN17

**Diagnostics Center**— press button to open diagnostics center for additional fault details.

NOLMWLO,000010D-19-01DEC20

### Confirm Header Calibration

Confirm Header Calibration requires you to confirm that the last header calibration was performed with the attached header.

#### Perform Calibration When:

- The attached header has not been previously calibrated to the current machine.
- The reel or cutterbar sensors have been adjusted or replaced.

#### Procedure to Modify:



Confirm

H131046—UN—05AUG20

- If the attached header has been calibrated to the machine and the reel or cutterbar sensors have not been adjusted or replaced since the calibration was last performed, press the Confirm button to continue.



H116669—UN—30JAN17

*Reel and Cutterbar Position Calibration*

- If the attached header has not been calibrated to the machine or if the reel or cutterbar sensors have been adjusted or replaced since the calibration was last performed, press the Reel and Cutterbar Position Calibration button. Follow the messages on-screen to perform the calibration.

MM95366,00005C0-19-01DEC20

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# Grain Handling Application

## Access Grain Handling

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



Grain Handling

H114773—UN—10JAN17

#### 3. Grain Handling

### Access Application Through Navigation Bar:



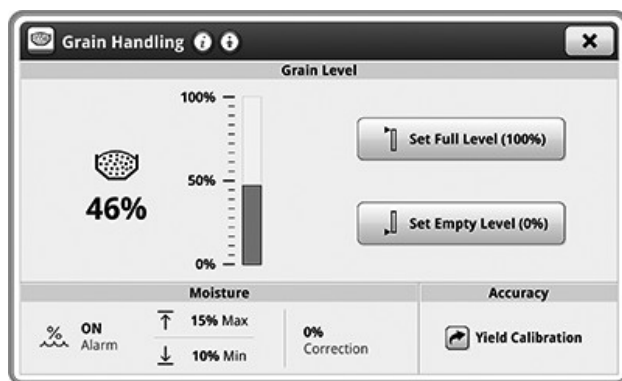
Grain Handling

H114775—UN—10JAN17

Press Grain Handling button on navigation bar below display.

N0LMWLO,000010E-19-26NOV19

## Grain Handling Main Page



Grain Handling

H119900—UN—10JAN17

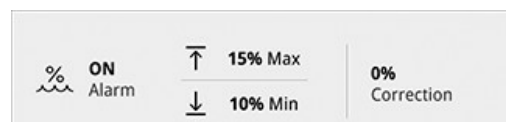
*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Grain Handling application is used to access and modify Grain Level settings, Moisture, and Accuracy. Advanced Settings are used to modify Grain Level Auto Beacon, Tank Unloading Offset, and Custom Level Alarm.

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*

### Items Accessible on Grain Handling Main Page:



Moisture

H114778—UN—10JAN17

Moisture— enable or disable moisture alarm, set maximum and minimum moisture alarm settings, and set moisture correction.



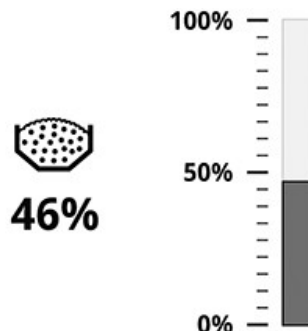
### Yield Calibration

Yield Calibration

H114779—UN—10JAN17

Accuracy— access Yield Calibration.

### Grain Level Items



Grain Level

H115000—UN—10JAN17

Grain Level— displays current grain tank level.



Set Full Level

H114776—UN—10JAN17

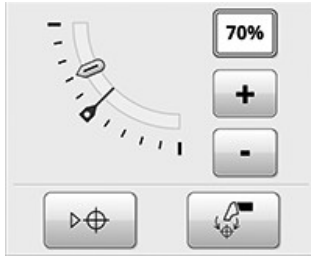
Set Full Level— set grain tank full level.



Set Empty Level

H114777—UN—10JAN17

Set Empty Level— set grain tank empty level.



Adjustable Spout

H132403—UN—17NOV20

Adjustable Spout— displays position information and setting adjustments for the unloading auger if equipped with adjustable spout.

### Advanced Settings Items



Advanced Settings

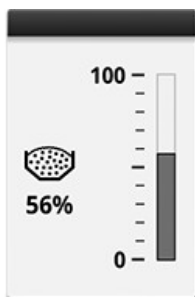
N118004—UN—22OCT15

Advanced Settings— access further adjustments and less common settings.

### Run Page Modules

Modules for this application can be added to run pages using Layout Manager.

Example:



Grain Level

H116266—UN—31JAN17

**Grain Level**— gives you direct access to Grain Level application.

*NOTE: Different modules can be available for your application.*

N0LMWLO,000010F-19-17NOV20

## Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

### Items Accessible on Advanced Settings Page:



ON/OFF

H113848—UN—04JAN17

Grain Level Auto Beacon— beacon light illuminates when grain tank is 3/4 full or is full.



Offset

H126193—UN—24APR19

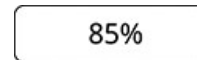
Tank Unloading Offset— adjust grain tank empty level if all grain is not emptied from grain tank or unloading auger continues to run after grain tank is empty.



ON/OFF

H113848—UN—04JAN17

Custom Level Alarm— message appears on the screen when selected grain level has been met.



Custom Level Alarm Input Box

H119129—UN—10JAN17

**Custom Level Alarm Input Box**— select to edit custom level alarm.

N0LMWLO,0000110-19-26NOV19

## Advanced Settings | Grain Level Auto Beacon

Grain Level Auto Beacon illuminates when grain tank is 3/4 full or is full.

### Modify To:

- Enable or disable Grain Level Auto Beacon.
- Provide a signal that the grain tank is 3/4 or full.

### Procedure to Modify:



Check Box

H114785—UN—10JAN17



Select to enable or disable Grain Level Auto Beacon.

N0LMWLO,0000111-19-26NOV19

## Advanced Settings | Tank Unloading Offset

Tank Unloading Offset allows you to adjust grain tank empty level if all grain is not emptied from grain tank or grain level does not show 0% after grain tank is empty. Different crops, weights, and moisture can affect grain tank level sensor readings.

### Modify When:

- Grain remains in tank after grain tank level reads 0%.
- Grain tank is emptied before grain tank level reads 0%.

### Procedure to Modify:

- Decrease offset value if grain remains in tank when grain tank level reads 0%.
- Increase offset value if grain tank is emptied before grain tank level reads 0%.



Decrease

H114780—UN—10JAN17

Select to decrease value.



Increase

H114781—UN—10JAN17

Select to increase value.

Minimum: -15 bu/sec

Maximum: 15 bu/sec

Increment: (+/-) 0.5 bu/sec

N0LMWLO,0000112-19-26NOV19

## Advanced Settings | Custom Level Alarm

Custom Level Alarm allows you to enable a message to appear on the screen when selected grain level has been met.

### Modify To:

- Enable or disable Custom Level Alarm.
- Set an additional earlier notification of grain tank level other than 3/4 full or full.
- Set a lower alarm threshold.

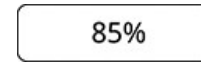
### Procedure to Modify:



ON/OFF

H114769—UN—22OCT15

1. Select to enable or disable Custom Level Alarm.



Input Box

H119129—UN—10JAN17

2. Select to open number pad and enter desired value.



OK

H114789—UN—10JAN17

3. Select OK to save value.

**NOTE:** When custom level alarm is met, a message appears on-screen. The message can be viewed in the Status Center on the display.

N0LMWLO,0000113-19-26NOV19

## Grain Level

Grain Level allows you to set correct grain tank Full Level or grain tank Empty Level if grain level is not reading correctly.

### Modify When:

- Grain is spilling over the sides when operating in hilly conditions. Set a lower grain tank level.
- The grain tank is full and you want to set the Grain Level as 100%. Select the "Set Full Level" button to calibrate the 100% reading.
- The grain tank is empty but the system is still unloading. Select the "Set Empty Level" button to calibrate the empty reading.

### Procedure to Modify:



Set Full Level

H114776—UN—10JAN17

- Select to save grain tank full level.



Set Empty Level

H114777—UN—10JAN17

- Select to save grain tank zero level.

**NOTE:** Selecting Set Empty Level will automatically adjust Tank Unloading Offset.

**NOTE:** Grain level 3/4 and full beacon will adjust based on grain level.

SS43267,00008B8-19-26NOV19

## Moisture Settings

Moisture Settings allows you to enable or disable moisture alarm, set maximum and minimum moisture alarm settings, set moisture correction, and enable or disable Use Fixed Moisture.

### Items Accessible on Moisture Settings Page:



ON/OFF

H113848—UN—04JAN17

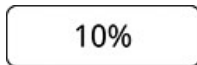
ON/OFF— enable or disable Moisture Alarm.



Maximum Moisture Value

H119131—UN—10JAN17

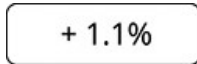
Maximum Moisture— upper limit to activate the moisture alarm.



Minimum Moisture Value

H119130—UN—10JAN17

Minimum Moisture— lower limit to activate the moisture alarm.



Correction Value

H119132—UN—10JAN17

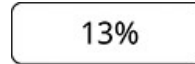
Correction— amount of correction needed to match a certified moisture measurement.



Unchecked

H114786—UN—10JAN17

Use Fixed Moisture— enable or disable fixed moisture.



Fixed Moisture Value

H119133—UN—10JAN17

Use Fixed Moisture— fixed moisture level.



Advanced Settings

N118004—UN—22OCT15

Advanced Settings— further Moisture Settings adjustments and less common settings.

N0LMWLO,0000114-19-26NOV19

## Moisture Alarm

Moisture Alarm allows you to enable or disable the Moisture Alarm that sounds when moisture value drops below minimum or above maximum setting.

### Modify To:

- Enable or disable the Moisture Alarm.
- Adjust the minimum moisture percentage.
- Adjust the maximum moisture percentage.

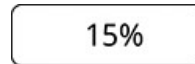
### Procedure to Modify:



ON/OFF

H114769—UN—22OCT15

- Select to enable or disable Moisture Alarm.



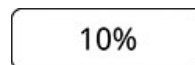
Maximum

H119131—UN—10JAN17

- Select to set percentage for alarm to sound when moisture percentage is above value.

Minimum: 1%

Maximum: 60%



Minimum

H119130—UN—10JAN17

- Select to set percentage for alarm to sound when moisture percentage is below value.

Minimum: 1%  
Maximum: 50%

**NOTE:** Maximum moisture percentage must be set higher than minimum moisture percentage.

NOLMWLO,0000115-19-26NOV19

## Moisture Correction

Moisture Correction allows you to toggle between Moisture Correction or Fixed Moisture, adjust the value when moisture percentage measured by combine moisture sensor differs from the elevator certified moisture, and disable moisture sensor reading and force a preset moisture value.

### Modify To:

- Toggle between moisture correction and fixed moisture.
- Change amount of correction needed to match a certified moisture reading.
- Change fixed moisture level used when the fixed moisture feature is enabled.

### Moisture Correction Procedure:

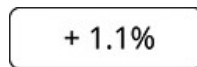
Set moisture correction to difference between combine moisture sensor and elevator certified moisture sensor. {Example: elevator moisture (13%) minus combine measured moisture (12%) = moisture difference (+1%)}



Checked

H114785—UN—10JAN17

1. If Use Fixed Moisture is checked, deselect checkbox to enable Correction.



Value

H119132—UN—10JAN17

2. Select to open number pad and enter desired value.



OK

H114789—UN—10JAN17

3. Select OK to save value.

**NOTE:** Moisture correction can be a positive or negative number.

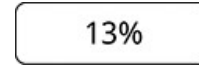
### Fixed Moisture Procedure:



Unchecked

H114786—UN—10JAN17

1. If Use Fixed Moisture is not checked, select checkbox to enable.



Value

H119133—UN—10JAN17

2. Select to open number pad and enter desired value.



OK

H114789—UN—10JAN17

3. Select OK to save value.

NOLMWLO,0000116-19-26NOV19

## Status Center

Status Center provides status and quick access for Grain Handling functions. See Display Overview for more information.

### Items Accessible for Grain Handling in Status Center:



Unloading Auger

H116268—UN—10JAN17

**Unloading Auger Swung Out**— auger is out.



Unloading Auger Engaged

H125880—UN—14MAR19

**Unloading Auger Engaged**— auger is currently unloading.



Grain Level

H116267—UN—10JAN17

**Grain Level**— shown as 3/4.

**NOTE:** Selecting Set Empty Level automatically adjusts Tank Unloading Offset.

**NOTE:** Grain level 3/4 and full beacon adjusts based on grain level.

N0LMWLO,0000117-19-02DEC20

## Adjustable Spout

Active Spout displays the desired position and target position of the unloading auger spout and allows you to adjust the spout manually or to a preset position.

### Items Accessible on Adjustable Spout Page:



Radial Gauge

H128680—UN—29JAN20

**Radial Gauge**— displays the usable range, target position, and desired position of the spout.



Desired Position

H128684—UN—29JAN20

**Desired Position**— indicates the position the spout will move to within the usable range.



Target Position

H128685—UN—29JAN20

**Target Position**— indicates the position the spout will move to when the Move To Target button is pressed.



Desired Position Value

H126722—UN—23JUL19

**Desired Position Value**— displays the desired position in a percentage value within the usable range of the spout.



Increase

H132404—UN—17NOV20

**Increase**— press to move the spout away from the machine.



Decrease

H132405—UN—17NOV20

**Decrease**— press to move the spout towards the machine.



Set Target

H126726—UN—23JUL19

**Set Target**— press to set the target position.



Move To Target

H128146—UN—16DEC19

**Move To Target**— press to move to the target position.

**NOTE:** The Set Target and Move To Target buttons will conditionally enable/disable based on the spout state.

### Status Indicators:



Unloading Auger Engaged

H128681—UN—29JAN20

**Unloading Auger Engaged**— shown while the unloading auger is engaged.



Fault

H128682—UN—29JAN20

**Fault**— shown when a fault locks the active spout system. A contextual message will inform you of the reason for the condition.



Content Blocker

H128683—UN—29JAN20

**Content Blocker**— shown if adjustable spout is not fully

unfolded. Adjustments cannot be made until active spout is fully unfolded.

**Modify When:**

- You want to adjust the position of the spout.
- You want to set the target position the spout will return to when the Move To Target button is pressed.

**Procedure to Modify:**



H132404—UN—17NOV20  
Increase



H132405—UN—17NOV20  
Decrease

1. Adjust the spout to the desired position using the Increase and Decrease buttons.



Set Target

H126726—UN—23JUL19

2. To set the current position of the spout as the target position, press the Set Target button.

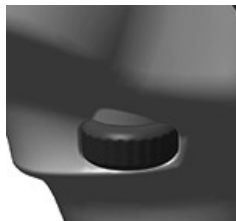


Go To Target

H128146—UN—16DEC19

3. To return the spout to the target position you have set, press the Move To Target button.

**Alternative Procedure to Modify:**



Scroll Wheel

H128143—UN—17JAN20

1. To adjust the position of the spout using the scroll wheel on the multi-function lever:
  - Scroll the wheel right (clockwise) to move the spout towards the machine (down).
  - Scroll the wheel left (counterclockwise) to move the spout away from the machine (up).



Reconfigurable Buttons

H128156—UN—14JAN20

2. To adjust the position of the spout using the C or D reconfigurable buttons on the multi-function lever:

- Press down on the rocker switch to move the spout towards the machine (down).
- Press up on the rocker switch to move the spout away from the machine (up).

**NOTE:** This procedure describes the default settings. This procedure may not apply if you previously configured new assignments or custom presets on the multi-function lever.

N0LMWLO,0000118-19-17NOV20

# Folding Application

## Access Folding

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



Folding

H114607—UN—10JAN17

#### 3. Folding

### Access Application Through Navigation Bar:



Folding

H115016—UN—22MAR16

Press Folding button on navigation bar below display.

NOLMWLO.0000119-19-26NOV19

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Folding Application is used to operate folding equipment.

### Items Accessible on Folding Main Page:

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*

#### Grain Tank Covers Items:



Lock/Unlock

H114615—UN—06JAN17

Grain Tank Covers— lock or unlock the folding function buttons for the grain tank covers.



Content Blocker

H127217—UN—26SEP19

**Content Blocker**— shows locked status. Prevents accidental engagement of the function. Press and hold to disengage.

#### Adjustable Spout Items:



Lock/Unlock

H114615—UN—06JAN17

Adjustable Spout— lock or unlock the folding function buttons for the adjustable spout.



Content Blocker

H128568—UN—20JAN20

**Content Blocker**— shows locked status. Prevents accidental engagement of the function. Press and hold to disengage.

#### Fountain Auger Items:



Lock/Unlock

H114615—UN—06JAN17

## Folding Main Page



Folding

H129113—UN—05MAR20

Fountain Auger— lock or unlock the folding function buttons for the fountain auger.



Content Blocker

H127220—UN—26SEP19

**Content Blocker**— shows locked status. Prevents accidental engagement of the function. Press and hold to disengage.

**Folding Unloading Auger Items:**



Lock/Unlock

H114615—UN—06JAN17

Folding Unloading Auger— lock or unlock the folding function buttons for the folding unloading auger.



Content Blocker

H127221—UN—26SEP19

**Content Blocker**— shows locked status. Prevents accidental engagement of the function. Press and hold to disengage.

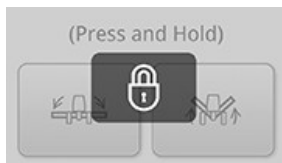
**Folding Corn Head (Non-John Deere Models):**



Lock/Unlock

H114615—UN—06JAN17

Folding Corn Head— lock or unlock folding function buttons for the corn head.



Content Blocker

H116240—UN—06JAN17

**Content Blocker**— shows locked status. Prevents accidental engagement of the function. Press and hold to disengage.

**Folding Corn Head (John Deere Models):**



Lock/Unlock

H114615—UN—06JAN17

Folding Corn Head— lock or unlock folding function buttons for the corn head.



Content Blocker

H127219—UN—26SEP19

**Content Blocker**— shows locked status. Prevents accidental engagement of the function. Press and hold to disengage.

**Manual Control Overlay:**



Manual Control

H116669—UN—30JAN17

Manual Control—any abnormal state causes the control frame to display the Manual Control icon link push button.

*NOTE: This applies to any subsystem affected by the position sensor issue or any other issue.*

N0LMWLO,000011A-19-03DEC20

**Grain Tank Covers**

Grain Tank Covers application allows you to open and close grain tank covers from within the cab.

**CAUTION:** Avoid power line entanglement. Grain tank covers must be closed before transporting machine.

**IMPORTANT:** Unload grain before closing grain tank covers.

*NOTE: Grain tank covers must be fully opened in order to engage separator.*

**Modify To:**

- Configure machine for field operation.
- Service machine components.
- Configure machine for road transportation or storage.
- Clean out machine.

**Procedure to Modify:**



Position Unknown Error

H114612—UN—06JAN17

**NOTE:** When a position unknown error is present on Grain Tank Covers, one-touch folding is unavailable. Select and hold buttons to fold or unfold grain tank covers.

**NOTE:** You can press the quick-stop switch on multi-function lever at any time to stop all movement controlled by the Folding application. Resume folding by selecting desired button.



Lock/Unlock

H114619—UN—06JAN17

1. Select to unlock folding and unfolding buttons.
2. Select desired button to fold or unfold grain tank covers.



Open

H114623—UN—06JAN17

- Select to fully open grain tank covers.



Close

H114621—UN—06JAN17

- Select to close grain tank covers.



Progress Indicator

H114616—UN—06JAN17

Displays progress of grain tank covers when opening and closing.



Open/Close

H114622—UN—06JAN17

**NOTE:** You can interrupt grain tank cover movement at any time by selecting either of the action buttons. Resume folding by selecting desired button.



Fully Open

H114627—UN—06JAN17



Fully Closed

H114640—UN—06JAN17

- Folding status is displayed on screen when action is complete.



Lock

H114615—UN—06JAN17

**NOTE:** System automatically changes to locked status 30 seconds after last button selection.

**NOTE:** Locked state prevents you from accessing folding controls, however it does not stop equipment that is already in motion. Locked state does not block physical controls that can be assigned to actuate movement in Controls Setup application.

N0LMWLO,000011B-19-26NOV19

## Adjustable Spout

Adjustable Spout application allows you to fold and unfold the adjustable spout from within the cab.

### Modify To:

- Configure machine for field operation.
- Configure machine for road transport.

### Procedure to Modify:



Position Unknown Error

H114612—UN—06JAN17



**NOTE:** When a position unknown error is present on Adjustable Spout, one-touch folding is unavailable. Select and hold buttons to fold or unfold adjustable spout.

**NOTE:** You can press the quick-stop switch on the multi-function lever at any time to stop all movement controlled by the Folding application. Resume folding by selecting desired button.



Lock/Unlock

H114619—UN—06JAN17

1. Select to unlock folding and unfolding buttons.
2. Select desired button to fold or unfold grain tank covers.



Unfold

H128152—UN—16DEC19

- Select to fully unfold adjustable spout.



Fold

H128153—UN—16DEC19

- Select to fully fold adjustable spout.



Progress Indicator

H114616—UN—06JAN17

Displays progress of the adjustable spout when folding and unfolding.



Unfolded/Folded

H128151—UN—16DEC19

**NOTE:** You can interrupt adjustable spout movement at any time by selecting either of the action buttons. Resume folding by selecting desired button.



Fully Unfolded

H128569—UN—20JAN20  
Fully Unfolded



Fully Folded

H128150—UN—16DEC19  
Fully Folded

- Folding status is displayed on screen when action is complete.



Lock/Unlock

H114615—UN—06JAN17

**NOTE:** System automatically changes to locked status 30 seconds after last button selection.

**NOTE:** Locked state prevents you from accessing folding controls, however it does not stop equipment that is already in motion. Locked state does not block physical controls that can be assigned to actuate movement in Controls Setup application.

N0LMWLO,0000120-19-02DEC20

## Fountain Auger

Fountain Auger application allows you to raise and lower the fountain auger from within the cab.

### Modify To:

- Configure machine for field operation.
- Configure machine for road transportation.

### Procedure to Modify:



Position Unknown Error

H114612—UN—06JAN17

**NOTE:** When a position unknown error is present on Fountain Auger, one-touch raising is unavailable. Select and hold buttons to raise or lower fountain auger.

**NOTE:** You can press the quick-stop switch on the multi-function lever at any time to stop all movement controlled by the Folding application. Resume folding by selecting desired button.



Lock/Unlock

H114619—UN—06JAN17

1. Select to unlock raise and lower buttons.
2. Select desired button to raise or lower fountain auger.



Raise

H127641—UN—08OCT19

**NOTE:** Locked state prevents you from accessing folding controls, however it does not stop equipment that is already in motion. Locked state does not block physical controls that can be assigned to actuate movement in Controls Setup application.

- Select to fully raise fountain auger.



Lower

H127642—UN—08OCT19

- Select to fully lower fountain auger.



Progress Indicator

H114616—UN—06JAN17

Displays progress of the fountain auger when raising and lowering.



Raised/Lowered

H127648—UN—08OCT19

**NOTE:** You can interrupt fountain auger movement at any time by selecting either of the action buttons. Resume raising or lowering by selecting desired button.



Fully Raised

H127653—UN—08OCT19  
Fully Raised



Fully Lowered

H127654—UN—08OCT19  
Fully Lowered

Folding status is displayed on screen when action is complete.



Lock/Unlock

H114615—UN—06JAN17

**NOTE:** System automatically changes to locked status 30 seconds after last button selection.

## Folding Unloading Auger

Folding Unloading Auger allows you to fold and unfold the folding unloading auger as required.

### Modify To:

- Configure machine for field operation.
- Service machine components.
- Configure machine for road transportation or storage.

### Procedure to Modify:



Position Unknown Error

H114612—UN—06JAN17

**NOTE:** When a position unknown error is present on Folding Auger Tip, one-touch folding is unavailable. Select and hold buttons to fold or unfold auger tip.

**NOTE:** You can press the quick-stop switch on multi-function lever at any time to stop all movement controlled by the Folding application. Resume folding by selecting desired button.



Unlock

H114619—UN—06JAN17

1. Select to unlock folding and unfolding buttons.
2. Select desired button to fold or unfold auger tip.



Unfold

H114637—UN—06JAN17

- Select to unfold auger tip.



Fold

H114628—UN—06JAN17

- Select to fold the auger tip.



Progress Indicator

H114616—UN—06JAN17

Displays progress of auger tip when folding and unfolding.



Unfold/Fold

H114629—UN—06JAN17

**NOTE:** You can interrupt auger tip folding movement at any time by selecting either of the action buttons. Resume folding by selecting desired button.



Fully Unfolded

H128147—UN—16DEC19  
Fully Unfolded



Fully Folded

H128148—UN—16DEC19  
Fully Folded

- Folding status is displayed on screen when action is complete.



Locked

H114615—UN—06JAN17

**NOTE:** System automatically changes to locked status 30 seconds after last button selection.

**NOTE:** Locked state prevents you from accessing folding controls, however it does not stop equipment that is already in motion. Locked state does not block physical controls that can be assigned to actuate movement in Controls Setup application.

NOLMWLO,000011C-19-02DEC20

## Folding Corn Head (John Deere Models)

Folding Corn Head Control allows you to fold and unfold corn head.

### Modify To:

- Configure machine for field operation.
- Service machine components.
- Detach corn head from machine.
- Gain clearance at headlands.
- Configure machine for road transportation.

**CAUTION:** Follow local government laws and regulations regarding transporting a header on roadways.

### Procedure to Modify:

**NOTE:** You can press the quick-stop switch on multi-function lever at any time to stop all movement controlled by the Folding application. Resume folding by selecting desired button.



Lock/Unlock

H114619—UN—06JAN17

1. Select to unlock folding and unfolding buttons.
2. Select and hold desired button to fold or unfold corn head.

**NOTE:** You can interrupt folding movement at any time by releasing the action button. Resume folding by selecting and holding desired button.



Unfold

H115022—UN—06JAN17

- Select and hold to unfold corn head.



Fold

H115021—UN—06JAN17

- Select and hold to fold corn head.



Lock/Unlock

H114615—UN—06JAN17

**NOTE:** System automatically changes to locked status 30 seconds after last button selection.

**NOTE:** Locked state prevents you from accessing folding controls, however it does not stop equipment that is already in motion. Locked state does not block physical controls that can be assigned to actuate movement in Controls Setup application.

NOLMWLO,000011D-19-16JAN20

## Folding Corn Head (Non-John Deere Models)

Folding Corn Head Control allows you to fold and unfold corn head.

### Modify To:

- Configure machine for field operation.
- Service machine components.
- Detach corn head from machine.
- Gain clearance at headlands.
- Configure machine for road transportation.

**CAUTION:** Follow local government laws and regulations regarding transporting a header on roadways.

### Procedure to Modify:

**NOTE:** You can press the quick-stop switch on multi-function lever at any time to stop all movement controlled by the Folding application. Resume folding by selecting desired button.



Lock/Unlock

H114619—UN—06JAN17

1. Select to unlock folding and unfolding buttons.
2. Select and hold desired button to fold or unfold corn head.



Unfold

H114617—UN—06JAN17

- Select and hold to unfold corn head.



Fold

H115021—UN—06JAN17

- Select and hold to fold corn head.

**NOTE:** You can interrupt folding movement at any time by releasing the action button. Resume folding by selecting and holding desired button.



Progress Indicator

H114616—UN—06JAN17

Displays progress of the corn head when folding and unfolding.



Partially Unfolded

H116122—UN—06JAN17



Fully Unfolded

H116121—UN—06JAN17



Partially Folded

H116123—UN—06JAN17



Fully Folded

H116124—UN—06JAN17

- A folding corn head equipped with position sensors displays current folding status.



Lock/Unlock

H114615—UN—06JAN17

**NOTE:** System automatically changes to locked status 30 seconds after last button selection.

**NOTE:** Locked state prevents you from accessing folding controls, however it does not stop equipment that is already in motion. Locked state does not block physical controls that can be assigned to actuate movement in Controls Setup application.

NOLMWLO,000011E-19-03DEC20

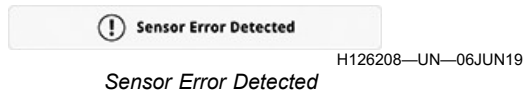
## Manual Control

Manual Control displays subsystem features that are malfunctioning or have been placed into manual control mode.

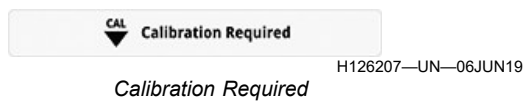
*NOTE: This does not include all subsystems, only those experiencing or affected by position sensor issues.*

**Items Accessible on Manual Control Page:**

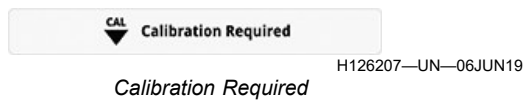
Displayed below are examples of attention frames that may appear on subsystems experiencing an issue. Subsystems not experiencing an issue will still be displayed, but without the sensor error or calibration required attention frames.



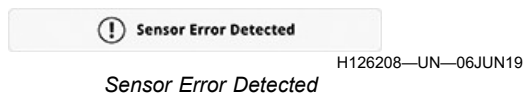
**Grain Tank Covers**



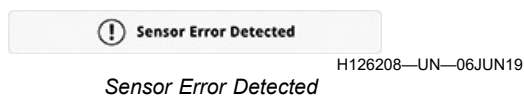
**Fountain Auger**



**Folding Unloading Auger**



**Adjustable Spout**



**Folding Corn Head**

N0LMWLO,000011F-19-02DEC20

# Harvest Settings Application

## Access Harvest Settings

Access Application Through Display:



Menu

H113668—UN—22OCT15

1. Menu



Machine Settings

N119118—UN—23SEP16

2. Machine Settings tab



Harvest Settings

H113528—UN—27JAN17

3. Harvest Settings

Access Application Through Navigation Bar:



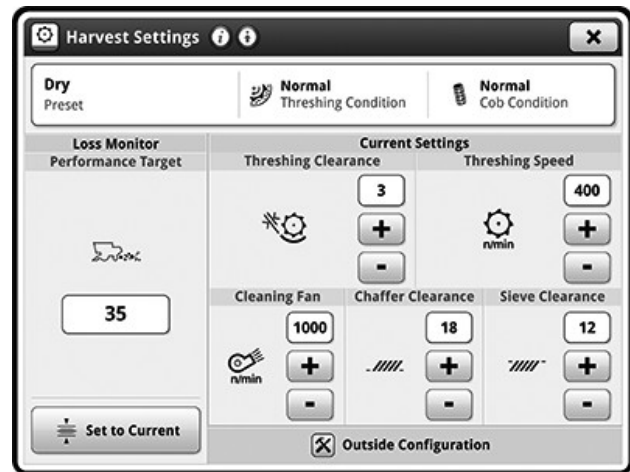
Harvest Settings

H116102—UN—27JAN17

Press the Harvest Settings button on the navigation bar below the display.

N0LMWLO,0000124-19-18NOV19

## Harvest Settings Main Page



H120310—UN—27JAN17

Harvest Settings

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Harvest Settings is used to adjust the threshing and cleaning performance for minimum harvest loss based on crop harvested and crop conditions.

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*

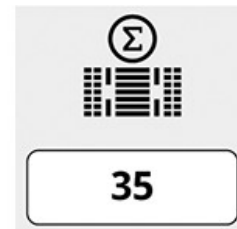
### Items Accessible on Harvest Settings Main Page:



H126455—UN—07JUN19

Load Harvest Settings

Load Harvest Settings— allows you to make default selections on Presets, Threshing Conditions, and Straw/Cob Conditions to help grain cleanliness and grain loss.



H119104—UN—30JAN17

Performance Target

Performance Target— allows you to select the acceptable grain loss for your machine.



Set To Current

H119125—UN—27JAN17

**Set to Current**— select to set the height total loss column of the VisionTrak™ display to the current

loss level. When pressed, the height total loss column is adjusted to the center of the column.

On older machines, selecting Set to Current also changes the "acceptable loss" level in HarvestSmart™.



Threshing Clearance

H113683—UN—27JAN17

**Threshing Clearance**— allows you to modify the threshing clearance.



Threshing Speed

H113685—UN—27JAN17

**Threshing Speed**— allows you to modify the threshing speed.



Cleaning Fan

H113684—UN—27JAN17

**Cleaning Fan**— allows you to modify the fan speed.



Outside Configuration

H116095—UN—27JAN17

**Outside Configuration**— shows the external machine adjustments that must be made prior to harvesting a selected crop type.



Advanced Settings

N118004—UN—22OCT15

**Advanced Settings**— allows you to access further adjustments and less common settings.



Chaffer Clearance

H113706—UN—27JAN17

**Chaffer Clearance**— allows you to modify the opening of the chaffer elements.



Sieve Clearance

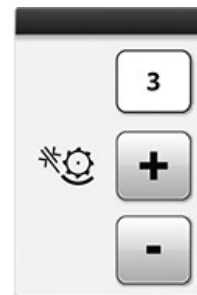
H113693—UN—27JAN17

**Sieve Clearance**— allows you to modify the opening of the sieve elements.

### Run Page Modules:

Modules for this application can be added to the run pages using [Layout Manager](#).

Example:



Clearance

H116117—UN—30JAN17

**Clearance**— allows you to adjust the threshing clearance.

**NOTE:** Different modules can be available for your application.

NOLMWLO.0000125-19-02DEC19

### Load Harvest Settings

Load Harvest Settings allows you to make default selections on Presets, Threshing Conditions, and Straw/Cob Conditions to help grain cleanliness and grain loss.

**NOTE:** Changing Crop Type in [Work Setup](#) causes change in harvest settings. See [Effects of Crop Change](#) for further information.

**Items Accessible on Load Harvest Settings Page:**

**Preset**— allows you to select defaults, previous preset values, and adjust previous preset values to adjust to crop conditions.

**Threshing Conditions**— allows you to describe the threshing conditions so the system can help determine correct machine settings.

**Straw Conditions**— allows you to describe the straw/cob conditions so the system can help determine correct machine settings.

**Settings Preview**— displays the current settings and displays your setting changes in bold in the "New" column.

**NOTE:** If any automated adjustment is made by the system, the values update to provide you the most current value.



Threshing Clearance

H113683—UN—27JAN17

Threshing Clearance



Threshing Speed

H113685—UN—27JAN17

Threshing Speed



Cleaning Fan

H113684—UN—27JAN17

Cleaning Fan



Chaffer Clearance

H113706—UN—27JAN17

Chaffer Clearance



Sieve Clearance

H113693—UN—27JAN17

Sieve Clearance



Save Preset

H116984—UN—27JAN17

**Save Preset**— allows you to save changes made to Presets, Threshing Conditions, and Straw/Cob Conditions.

**NOTE:** Auto Maintain performance can be reduced if settings differ from the selected preset. Create a new preset with the current settings for best performance.

NOLMWLO,0000126-19-22NOV19

## Load Harvest Settings | Preset

Preset allows you to select from a list of saved machine configurations for a given crop.

### Modify When:

- You want to create a preset to capture the harvest settings that provide the desired performance and grain quality for the crop and conditions that you are harvesting.
- You want to create a new custom preset when working with Auto Maintain and your settings are very different from the actual preset.

### Procedure to Modify:

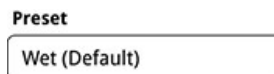


Load Harvest Settings

H127985—UN—19NOV19

1. Select to open.

**NOTE:** Other than corn, all other crop types are listed with default first, then clean out option, and finally, all of your created presets in alphabetical order.



Preset

H118081—UN—27JAN17

2. Select to open Select Preset.



Select Preset

H119178—UN—27JAN17

3. Select desired preset.





OK

H116106—UN—27JAN17

4. Select to save preset and return to Load Harvest Settings.

Current		New
mm	3	3
n/min	400	<b>430</b>
n/min	1000	<b>1250</b>
mm	18	18
mm	12	12

Current / New

H116110—UN—27JAN17

**NOTE:** As you select a different preset, the "New" column of Settings Preview updates to display the settings change in bold.

When presets for defaults are changed, the "New" column value in the Settings Preview changes. Defaults remain unchanged when changing presets within the crop type.

**NOTE:** If the New Threshing Speed is outside the current rotor drive gear range, an overlay may show to prompt you to change the gear.

**NOTE:** When modifications are made to the selected preset, the word (Modified) is added to the name.

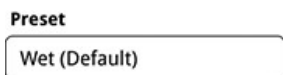
#### Procedure to Delete:



H127985—UN—19NOV19

Load Harvest Settings

1. Select to open Preset.



Preset

H118081—UN—27JAN17

2. Select to open Select Preset.



Select Preset

H119178—UN—27JAN17

3. Select desired preset.



Delete

H116104—UN—27JAN17

4. Select to delete preset.

**NOTE:** Presets that you created can be deleted. If pressed, a message dialogue is shown to confirm the delete action on the preset.



Cancel

H116105—UN—27JAN17

5. Select to cancel if you do not wish to delete the selected preset.

**NOTE:** Manually record data by hand before deleting. If you delete a preset, it is removed from the display and cannot be undone.



OK

H116106—UN—27JAN17

6. Select to delete the preset.

N0LMWLO,0000127-19-02DEC20

## Load Harvest Settings | Threshing Conditions

Threshing Conditions allows you to select from three options to choose the best description of your current threshing conditions.

#### Modify When:

- There is unthreshed grain or kernels with hull present in the sample. Set to Difficult.
- A satisfactory sample is created using the threshing settings within the recommended range for that crop. Set to Normal.
- Grain separates from the hull or cob before entering the threshing section. Set to Easy.

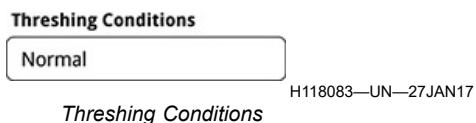
**NOTE:** For small grain crops, rubbing a grain head in between your fingers gives a good indication of how easy the grain will thresh. Rub the head in between your fingers until all the kernels are out of the their husks:

- **Easy**— around 4 rubs of the grain head.
- **Normal**— around 8 rubs of the grain head.
- **Difficult**— around 15 rubs of the grain head.

**Procedure to Modify:**

Load Harvest Settings

1. Select to open.



Threshing Conditions

2. Select the Threshing Conditions list box to open list of the threshing conditions.
3. Select the desired threshing condition.
  - **Difficult**— increased threshing aggressiveness to reduce unthreshed grain.
  - **Normal**— regular settings for ordinary harvest conditions.
  - **Easy**— decreased threshing aggressiveness to reduce power consumption and grain damage.



Cancel

4. Select to cancel if you do not wish to change.



OK

5. Select to save the Threshing Condition.

*NOTE: Once selected, the system begins adjusting the settings to match the selected preset you have chosen.*



Close

6. Select to close.

N0LMWLO,0000128-19-19NOV19

**Load Harvest Settings | Straw Conditions**

Straw Conditions allows you to select from three options to choose the best description of your current straw condition.

**Modify When:**

- Harvesting tough, wet straw, green stems, or lots of

material other than grain is being processed. Set to Difficult.

- Ordinary material handling for the crop is present. Set to Normal.
- Harvesting very dry straw or stems that break easily, creating an undesirable sample. Set to Brittle.

*NOTE: Pick a handful of standing straw and twist it. Twisting a handful of straw gives a good indication of straw conditions.*

- **Difficult**— straw will not break even when twisted more than 10 times.
- **Normal**— straw starts to break after twisting it a few times.
- **Brittle**— straw breaks easily when starting to twist it.

**Procedure to Modify:**

Load Harvest Settings

1. Select to open.



Straw Conditions

2. Select Straw Conditions list box.
3. Select the desired Straw Condition.

- **Difficult**— improves material flow in tough or wet straw.
- **Normal**— regular settings for ordinary harvest conditions.
- **Brittle**— decreases straw breakage to reduce cleaning shoe load.



Cancel

4. Select to cancel if you do not wish to change the Preset Modifiers.



OK

5. Select to save Straw Condition.

*NOTE: Once selected, the system begins adjusting the settings to match the selected preset you have chosen.*



Close

H116113—UN—27JAN17

6. Select to close.

N0LMWLO,0000129-19-02DEC20

## Load Harvest Settings | Save Preset

Save Preset allows you to create a new preset or to update the last preset you used.

### Items Accessible on Save Preset:

Default Preset— allows you to change default presets and save them as your own custom preset.

Custom Preset— allows you to either update an existing custom preset or create a preset.

SS43267,0000967-19-26JAN17

## Load Harvest Settings | Save Preset | Factory Default

Default Presets are factory loaded settings for each combination of Threshing Condition and Straw/Cob Quality for a given crop. You can modify these defaults and save them as a new name based on your harvesting conditions.

### Modify When:

You want to create your own preset to capture the harvest settings that provide the desired performance and grain quality for the crop and conditions that you are harvesting.

### Procedure to Modify:



Load Harvest Settings

H127985—UN—19NOV19

1. Select to access the Load Harvest Settings page.



Save Preset

H116984—UN—27JAN17

2. Select to save the preset as a new name.

3. Use the keyboard to enter the name of this customized setting.



Cancel

H116105—UN—27JAN17

4. Select to cancel if you do not want to save the preset.



OK

H116107—UN—27JAN17

5. Select to save the preset.

N0LMWLO,000012A-19-19NOV19

## Load Harvest Settings | Save Preset | Custom Preset

Custom Presets are defined by you based on your harvesting conditions. These can be modified as crop conditions or machine performance changes.

### Modify When:

- Harvesting different varieties of a particular crop.
- Harvesting at different times of the day (morning and evening versus afternoon).
- Harvesting in different grain moisture (wet crop versus dry crop).

### Procedure to Modify:



Load Harvest Settings

H127985—UN—19NOV19

1. Select to access the Load Harvest Settings page.



Save Preset

H116984—UN—27JAN17

2. Select to save the preset and activate the keyboard.

3. Select an option to save the current Harvest Setting.



Selection

H116289—UN—27JAN17

### Create a New Preset

Enter a new Preset name



Selection

H116289—UN—27JAN17

Update Last Used Preset  
"Corn"



Cancel

H116105—UN—27JAN17

4. Select to cancel if you do not wish to save the preset.



OK

H116107—UN—27JAN17

5. Select to save the preset.

N0LMWLO,000012B-19-19NOV19

## Load Harvest Settings | Effects of Crop Change

Changing the crop type in Work Setup also makes changes to the Load Harvest Settings.



Cancel

H116105—UN—27JAN17

Selecting Cancel on the Load Harvest Settings page while changing crop type in Work Setup results in the combine not being adjusted.

**NOTE:** The "Preset" indication shown on the Harvest Settings main page shows "-" until a new preset is loaded.

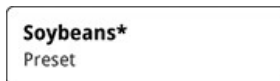


OK

H116106—UN—27JAN17

Selecting OK changes the Load Harvest Settings based on the crop selected.

- If the crop type has never been used, the factory default settings are set.
- If the last used settings were a preset, the preset is selected, the last used threshing and straw conditions are selected, and individual settings are set to last use (matching the preset and conditions set).



Preset

H119175—UN—27JAN17

- If the last used settings were custom, the Preset shows {PresetName}\* and the individual settings are set to the last used.

**NOTE:** If the new value for Threshing Speed is outside of the current rotor drive gear range, an overlay may show to prompt you to change the gear.

**NOTE:** Several harvesting functions are affected by the selected crop type preset. It is important to change the preset to match the crop being harvested.

N0LMWLO,000012C-19-18NOV19

## Current Settings | Threshing Clearance

Threshing Clearance allows you to modify the threshing clearance for varying crops and conditions.

**NOTE:** For the threshing clearance settings, refer to Crop Settings section in your Operator's Manual.

### Modify To:

#### Increase Threshing Clearance To:

- Improve straw quality; make longer straw and generates less breakage of material.
- Improve grain quality; reduce splits and grain damage.
- Reduce power consumption; for easy threshing grain.
- Improve sample cleanliness; reduce chaff load on the cleaning shoe.

#### Decrease Threshing Clearance To:

- Reduce unthreshed separator loss; unhulled grain or grain on the cob behind the machine.
- Improve grain tank sample; reduce kernels with husks or unopened pods.

Adjustment States— depending on machine options, different adjustment states may appear as current settings are changed.

### Procedure to Modify:



Threshing Clearance

H113683—UN—27JAN17

1. Select to set the threshing clearance.



Adjustment

H113698—UN—30JAN17

2. Select plus (+) to increase or minus (-) to decrease threshing clearance or select the input field and use the Armrest Adjustment Dial to make desired clearance changes.



H116282—UN—27JAN17  
Input Field



H115034—UN—28MAR16  
Armrest Adjustment Dial

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

**NOTE:** Depending on machine configurations, some values may not be reached.

**NOTE:** Maximum value may not be attainable if dense pack elements are installed.

Minimum: 0

Maximum: 42

Increment: 1



Close

H116113—UN—27JAN17

3. Select to close.

AZ06166,00007A3-19-02DEC20

**NOTE:** For the threshing speed settings, refer to Crop Settings section in your Operator's Manual. If the crop is being under-threshed, first attempt to solve the problem by decreasing the threshing clearance before adjusting the threshing speed. If the crop or straw is being damaged, try reducing the threshing speed first to solve the problem before adjusting the threshing clearance.

### Modify To:

#### Increase Threshing Speed To:

- Allow grain to be removed from the other crop material before it escapes the separator.
- Improve material flow.
- Achieve more capacity in tough material conditions.
- Improve handling in tough straw.
- Reduce the risk of plugging when taking in large amounts of material.

#### Decrease Threshing Speed To:

- Reduce power consumption; reduce threshing speed in easy threshing grain for improved efficiency.
- Improve grain sample quality; generate less chaff and foreign material in the cleaning shoe by reducing threshing speed.
- Reduce grain damage; broken kernels and splits can occur if the threshing speed is too fast, even if the concave clearance is set correctly.

**Adjustment States**— depending on machine options, different adjustment states may appear as current settings are changed.

**NOTE:** The threshing speed may increase about 30 rpm over 4 hours as the oil temperature increases. Adjust the speed as necessary.

### Procedure to Modify:

1. Engage the separator and run the engine at high idle.



Threshing Speed

H113685—UN—27JAN17

2. Select to modify the threshing speed.

## Current Settings | Threshing Speed

Threshing Speed allows you to modify the threshing speed for varying crop conditions.



Adjustment

H116279—UN—30JAN17

3. Select plus (+) to increase or minus (-) to decrease speed or select the input field and use the Armrest Adjustment Dial to make desired speed changes.



Input Field

H118087—UN—27JAN17



Armrest Adjustment Dial

H115034—UN—28MAR16

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

**NOTE:** Threshing has a two speed gearbox, with high and low speeds. Minimum and Maximum values may require you to change the gear case setting. See Operator's Manual for further information on which speed should be selected.

**NOTE:** Depending on machine configurations, some values may not be reached.

Minimum: 300 rpm

Maximum: 1300 rpm

Increment: 10 rpm



Close

H116113—UN—27JAN17

4. Select to close.

NOLMWLO,000012E-19-23NOV20

## Current Settings | Cleaning Fan

Cleaning Fan Speed allows you to modify the fan speed to improve grain cleanliness and reduce grain loss.

**NOTE:** For the fan speed settings, refer to Crop Settings section in your Operator's Manual.

### Modify To:

#### Increase Fan Speed To:

- Improve sample quality; reduce the amount of chaff or light material other than grain in the grain tank by blowing it out.
- Reduce cleaning shoe loss due to insufficient aeration; lighter grains can become trapped in chaff.

#### Decrease Fan Speed To:

- Reduce cleaning shoe loss; smaller lighter grains can be carried out of the cleaning shoe if the cleaning fan speed is too high.

**Adjustment States**— depending on machine options, different adjustment states may appear as current settings are changed.

### Procedure to Modify:

1. Engage the separator and run the engine at high idle.



Cleaning Fan Speed

H113684—UN—27JAN17

2. Select to set the cleaning fan speed.



Adjustment

H116982—UN—30JAN17

3. Select plus (+) to increase or minus (-) to decrease speed or select the input field and use the Armrest Adjustment Dial to make desired speed changes.



Input Field

H118088—UN—27JAN17



Armrest Adjustment Dial

H115034—UN—28MAR16

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

**NOTE:** Minimum and Maximum values may change if machine is equipped with a cleaning fan slow down kit.

Minimum: 570 rpm

Maximum: 1430 rpm

Increment: 10 rpm



Close

H116113—UN—27JAN17

4. Select to close.

NOLMWLO,000012F-19-02DEC20

## Current Settings | Chaffer Clearance

Chaffer Clearance allows you to modify the opening of the chaffer elements to improve the grain cleanliness and reduce the cleaning shoe loss for varying crops and conditions.

**NOTE:** For the chaffer clearance settings, refer to Crop Settings section in your Operator's Manual.

### Modify To:

#### Increase Chaffer Clearance To:

- Reduce cleaning shoe loss; allows the grain to fall through sooner before it can escape the cleaning shoe.
- Allow the grain to fall through sooner before it is forced into the tailings.

**NOTE:** Opening of the chaffer will also decrease pressure in the cleaning shoe. Large adjustments could require readjustment of the fan speed.

#### Decrease Chaffer Clearance To:

- Improve sample quality; reduce the amount of larger, foreign material in the grain tank.
- Reduce high tailings volume when it does not contain free grain.

**Adjustment States**— depending on machine options, different adjustment states may appear as current settings are changed.

### Procedure to Modify:



Chaffer Clearance

H113706—UN—27JAN17

1. Select to set the chaffer clearance.



Adjustment

H116993—UN—30JAN17

2. Select plus (+) to increase or minus (-) to decrease the desired chaffer clearance.



H118089—UN—27JAN17  
Input Field



H115034—UN—28MAR16  
Armrest Adjustment Dial

3. Turn the dial clockwise to increase the value.

4. Turn the dial counterclockwise to decrease the value.

**NOTE:** Depending on machine configurations, some values may not be reached.

### General Purpose:

Minimum: 0

Maximum: 22

Increment: 1

### Deep Tooth:

Minimum: 0

Maximum: 30

Increment: 1



Close

H116113—UN—27JAN17

5. Select to close.

NOLMWLO,0000130-19-02DEC20

## Current Settings | Sieve Clearance

Sieve Clearance allows you to modify the opening of the

sieve to improve grain cleanliness and manage tailings volumes for varying crops and conditions.

*NOTE: For the sieve clearance settings, refer to Crop Settings section in your Operator's Manual.*

### Modify To:

#### Increase Sieve Clearance To:

- Reduce amount of free grain in the tailings; allows more grain to fall through to clean grain sooner before it is recirculated in tailings.
- Increase cleaning fan air flow; increasing sieve clearance allows more cleaning fan air up through the chaffer.

*NOTE: Opening of the sieve will also decrease pressure in the cleaning shoe. Large adjustments could require readjustment of the fan speed.*

#### Decrease Sieve Clearance To:

- Improve sample quality; reduce the amount of foreign material in the grain tank.

*NOTE: To find the optimal setting for low tailings, high capacity, and grain tank cleanliness, increase sieve clearance until you see a dirty grain tank. Then decrease sieve clearance until dirt disappears.*

Adjustment States— depending on machine options, different adjustment states may appear as current settings are changed.

### Procedure to Modify:



Sieve Clearance

H113693—UN—27JAN17

1. Select to set the sieve clearance.



Adjustment

H116994—UN—30JAN17

2. Select plus (+) to increase or minus (-) to decrease the desired sieve clearance.



H118090—UN—27JAN17  
Input Field



H115034—UN—28MAR16  
Armrest Adjustment Dial

- Turn the dial clockwise to increase the value.
- Turn the dial counterclockwise to decrease the value.

*NOTE: Depending on machine configurations, some values may not be reached.*

### General Purpose:

Minimum: 0

Maximum: 22

Increment: 1

### Deep Tooth:

Minimum: 0

Maximum: 30

Increment: 1



Close

H116113—UN—27JAN17

3. Select to close.

N0LMWLO,0000131-19-02DEC20

## Current Settings | Outside Configuration

Outside Configuration shows external machine adjustments that must be made prior to harvesting the selected crop type.

*NOTE: For more information, refer to the machine Operator's Manual.*

### Procedure to Modify:

**CAUTION:** Shut OFF engine, set the park brake, and remove the key before making changes.



Outside Configuration

H116095—UN—27JAN17

1. Select to access outside configuration.



2. Select desired outside configuration for further information on machine settings.

- Chopper Speed
- Tailings System Concave Position
- Feed Accelerator Speed
- Feeder House Conveyor Chain Sprocket



Close

H116113—UN—27JAN17

3. Select to close.

NOLMWLO,0000132-19-02DEC20

**NOTE:** The actual value representing the system, which is below the icon, flashes until the actual value matches the new setpoint. Once the value reaches the new setpoint, it continues to display for 1 second before the value and progress indicator are removed from the screen.

### Combine Advisor™ and Initiated Active Terrain Adjustment™ Changes:

**NOTE:** At any time, you can make manual adjustments while an Auto Maintain or Active Terrain Adjustment™ settings change is being applied.

**NOTE:** The majority of adjustments made by Combine Advisor™ systems are offsets, meaning a setting is adjusted temporarily and reverted back to its original value when the system removes the offset.

## Current Settings | Adjustment States

Adjustment States show how the system adjustment settings react when machine changes are made.

**NOTE:** Some items below are only displayed if machine is equipped with the associated option.

### Operator Initiated Changes:

**NOTE:** Operator changes are made using the display or the Armrest Adjustment Dial.



Progress Indicator

H116277—UN—27JAN17

Operator Initiated Changes Progress Indicator.



Input Field

H118102—UN—27JAN17

Operator Initiated Setpoint Value Input Field.



200

Performance Value

H118101—UN—27JAN17

The value displayed below the setting icon represents the actual performance value.



Progress Indicator

H116278—UN—27JAN17

Auto Maintain and Active Terrain Adjustment™ Initiated Progress Indicator.



Input Field

H118094—UN—27JAN17

Auto Maintain and Active Terrain Adjustment™ Initiated Setpoint Value Input Field.



Progress Indicator

H116277—UN—27JAN17

Operator initiated changes Progress Indicator.



Input Field

H118107—UN—27JAN17

Operator Initiated Setpoint Value Input Field.

Active Terrain Adjustment is a trademark of Deere & Company  
Combine Advisor is a trademark of Deere & Company



Performance Value

H118101—UN—27JAN17

The value displayed below the setting icon represents the actual performance value.

**NOTE:** The actual value representing the system, which is below the icon, flashes until the actual value matches the new setpoint. Once the value reaches the new setpoint, it continues to display for 1 second before the value and progress indicator are removed from the screen.

**NOTE:** The input field remains blue with "AUTO" printed on it to indicate that the system is maintaining the offset. When the system removes the offset, performance value returns to its value prior to the system making the offset.

NOLMWLO,0000133-19-02DEC20

## Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

**Items Accessible on Advanced Settings Page:**



Separator Resolution

H116272—UN—27JAN17

**Separator Resolution**— allows you to modify the number of bars shown on the Corner Post Display VisionTrak™ for the separator loss indicator (independent of the number of center bars).



Shoe Resolution

H116272—UN—27JAN17

**Shoe Resolution**— allows you to modify the number of bars shown on the Corner Post Display VisionTrak™ for the shoe loss indicator (independent of the number of center bars).



Loss Sensor Tap Test

H116669—UN—30JAN17

**Loss Sensor Tap Test**— allows you to verify that various grain loss monitor sensors are functioning normally and detecting loss strikes. Select to open the grain loss monitor sensor tap test.

**NOTE:** The grain loss monitor sensor tap test can also be accessed from the Calibrations and Procedures application.



Dust Fan System

H113730—UN—30JAN17

**Dust Fan System**— allows you to engage and disengage the dust fan system.

NOLMWLO,0000134-19-02DEC20

## Advanced Settings | Separator Resolution

Separator Resolution allows you to modify the number of bars on the Corner Post Display VisionTrak™ for the separator loss indicator.

**Prior to Modification:**



Set to Current

H119125—UN—27JAN17

1. Harvest with the machine and press the Set to Current button.
2. Perform a Power Shutdown (see Operator's Manual for procedure).
3. Inspect for any grain loss from the separator.

**NOTE:** If loss is present, determine if the loss is acceptable to the amount of bars indicated by the VisionTrak™ display.

**Modify When:**

- The VisionTrak™ display does not indicate the amount of grain loss from the separator that is preferred.
- Increase Separator Resolution to show more emphasis on grain loss from the threshing and separating section.
- Decrease Separator Resolution to show less

emphasis on grain loss from the threshing and separating section.



Set to Current

H119125—UN—27JAN17

### Procedure to Modify:



Advanced Settings

N118004—UN—22OCT15

1. Select the Advanced Settings button.



Slide Bar

H118553—UN—27JAN17

**NOTE:** Slide bar displays the current resolution.



Separator Resolution

H116272—UN—27JAN17

2. Select plus (+) to increase or minus (-) to decrease the separator resolution.

Minimum: -5

Maximum: 5

Default: 0

Increment: 1



Close

H116113—UN—27JAN17

3. Select to close.

N0LMWLO,0000135-19-02DEC20

## Advanced Settings | Shoe Resolution

Shoe Resolution allows you to modify the number of bars on the Corner Post Display VisionTrak™ for the shoe loss indicator.

### Prior to Modification:

*VisionTrak is a trademark of Deere & Company*

1. Harvest with the machine and press the Set to Current button.
2. Perform a Power Shutdown (see Operator's Manual for procedure).
3. Inspect for any grain loss from the cleaning shoe.

**NOTE:** If loss is present, determine if the loss is acceptable to the amount of bars indicated by the VisionTrak™ display.

### Modify When:

- The VisionTrak™ display does not indicate the amount of grain loss from the cleaning shoe that is preferred.
- Increase Shoe Resolution to show more emphasis on grain loss from the cleaning shoe section.
- Decrease Shoe Resolution to show less emphasis on grain loss from the cleaning shoe section.

### Procedure to Modify:



Advanced Settings

N118004—UN—22OCT15

1. Select the Advanced Settings button.



Slide Bar

H118553—UN—27JAN17

**NOTE:** Slide bar displays the current resolution.



Shoe Resolution

H116272—UN—27JAN17

2. Select plus (+) to increase or minus (-) to decrease the shoe resolution.

Minimum: -5

Maximum: 5

Default: 0

Increment: 1



Close

H116113—UN—27JAN17

3. Select to close.

N0LMWLO,0000136-19-02DEC20

## Performance Target

Performance Target allows you to adjust the number of bars on the Corner Post Display VisionTrak™ for the shoe loss indicator, separator loss indicator, and total loss indicator to a level representative of the grain loss exiting the machine.

### Modify When:

- Changing crop type.
- Harvesting conditions vary (wet crop versus dry crop, high moisture versus low moisture, variety A versus variety B, or large swings in seed size or yield).

*NOTE: It is not necessary to set a new target if you are using a recent performance target for this crop type and harvesting conditions.*

### Procedure to Modify:

*NOTE: Larger seed sizes such as corn or soybeans generally have a lower numerical calibration value than smaller seed sizes like wheat or canola.*

*NOTE: Selecting a lower calibration value will register more bars on the display for the same acceptable grain loss.*

### Automatic:

*NOTE: Operate the machine at the desired performance and select Set to Current, this stores operating characteristics to memory and centers the total loss indicator.*

*NOTE: Clicking Set Performance Target in Combine Advisor also performs an Automatic Target for Grain Loss.*



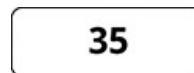
Set To Current

H119125—UN—27JAN17

Select Set to Current to adjust the height total loss

column of the VisionTrak™ display to the center of the column.

### Manual:



Input Box

H119105—UN—27JAN17

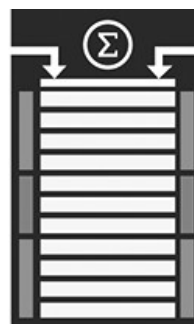
Select to open number pad and manually enter desired value.

Minimum: 1

Maximum: 99

Increment: 1

*NOTE: The Automatic setting is recommended. The Manual setting should only be used if the Automatic setting does not give the desired results.*



Total Loss Indicator

H117836—UN—22DEC16

*NOTE: Total Loss Indicator bar graph is now a visual guide. You can refer to the corner post display periodically to know when an increase or decrease in the total loss amount occurs.*

*If the total loss indicator bar graph is above or below the green area and losses are acceptable, the grain loss monitor is either incorrectly adjusted or there is a higher flow of material through the machine since the grain loss monitor was last calibrated. Higher flow of material can be caused by increased ground speed or higher crop yields.*

*When the machine encounters a “slug”, the middle bar graph will fluctuate upward (15 to 20 seconds) and then return to the previous reading. Ignore these fluctuations when this occurs.*

N0LMWLO,0000137-19-02DEC20

# Engine Application

## Access Engine

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



Engine

H113552—UN—09MAR16

#### 3. Engine

### Access Application Through Navigation Bar:



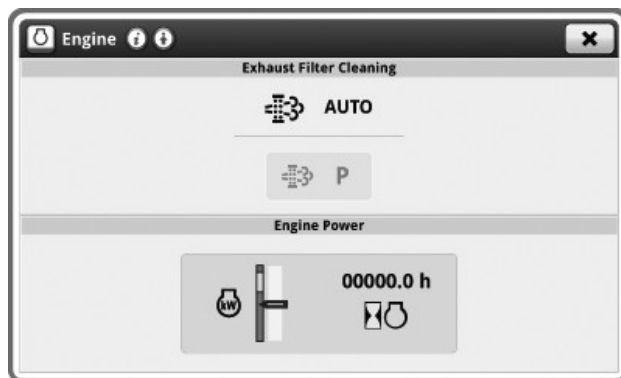
Engine Application Button

H113709—UN—04JAN17

Press Engine button on navigation bar below display.

NOLMWLO,0000138-19-26NOV19

## Engine Main Page



Engine

H128119—UN—06JAN20

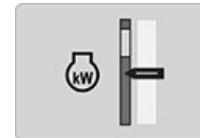
*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

The Engine application is used to access and adjust engine settings.

### Items Accessible on the Engine Main Page:

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Engine Power

H113549—UN—04JAN17

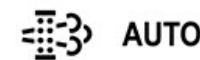
Engine Power— amount of power the engine is using.



Engine Hours

H115017—UN—04JAN17

Engine Hours— accumulated engine hours.



Auto Exhaust Filter Cleaning

H113829—UN—04JAN17

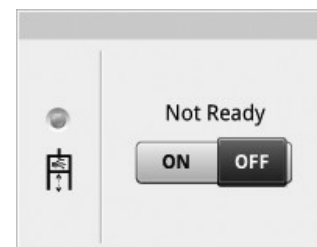
AUTO Exhaust Filter Cleaning— automated process that performs exhaust filter cleaning during normal operation as required.



Parked Filter Cleaning

H113830—UN—04JAN17

Parked Filter Cleaning— process which allows the system to perform additional exhaust filter cleaning when required.



Air Compressor

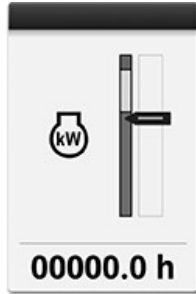
H126730—UN—26SEP19

**Air Compressor**— toggle button to enable or disable air compressor system.

### Run Page Modules

Modules for this application can be added to run pages using Layout Manager.

Example:



Engine Power

H115023—UN—04JAN17

**Engine Power**— shows engine hours and power output of the engine.

*NOTE: Different modules can be available for your application.*

### Shortcut Keys

Shortcut keys for this application can be added to the shortcut bar using Layout Manager.



Air Compressor

H118309—UN—04JAN17

**Air Compressor Shortcut Key**— allows you quick access to turn air compressor ON/OFF.

NOLMWLO,0000139-19-16NOV20

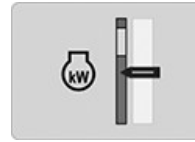
### Engine Power

Engine Power allows you to view amount of engine power being used and accumulated engine hours. A power meter is available on both the display and the corner post display for visual indication of current power consumption.

**IMPORTANT: If alerts or excessive exhaust smoke are visible, see your John Deere dealer or other qualified service provider for further diagnosis.**

### Items Displayed on the Engine Power Page:

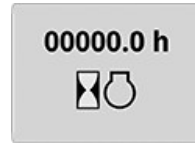
*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Engine Power

H113549—UN—04JAN17

**Engine Power**— amount of power the engine is using.



Engine Hours

H115017—UN—04JAN17

**Engine Hours**— accumulated engine hours.

### Isochronous Engine Governor

Keeps the engine and driven component speeds constant to enhance capacity and efficiency until rated engine power is exceeded.

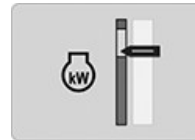
### Power Meter



Green Zone

H113549—UN—04JAN17

- **Green Zone**— operate engine at upper portion of the green zone to maximize machine productivity and maintain constant engine speed.



Yellow Zone

H113551—UN—04JAN17

- **Yellow Zone**— preferred upper limit in tough conditions. Less power bulge available in this zone. Target lower range of the yellow zone before unloading auger is engaged.



Red Zone

H113550—UN—04JAN17

- **Red Zone**— peak power level and is not recommended for extended periods because no power reserve is available.

**IMPORTANT:** If indicator moves into the red zone, engine power is maximized and the machine could potentially stall. Reduce load on the machine until indicator moves back into green or yellow zones.

Operating in the following conditions increases power consumption:

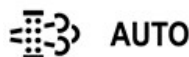
- Hilly terrain
- Heavy or wet crop
- Wet ground conditions
- Excessive ground speed

N0LMWLO,000013A-19-02MAR20

## Exhaust Filter System Overview

Your machine is equipped with an emission-compliant engine, which cleans and filters the exhaust. Under normal machine operation and with the system in AUTO mode, the system requires minimal operator interaction.

To avoid the unnecessary buildup of diesel particulates or soot in the exhaust filter system:



Auto Exhaust Filter Cleaning

H113829—UN—04JAN17

- Utilize AUTO Exhaust Filter Cleaning mode.
- Avoid unnecessary idling.
- Use proper engine oil.
- Use only ultra low sulfur fuel.

**NOTE:** For more information, refer to *Fuels and Lubricants* section in the machine Operator's Manual.

**CAUTION:** When AUTO or PARKED cleaning is enabled, the exhaust temperature can be high under no load or light load conditions at certain times during the exhaust filter cleaning cycle.

Servicing machine or attachments during the exhaust filter cleaning can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

During auto or manual/stationary exhaust filter cleaning operations, the engine runs at elevated idle and hot temperatures for an extended period. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite, or melt common materials.

**AUTO Mode**— automated process that performs exhaust filter cleaning during normal operation.

**Disable AUTO Exhaust Filter**— in conditions where it can be unsafe for elevated exhaust temperatures.



Parked Filter Cleaning

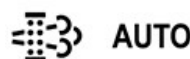
H113830—UN—04JAN17

**Parked Filter Cleaning**— process which allows the system to perform additional exhaust filter cleaning when required.

**Engine Cool Down**— period of cool down after exhaust filter cleaning.

N0LMWLO,000013B-19-19NOV19

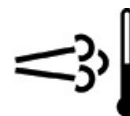
## AUTO Exhaust Filter Cleaning



Auto Exhaust Filter Cleaning

H113829—UN—04JAN17

AUTO Mode allows the Exhaust Filter System to perform exhaust filter cleaning as required. Corner post display indicator and armrest display provide you with information related to exhaust filter system activity.



High Exhaust System Temperature (HEST) Indicator

H113561—UN—07NOV16

High Exhaust System Temperature (HEST) Indicator illuminates on the corner post display when the exhaust system temperatures are elevated.

**CAUTION:** When AUTO or PARKED cleaning is enabled, the exhaust temperature can be high under no load or light load conditions at certain times during the exhaust filter cleaning cycle. Disable exhaust filter cleaning system in conditions where it can be unsafe for elevated exhaust temperatures.

**NOTE:** System defaults to AUTO mode when parked exhaust filter cleaning is complete.

**Disable AUTO Exhaust Filter Cleaning** system in conditions where it can be unsafe for elevated exhaust temperatures.

**IMPORTANT:** Damage to engine components can occur if engine is turned OFF while performing exhaust filter cleaning or shortly after cleaning is complete. Alarm sounds and a warning message appears on display. Start machine and follow messages on display to allow components to cool. See Engine Cool Down In Progress.

**NOTE:** If a filter cleaning is requested while the machine is stationary and not in harvesting mode, a caution will appear on-screen. After reading the caution, you must select Accept or Cancel before continuing.

PR79369,00002A5-19-30NOV20

## Parked Filter Cleaning

Parked Filter Cleaning is a process which you initiate to clean the exhaust filter when required.

During the process, engine speed is controlled by the system, and the machine must remain parked to complete the procedure. Time required for the Parked Filter Cleaning process is dependent upon the level of exhaust filter restriction, ambient temperatures, and current exhaust gas temperature.

### Procedure to Modify:

**CAUTION:** When AUTO or PARKED cleaning is enabled, the exhaust temperature can be high under no load or light load conditions at certain times during the exhaust filter cleaning cycle.

Servicing machine or attachments during the exhaust filter cleaning can result in serious personal injury. Avoid exposure and skin contact with hot exhaust gases and components.

During auto or manual/stationary exhaust filter cleaning operations, the engine runs at elevated idle and hot temperatures for an extended period. Exhaust gases and exhaust filter components reach temperatures hot enough to burn people, or ignite, or melt common materials.

**IMPORTANT:** Damage to exhaust cleaning components can occur if engine is turned OFF while performing exhaust filter cleaning or shortly after cleaning is complete. Start machine and follow messages on display to allow components to cool. See Engine Cool Down In Progress.

**NOTE:** Parked Filter Cleaning can exceed 40 minutes.



Abort

H113804—UN—09MAR16

Select Abort at any time during Parked Filter Cleaning procedure to cancel process.



Parked Filter Cleaning

H113830—UN—04JAN17

1. Select Parked Exhaust Filter Cleaning button.
2. Verify that the machine is configured for Parked Filter Cleaning.

- Position the machine outdoors
- Stop machine motion
- Set engine speed to low idle
- Engage park brake
- Disengage separator
- Clear proximity sensor
- Engine debris management system functional



Check Mark

N118440—UN—09MAR16

Once a condition has been met, a green check mark in box appears preceding the condition.



Next

H113803—UN—09MAR16

3. Once all conditions have been met, select next button.

**NOTE:** Exhaust Filter System controls the engine speed to increase exhaust temperature.



Progress Indicator

H113801—UN—04JAN17

Exhaust filter cleaning is shown by Progress Indicator.



H114770—UN—22JAN20

4. Select and a message appears on the screen that can be viewed in the Status Center on the display.



**NOTE:** Cleaning process continues when close button is selected.



Status Center

H113816—UN—04JAN17

To check status of the procedure, select Status Center to open Status Center page.



Check Status

H118543—UN—04JAN17

Select Check Status to view the cleaning process.



Cleaning Complete

H113825—UN—04JAN17

System informs you when exhaust filter cleaning is complete.



Close

H114770—UN—22JAN20

5. Select to return to the display.

If you are not returning the machine to service immediately after procedure, allow engine time to return to normal operating temperature before stopping engine. See Engine Cool Down In Progress.

**NOTE:** System defaults to AUTO mode when parked exhaust filter cleaning is complete.

N0LMWLO,000013C-19-19NOV19

## Disable AUTO Exhaust Filter Cleaning

Auto Exhaust Filter Cleaning can be disabled in certain conditions.

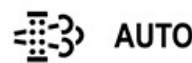
**IMPORTANT:** Disable the automatic exhaust filter cleaning system only when necessary.

### Modify When:

- Indoors or under a roof unless a high temperature externally vented exhaust system is connected.
- There is not enough time available for the machine to complete a cleaning cycle before it is shut down.
- In high crop dust or chaff conditions.

- Next to a fueling area.

### Procedure to Modify:



Automatic

H113829—UN—04JAN17

1. Select to open Exhaust Filter Cleaning.



ON/OFF

H113848—UN—04JAN17

2. Select to enable or disable Automatic Filter Cleaning.



Close

H114770—UN—22JAN20

3. Select to close Exhaust Filter Cleaning.

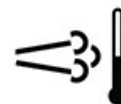
N0LMWLO,000013D-19-19NOV19

## Engine Cool Down In Progress

Engine Cool Down is a specific time period necessary to allow the engine and components to cool down.

**IMPORTANT:** Damage to exhaust cleaning components can occur if engine is turned OFF while performing exhaust filter cleaning or shortly after cleaning is complete. Alarm sounds and a warning message appears on display. Start machine and follow messages on display to allow components to cool.

### Access Engine Cool Down In Progress:



Exhaust Filter Cleaning Icon ON

H113811—UN—04JAN17

1. Exhaust Filter Cleaning Icon illuminates on corner post display.



Engine Cool Down Icon

H127479—UN—26SEP19

- Engine Cool Down In Progress alert opens on-

screen showing the minutes left before the machine can be shut down.



OK

H113812—UN—04JAN17

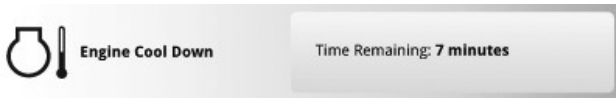
2. Select OK on Engine Cool Down In Progress alert.



Status Center

H127477—UN—26SEP19

3. Engine Cool Down Icon illuminates in Status Center during Engine Cool Down In Progress.



Status Center Display

H127983—UN—19NOV19

4. Select Engine Cool Down icon to view Engine Cool Down progress in the Status Center Display.



Engine Cool Down Complete

H127510—UN—26SEP19

5. When engine cool down time elapses, the Engine OK Icon is no longer illuminated.



OK

H113812—UN—04JAN17

**IMPORTANT: If engine is shut off during Engine Cool Down, an alert displays on-screen requiring the engine to be started.**

6. Cool Down Complete message appears and tells you that the machine can be shut down. Select to close message.

PR79369,00002A6-19-30NOV20

## Air Compressor

Air Compressor provides a supplemental compressed air source to clean the machine.

The air compressor will only function if the following requirements are met:

- Engine must be running.
- Machine must be in park.
- Separator must be disengaged.

- Header must be disengaged.
- Machine external components must not be in motion.

### Procedure to Modify:

**IMPORTANT: Drain moisture from the air tank daily. Refer to Operator's Manual for details.**

**IMPORTANT: Never clean engine air filters or debris management air filters while engine is running.**

**NOTE: Onboard Air Compressor is NOT recommended to inflate tires on the machine or run air tools.**



Status Indicator

H113822—UN—04JAN17

Status Indicator— displays status of Air Compressor requirements.



ON/OFF

H116670—UN—04JAN17

Select to enable or disable Air Compressor. ON/OFF toggle button is located on the Engine Main Page.

**NOTE: When the air compressor is active, the green status indicator pulses to remind you that certain machine functions such as separator, header, unloading auger and propulsion systems are reduced in functionality.**

**NOTE: When preconditions are not met, selecting the ON/OFF toggle button displays Air Compressor Status to help troubleshoot what is preventing the system from activating.**

N0LMWLO,000013F-19-16DEC19

## Air Compressor Status

Air Compressor Status shows the requirements needed to enable the air compressor system.



ON/OFF

H116670—UN—04JAN17

Select ON/OFF toggle button under Air Compressor to open Air Compressor Status page if all requirements are not met.

**Items Displayed on Air Compressor Status Page:**



Gray

H113824—UN—04JAN17

**Not Ready**— requirements not met.



Gray

H113824—UN—04JAN17

**Ready**— requirements met but not enabled.



Green

H113822—UN—04JAN17

**Active**— requirements met and system enabled.

#### Air Compressor Requirements:

- Engine must be running.
- Machine must be in park.
- Separator must be disengaged.
- Header must be disengaged.
- Machine external components must not be in motion.



Alert Message

H113826—UN—04JAN17

A message appears when a requirement is not met.



Check Mark

H113825—UN—04JAN17

Once a condition is met, a green check mark appears.



Close

H114770—UN—22JAN20

Select to close Air Compressor Status.

SS43267,00008A2-19-19NOV19

## Engine Preheat Active

Engine Preheat Active message appears on your display if the engine is not preheated to a certain temperature prior to starting.

**IMPORTANT:** It is recommended to allow the preheat process to finish before starting the engine. Failure to do so may result in reduced starting performance.

*NOTE:* The message will disappear after machine is cranked or started.



H119166—UN—17JAN17

Time remaining for the preheat function is displayed next to the clock icon.

NOLMWLO,0000140-19-19NOV19

## Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

### Items Accessible on Advanced Settings Page:

**Cooling Fan Reversal**— provides the status of the cooling fan system, manual reversal, and service clean out modes.



Reversal Ready

H113822—UN—04JAN17

**Reversal Ready**— system is ready to begin manual reversal cycle.



Reversal Not Ready

H114658—UN—05JAN17

**Reversal Not Ready**— system is not available.



Manual Cycle Active

H113824—UN—04JAN17

**Manual Cycle Active**— during the manual cleaning cycle the status indicator will cycle between gray and green.



*Auto Cycle Active*

H113821—UN—04JAN17

**Auto Cycle Active**— indicates that the system has begun a reversal cycle automatically.



*Fault Detected*

H114657—UN—05JAN17

**Fault Detected**— system is unavailable due to the presence of a fault.



*Diagnostics Center*

H116669—UN—30JAN17

**Diagnostics Center**— press button to open diagnostics center for additional fault details.

**Manual Reversal**— press button to begin a reverse cycle manually.

**Service Clean Out**— press button to begin a full clean out cycle manually.

**Access Cooling Fan Reversal In Progress:**



*Status Bar*

H127511—UN—26SEP19

1. A Cooling Fan Reversal icon will appear in the Status Bar when a reversal cycle is running.



Cooling Fan Reversal  
In progress



Open Engine App

*Status Center Display*

H127984—UN—19NOV19

2. Select Cooling Fan Reversal icon to view progress in the Status Center Display and open the Engine app.

N0LMWLO,0000142-19-19NOV19

# HVAC Application

## Access HVAC

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



HVAC

H114795—UN—04JAN17

#### 3. HVAC

### Access Application Through Navigation Bar:



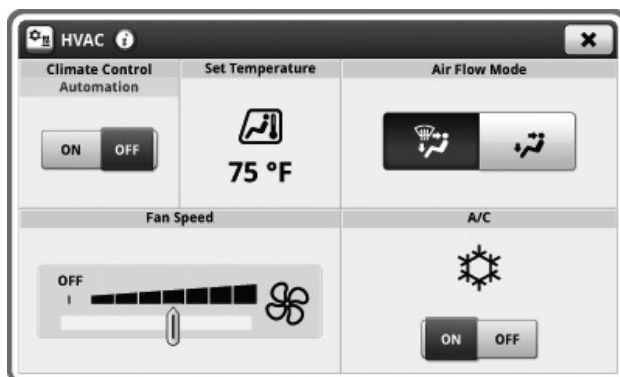
HVAC

H114794—UN—17MAR16

Press HVAC button on navigation bar below display.

N0LMWLO,0000143-19-26NOV19

## Heating, Ventilation, and Air Conditioning (HVAC) Main Page



HVAC

H128158—UN—16JAN20

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

HVAC application is used to adjust temperature, fan speed, and air flow mode inside of the cab and view the outside temperature (if equipped).

### Items Accessible on HVAC Main Page:



Climate Control Automation

H114790—UN—04JAN17

**Climate Control Automation**— enable to allow automatic control over air conditioning, air flow mode, and fan speed.

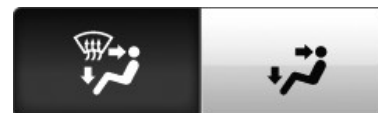


75° F

Set Temperature

N145866—UN—26SEP19

Set Temperature— set a desired temperature inside the cab.



Air Flow Mode

N145867—UN—26SEP19

Air Flow Mode— adjust distribution of air flow inside the cab.



Fan Speed

N145868—UN—26SEP19

Fan Speed— control fan speed inside the cab.



Air Conditioning

N145869—UN—26SEP19

Air Conditioning (A/C)— enable or disable air conditioning.

### Run Page Modules

Modules for this application can be added to run pages using the Layout Manager.

Example:



A/C

H115024—UN—04JAN17

**A/C**— toggle gives you direct access to enable/disable the A/C.

*NOTE: Different modules can be available for your application.*

### Shortcut Keys

Shortcut keys for this application can be added to the shortcut bar using Layout Manager.

Example:



A/C ON/OFF

H116265—UN—04JAN17

**A/C ON and OFF**— quick access to turn air conditioning on and off.

*NOTE: Different shortcut keys may be available for your application.*

PR79369,00002A1-19-25NOV20

### Set Temperature

Set Temperature allows you to set a desired temperature inside the cab.

**Procedure to Modify:**



75° F

Set Temperature

N145866—UN—26SEP19

1. Select Set Temperature value to modify the cab temperature setting.



Decrease

H114792—UN—22JAN20

2. Select to decrease the value.



Increase

H114791—UN—22JAN20

3. Select to increase the value.



Close

H114770—UN—22JAN20

4. Select to close the cab temperature setting.

### Alternate Procedure to Modify:

**CommandARM™ Temperature Control**—press the temperature increase or decrease buttons on armrest to modify temperature.

PR79369,00002A2-19-25NOV20

### Fan Speed

Fan Speed allows you to control fan speed inside the cab.

**Procedure to Modify:**



Fan Speed

N145868—UN—26SEP19

1. Select the screen area under Fan Speed to modify it.



Indicator

H114802—UN—17MAR16

2. The indicator moves to the selected fan speed or is turned off by selecting the minus (-) or plus (+) buttons.



Decrease

H114998—UN—04JAN17

- a. Select to decrease the fan speed. The fan speed decreases until the indicator reaches the OFF position.



Increase

H114997—UN—04JAN17

- b. Select to increase the fan speed. The fan speed increases until the highest setting is reached.

The fan is turned off when the indicator moves to OFF.



Close

H114770—UN—22JAN20

3. Select to close the fan speed setting.



Climate Control Automation

H114790—UN—04JAN17

**NOTE:** When climate control automation is enabled on the HVAC main page, the fan speed decreases as the temperature approaches the temperature Setpoint.

#### Alternate Procedure to Modify:

**CommandARM™ Fan Speed Control**— press fan speed increase or decrease buttons on armrest to modify fan speed.

*CommandARM is a trademark of Deere & Company*

PR79369,00002A3-19-25NOV20

### Air Flow Mode

Air Flow Mode allows you to adjust distribution of air flow inside the cab or enable windshield defrost.

#### Procedure to Modify:



Air Flow Modes

N145867—UN—26SEP19

Select the desired air flow mode on the toggle bar.



Defrost, Operator, and Floor

N145870—UN—26SEP19

**Defrost, Operator, and Floor**— distribute air flow evenly throughout the cab and defrost the windshield.

**NOTE:** Air conditioning turns ON when Defrost air flow mode is selected.



Operator and Floor

N145871—UN—26SEP19

**Operator and Floor**— direct air flow evenly throughout the cab.

#### Alternate Procedure to Modify:

**CommandARM™ Air Flow Control**— press the air flow mode button on the armrest to toggle between modes.

PR79369,00002A4-19-25NOV20

### Air Conditioning (A/C)

Air Conditioning allows you to enable or disable air conditioning.

**NOTE:** Air conditioning turns ON when defrost air flow mode is selected.

#### Procedure to Modify:



ON/OFF

H114790—UN—04JAN17

Select to enable or disable air conditioning.

NOLMWLO,0000148-19-16JAN20

# Transmission Application

## Access Transmission

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



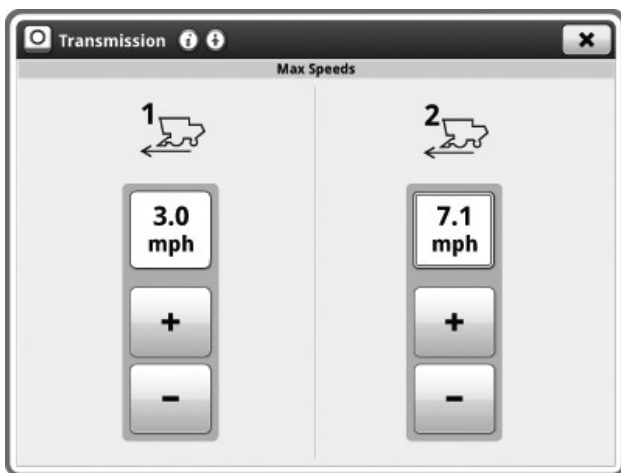
Transmission

H113843—UN—30OCT15

#### 3. Transmission

N0LMWLO,000014A-19-22NOV19

## Transmission Main Page



Transmission

H128141—UN—06JAN20

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*

Transmission application is used to display transmission information and adjust settings.

### Items Accessible on ProDrive™ XL Transmission Main Page:

*NOTE: Transmission application is not available when road mode is active. Press the Road Transport Disconnect button to turn road mode on or off.*



Max Speed 1

H126972—UN—26SEP19

Max Speed 1— maximum speed when max speed 1 is active. Select input box to adjust setting.



Max Speed 2

H126973—UN—26SEP19

Max Speed 2— maximum speed when max speed 2 is active. Select input box to adjust setting.



Advanced Settings

N118004—UN—22OCT15

Advanced Settings— allows you to access further adjustments and less common settings.

N0LMWLO,000014B-19-24NOV20

## Max Speed 1 and 2

Max Speeds allows you to set a comfortable harvest or transport speed. When desired ground speed is set and multi-function lever is moved fully forward with the engine at high idle, machine operates no faster than the setpoint for the selected mode. Two modes are available.

*NOTE: Max Speed 1 cannot be set higher than current maximum speed set in Max Speed 2.*



**NOTE:** Greater maximum setpoints mean more aggressive machine movements. It is always best to use low range with a low maximum setpoint when doing precision movements (hooking up header).

- Example 1: Attaching header to machine and harvesting desired crop. Max Speed 1 set to 1.6 km/h (1 mph). Max Speed 2 set to 11.3 km/h (7 mph).
- Example 2: Waterway approaches and harvesting desired crop. Max Speed 1 set to 4.8 km/h (3 mph). Max Speed 2 set to 11.3 km/h (7 mph).



Value

H126975—UN—26SEP19

Select plus (+) button to increase value.

Select minus (-) button to decrease value.

**NOTE:** As you switch between speed settings using the ProDrive™ Mode buttons on the armrest, a message appears on-screen reminding you of the speed settings currently active. The message can be viewed in the Status Center on the display.

N0LMWLO,000014C-19-25NOV20

## Advanced Settings

### Items Accessible on Advanced Settings Page:

**Limp Home Mode**— enable to move a machine with a power train sensor fault to a safe location or to be serviced.

**Tow Mode**— must be enabled to tow the machine.

N0LMWLO,000014D-19-13MAY20

## Tow Mode

You can enable Tow Mode to protect transmission if machine is disabled and requires towing.

**CAUTION:** Do not tow machine with wire rope. If rope breaks, the whipping action could cause bodily injury.

**Do not remove couplers. When couplers are removed, brakes are disabled.**

**Avoid electrical line entanglement. Grain tank covers must be closed and the radio antenna must be removed before transporting. For further information, see the Folding application on the CommandCenter™ display and Radio Antenna in the Operator's Station section of the Operator's Manual.**

**Check local governmental regulations regarding driving or towing equipment on public roads. Use auxiliary lights and devices available from your John Deere dealer to warn other roadway users.**

**Avoid crushing injuries from runaway machine. If machine is on a slope, do not disengage park brake until wheels are blocked.**

**Machine can be towed for emergency situations up to 10 min at maximum speed of 10 km/h (6.2 mph).**

### Tow Mode Procedure Requirements:

Engine State	Running
Wheel Speed	0 km/h (0 mph)
Operator	In Seat
Machine State	Park Brake Engaged

### Procedure to modify:

To tow machine, proceed as follows:

1. Start engine.
2. Empty grain tank and remove header.
3. Swing unloading auger back.
4. Close the grain tank covers.
5. Swing ladder forward and remove the radio antenna.

**NOTE:** Always tow machine in a forward direction by attaching a chain around main axle. Be certain chain does not damage any hydraulic lines. Have driver in operator's seat to steer machine.

6. Turn warning lights ON, unless prohibited by law.

**NOTE:** Engine must be running to turn off park brake and tow machine. If engine is inoperable, see your John Deere dealer or other qualified service provider for further information.



ON/OFF

H114769—UN—22OCT15

7. Select ON/OFF toggle button to enable Tow Mode.



Message

H114772—UN—22OCT15

8. If requirements for tow mode were not met, a message appears displaying which requirements are not met.



Close

H114770—UN—22JAN20

9. If you need to exit tow mode for any reason you can do so by selecting close button.



Green Checkmark

H114771—UN—22OCT15

10. Once a requirement is met, a green checkmark appears preceding the requirement.



ON/OFF

H114769—UN—22OCT15

11. Once all requirements are met, you can select ON/OFF toggle button to activate Tow Mode.

**CAUTION:** Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use hand signals or turn signal lights.

Use headlights, flashing warning lights, and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that are damaged or lost.

12. Press park button on armrest to release brakes before towing machine.

**NOTE:** Operator must remain in seat for park to be disengaged.

Tow mode is disabled and a message appears on screen that can be viewed in the Status Center if you:

- Shift transmission into gear.

N0LMWLO,000014E-19-24NOV20

## Limp Home Mode

You can enable Limp Home Mode to move a machine to a safe location that is brought to a stop due to a power train sensor fault at a derated speed.

**NOTE:** Allows machine to operate up to 4 hours. Not to be used for normal operation.



ON/OFF

H114769—UN—22OCT15

Select ON/OFF toggle button to enable Limp Home Mode.

If there is a power train sensor fault Limp Home Mode enables and a message appears.

**NOTE:** Limp Home Mode will automatically disable on machine key cycle.

If no power train sensor fault was detected, Limp Home Mode is not enabled and a message appears.

N0LMWLO,000014F-19-24NOV20

# Lights Application

## Access Lights

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Machine Settings

N119118—UN—23SEP16

#### 2. Machine Settings tab



Lights

H115006—UN—09JAN17

#### 3. Lights

### Access Application Through Navigation Bar:



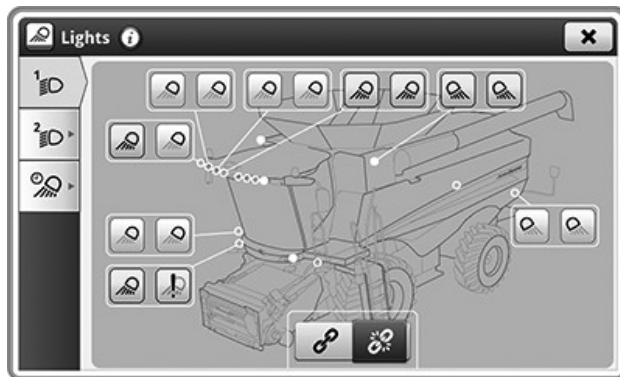
Lights

H115005—UN—11MAR16

Press Lights button on navigation bar below display.

N0LMWLO,00001A8-19-25NOV19

## Lights Main Page



Lights

H120316—UN—09JAN17

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

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Lights application is used to access light presets that can be configured by the operator. Selecting one of the tab presets allows you to make adjustments.

**NOTE:** Worklights are configurable. Road lights are not configurable.

### Tabs Available in Lights Application:



Worklights Preset 1

N153122—UN—01DEC20

Worklights Preset 1— configure the lights that illuminate in Worklights Preset 1.



Worklights Preset 2

N153123—UN—01DEC20

Worklights Preset 2— configure the lights that illuminate in Worklights Preset 2.



Highlighted Tab

H114597—UN—11MAR16

**Highlighted Tabs**— indicate which light preset is selected.

Worklights Controls— provide you with controls to select worklights.



Light With Fault

H113862—UN—11MAR16

**Light with Fault**— exclamation point indicates light is in error. Example, light bulb is burnt out.



Advanced Settings

N144939—UN—24MAY19

**Advanced Settings**— allows you to access further adjustments and less common settings.

NOLMWLO,00001A9-19-25NOV20

## Worklights Preset 1

Worklights Preset 1 allows you to customize presets for specific needs. Modify when needing customized lighting in low visibility conditions.

### Procedure to Modify:



Worklights Preset 1

N153122—UN—01DEC20

1. Select to allow customization of each individual light in this mode.



Link

H113857—UN—11MAR16

- Select Link on toggle button to link paired left-hand and right-hand lights for simultaneous ON and OFF operation on all tabs.



Unlink

H113858—UN—11MAR16

- Select Unlink on toggle button to allow paired left-hand and right-hand lights individual ON and OFF operation on all tabs.



H114591—UN—11MAR16  
Light Button



H113853—UN—11MAR16  
Light Pair Button

2. Select Light or Light Pair button for lights you want illuminated.



Highlighted Button

H114592—UN—11MAR16

**NOTE:** Button becomes highlighted when selected.

PR79369,000029E-19-24NOV20

## Worklights Preset 2

Worklights Preset 2 allows you to customize presets for specific needs. Modify when needing customized lighting in low visibility conditions.

### Procedure to Modify:



Worklights Preset 2

N153123—UN—01DEC20

1. Select to allow customization of each individual light in this mode.



Link

H113857—UN—11MAR16

- Select Link on toggle button to link paired left-hand and right-hand lights for simultaneous ON and OFF operation on all tabs.



Unlink

H113858—UN—11MAR16

- Select Unlink on toggle button to allow paired left-hand and right-hand lights individual ON and OFF operation on all tabs.



H114591—UN—11MAR16  
Light Button



H113853—UN—11MAR16  
Light Pair Button

2. Select Light or Light Pair button for lights you want illuminated.



Highlighted Button

H114592—UN—11MAR16

**NOTE:** Button becomes highlighted when selected.

PR79369,000029F-19-24NOV20

## Worklights Controls

Worklights Controls allows you to select the desired worklight preset and mode.

**NOTE:** Some items below are only displayed if machine is equipped with the associated option.

### Procedure to Modify:



Worklights Button

H127046—UN—26SEP19

1. Press the Worklights button on the CommandARM™ armrest.

**NOTE:** LED illuminates when the worklights button is selected.



Lever

H127048—UN—26SEP19

2. Push and pull the lever on the left-hand side of the front console to toggle between worklights preset 1 and worklights preset 2. The worklights preset that was last used is the preset that is first used when the worklights button is pressed on the CommandARM™.

**NOTE:** After the lever is released and returns to the home (middle) position, the selected preset remains active.



N153122—UN—01DEC20  
Worklights Preset 1



N153123—UN—01DEC20  
Worklights Preset 2

3. To customize the lighting presets, access the Lights application and make changes to Worklights Preset 1 and Worklights Preset 2 as desired.

NOLMWLO,00001AF-19-30NOV20



Engine Off Delayed Lighting

H125409—UN—01FEB19

**Engine Off Delayed Lighting**— lets you set the time limit for the lights to shut off after exiting the machine.

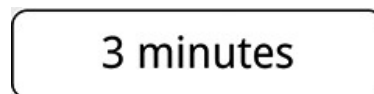
NOLMWLO,00001B0-19-25NOV20

### Engine Off Delayed Lighting

Engine Off Delayed Lighting lets you set the time limit for the lights to shut off after exiting the machine.

**NOTE:** Operators are able to set the timeout delay for egress lighting upon engine off.

### Procedure to Modify:



Time Limit

H125410—UN—01FEB19

Select to open a list of available time limits:

- OFF
- 1 minute
- 3 minutes
- 5 minutes

PR79369,00002A0-19-25NOV20

## Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

**Items Accessible on Advanced Settings Page:**

# Calibrations Application

## Access Calibrations and Procedures

Access Application Through Display:



Menu

H113668—UN—22OCT15

1. Menu



Machine Settings

N119118—UN—23SEP16

2. Machine Settings tab



Calibrations and Procedures

N119098—UN—25MAY16

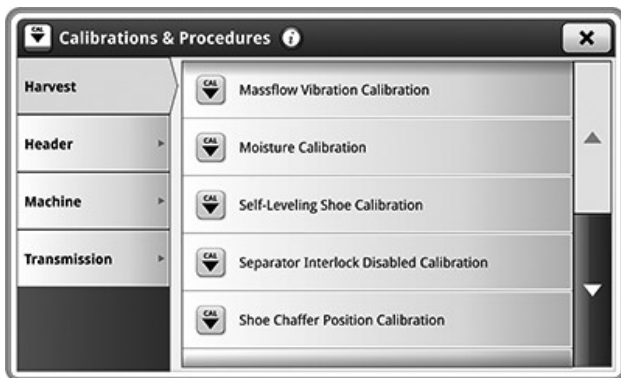
3. Calibrations and Procedures

AZ06166,000072C-19-20JAN20

## Calibrations and Procedures Overview

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

*Main page shown is for example only. Your main page may differ depending on options or connected equipment.*



Calibrations and Procedures

H119896—UN—18JAN17

Calibrations and Procedures application provides centralized access to maintenance procedures and calibrations for the machine.



Harvest Tab

H119225—UN—23SEP16

### Harvest Tab

Mass Flow Vibration

Yield

Amber Flasher

Grain Loss Monitor Tap Test

Chopper Vane

Shrouds

Moisture Sensor

Unloading Auger Engage

ActiveYield™

Left Concave Leveling

Right Concave Leveling

Chaffer Position

Sieve Position

Tailings Calibration

Left Threshing Clearance

Right Threshing Clearance



Header Tab

H119226—UN—23SEP16

### Header Tab

*NOTE: It is not necessary to perform the header calibrations before operating headers for the first time on X-series machines.*

Feeder House Raise Speed

Header

Deck Plate Spacing

Feeder House Lateral Tilt Speed

Wings (Folding Corn Head)

Reel and Cutterbar Position

Reel Position

Feeder House Tilt Fore/Aft Range

Feeder House Lateral Tilt Range

Header Suspension Service ModeHinged Draper Wing PositionGauge Wheel RangeGauge Wheel SpeedWindscreen Position

N0LMWLO,0000174-19-02DEC20

## Mass Flow Vibration

This procedure calibrates the mass flow sensor to accommodate for normal vibration of machinery while in operation. Performing this calibration prevents the mass flow sensor from falsely reading vibration as material being harvested.

*NOTE: Mass Flow Vibration calibration must be performed when changing headers and in every crop that is harvested. Perform Mass Flow Vibration calibration before ActiveYield™ calibration.*

### Perform Calibration When:

- Control unit AYM or associated components are replaced/adjusted.
- Equipment configuration such as a Header has changed.
- Crop type being harvested has changed.
- Mass Flow Sensor has been replaced.

### Items Accessible on Mass Flow Vibration Calibration Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	See "Perform Calibration When" section for more information.
Estimated Time Required	Approximately 1 min

N0LMWLO,0000175-19-26NOV19

## Mass Flow Vibration Calibration Procedure

### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000176-19-26NOV19

## Moisture Sensor

### Perform Calibration When:

- The moisture sensor has been installed, replaced, or adjusted.
- The moisture sensor accuracy needs to be improved.

### Items Accessible on Moisture Sensor Calibration Page:



Begin Calibration

N120226—UN—23FEB16

Moisture Sensor Procedure— begin calibration procedure.Requirements— machine state required for calibration.

N0LMWLO,0000177-19-26NOV19

## Moisture Sensor Procedure

This procedure performs the calibration for the Moisture Sensor.

### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface

### Procedure to Perform:



Start

A102855—UN—01FEB19

1. Select Start to begin calibration procedure.



Calibrating

H113801—UN—04JAN17

2. Calibrating symbol will appear on screen. Calibration will proceed to next step automatically.



Calibration Complete

A92084—UN—09MAY19

If no issues are present, Calibration Complete will appear on screen.



Save

A92068—UN—16MAR18

3. Confirm Calibration by pressing ENTER and selecting Save.



Cancel

A92067—UN—16MAR18

4. Select Cancel to return to previous page.

PR79369,000004D-19-26NOV19

## Yield Calibration

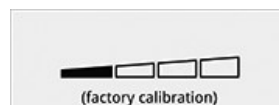
This procedure calibrates the estimated yield. Calibration is done by matching recorded samples with corresponding scale weight measurements.

**NOTE:** Yield Calibration must be performed every year and in every crop that is harvested to achieve accurate grain weight measurements. Also, verify that Mass Flow Vibration Calibration has been performed for each crop.

### Perform Calibration When:

- Control unit AYM or associated components are replaced/adjusted.
- Yield totals do not match scale tickets.
- Highest accuracy of yield totals desired.

### Items Accessible on Yield Calibration Page:



Calibration Quality

H119365—UN—18JAN17

Calibration Quality— indicates the quality of the calibration samples.



Status

H119417—UN—18JAN17

Status Indicator— indicates the status of sample recording.



Record

H119235—UN—18JAN17

Record— collect sample data.



Unmatched Samples

H119363—UN—18JAN17

**Unmatched Samples**— number of samples not matched to an actual weight.



Match Scale Weight

H119364—UN—18JAN17

Match Scale Weight— match recorded sample weight to actual weight of sample.





Advanced Settings

N118004—UN—22OCT15

**Advanced Settings**— access further adjustments and less common settings.

*NOTE: If Mass Flow Vibration Calibration is not current, then it is recommended to perform that calibration before performing Yield Calibration.*

N0LMWLO,000017A-19-25NOV19

Yield | Calibration Quality

Calibration Quality indicates the quality of the calibration samples and the margin of error between the recorded samples and actual weights.

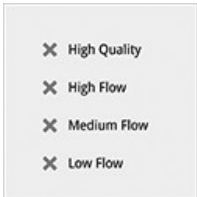
**Items Accessible on Calibration Quality Page:**



Calibration Quality

H119365—UN—18JAN17

**Calibration Quality Indicator**— indicates the quality of the calibration samples.



Collected Samples

H119374—UN—18JAN17

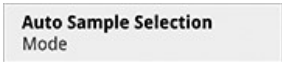
**Collected Sample Status**— indicates the criteria met by the current set of samples.



Yield Margin of Error

H119372—UN—18JAN17

**Yield Margin of Error**— difference between recorded sample weight and actual weight expressed as a percentage. Colored backgrounds indicate the quality of the margin.



Calibration Mode

H119375—UN—18JAN17

**Calibration Mode**— current sample selection mode.



Samples in Calibration

H119373—UN—18JAN17

**Samples in Calibration**— number of samples stored. If no samples are stored, the factory calibration is used.



Advanced Settings

N118004—UN—22OCT15

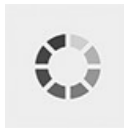
**Advanced Settings**— access further adjustments and less common settings.

N0LMWLO,000017B-19-25NOV19

Yield | Status Indicator

Status Indicator displays the status of Record Samples and a message about that status.

Status options are as follows:



Progress Indicator

H119424—UN—18JAN17

**Progress Indicator**— displays when a sample is being recorded.



Green

N118420—UN—02NOV16

**Active**— sample recording is active.



Gray

N118019—UN—22OCT15

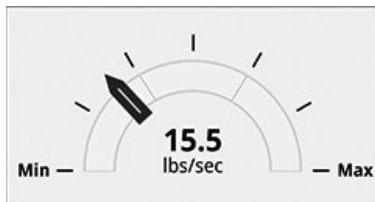
**Inactive**— sample recording is not active.

N0LMWLO,000017C-19-25NOV19

## Yield | Record Sample

Record Sample page allows you to collect a yield sample, monitor flow rate, and view the recorded weight of the sample.

### Items Accessible on Record Sample Page:



Mass Flow Rate

H119379—UN—18JAN17

**Mass Flow Rate**— indicates the flow of crop being harvested.

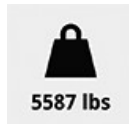
Medium Flow

Medium Flow

H119418—UN—18JAN17

**Flow Rate Range**— indicates the current range that the sample is being harvested in.

*NOTE: Low flow rate is displayed using dashes.*



Weight

H119380—UN—18JAN17

**Weight**— calculated weight of the sample.



Weight Status

H119399—UN—18JAN17

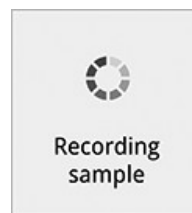
**Weight Status**— indicates when enough crop has been harvested to perform the calibration.

Crop Type: Corn

Crop Type: Corn

H119419—UN—18JAN17

**Crop Type**— crop being harvested.



Recording Sample

H119400—UN—18JAN17

**Recording Status**— displays status of sample recording.



Delete

H119401—UN—18JAN17

**Delete**— deletes the current sample data.



Start

H119421—UN—18JAN17

**Start**— begins recording sample data.



Done

H119420—UN—18JAN17

**Done**— stops sample recording and stores the information.

### Procedure to Modify:



Record

H119235—UN—18JAN17

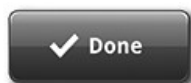
1. Select Record.
2. Begin harvesting crop.



Start

H119421—UN—18JAN17

3. Select Start button.
4. Adjust ground speed until desired flow rate range is obtained.
5. Continue harvesting until the necessary amount of crop is harvested.



Done

H119420—UN—18JAN17

6. Select Done button to store the sample information.

N0LMWLO,000017D-19-21NOV19



Cancel

N118094—UN—18JAN17

**NOTE:** Select Cancel button to return to the previous page without making any changes.

N0LMWLO,000017E-19-25NOV19

## Yield | Match Scale Weight

Match Scale Weight allows you to match recorded sample weight to the actual weight of sample.



Sample

### Procedure to Modify:

1. Select sample to match.
2. Enter the actual sample weight using the keypad.



Save

N118093—UN—16FEB16

3. Select Save button to confirm.



Cancel

N118094—UN—18JAN17

**NOTE:** Select Cancel button to return to the previous page without making any changes.

### Procedure to Delete a Sample:



Sample

1. Select sample to delete.



Delete Sample

H119408—UN—18JAN17

2. Select Delete Sample.



OK

H114654—UN—05JAN17

3. Select OK button.

## Yield | Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

**NOTE:** Advanced Settings is not available when ActiveYield™ is selected.

### Modify When:

- Resetting to the factory defaults.
- Manually selecting samples.
- Manually adjusting the calibration value.
- Transferring the calibration to another machine.

### Items Accessible on Advanced Settings Page:



Reset

H119409—UN—18JAN17

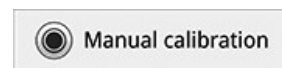
**Reset**— reset the system to the factory default.



Auto Sample Selection

H119410—UN—18JAN17

**Auto Sample Selection**— system randomly selects samples to use for calibration value.



Manual Calibration

H119411—UN—18JAN17

**Manual Calibration**— select desired samples to use for calibration value.



Edit/Select Samples

H119412—UN—18JAN17

**Edit/Select Samples**— choose samples to use for manual calibration. Edit sample scale weights or delete samples.

ActiveYield is a trademark of Deere & Company



Advanced Options

H119413—UN—18JAN17

**Advanced Options**— manually adjust the calibration value or transfer calibration from another machine.



Delete Unused Samples

H119414—UN—18JAN17

**Delete Unused Samples**— delete any samples not being used for the calibration.

NOLMWLO,000017F-19-25NOV19

## Yield | Calibration Quality Indicator

Calibration Quality Indicator indicates the quality of the calibration samples.



Factory Calibration

H119365—UN—18JAN17

**Factory Calibration**— indicates that factory calibration is in use. No adjustments have been made.



Single Sample

H119366—UN—18JAN17

**Single Sample**— indicates that only one sample has been taken or selected for use.

**NOTE:** Single sample calibration performs well for the flow rate that the sample was

collected for. The performance may be degraded at different flow rates.



Low Quality

H119367—UN—18JAN17

**Low Quality Sample**— four or more samples are selected, but samples are not high quality and only two represent two of the flow ranges.



High Quality

H121087—UN—19MAY17

**High Quality Sample**— four or more samples are selected from high-quality loads and represent all flow ranges.

NOLMWLO,0000180-19-25NOV19

## Yield | Collected Sample Status

Collected Sample Status indicates the criteria met, by the current sample set. When a criterion is met a checkmark is displayed next to it.



High Quality

H128112—UN—21NOV19

**High Quality**— all samples are taken from a uniform area of the field that provides a constant flow of grain.



High Flow

H128113—UN—21NOV19

**High Flow**— determined using the gauge on the record sample page. Grain flow must be above 66% of the maximum flow for combine model and crop. Increase ground speed to increase flow.



Medium Flow

H128114—UN—21NOV19

**Medium Flow**— determined using the gauge on the record sample page. Grain flow must be between 33%-66% of the maximum flow for combine model and crop. Adjust ground speed to regulate flow.



Low Flow

H128115—UN—21NOV19

**Low Flow**— determined using the gauge on the record sample page. Grain flow must be below 33% of the maximum flow for combine model and crop. Decrease ground speed to decrease flow.

For the best calibration collect at least 4 loads in all flow ranges:

- High
- Medium
- Low

In tough harvesting conditions, when higher flow rates are not achievable, use following process:

Collect the first load using the highest harvesting speed

as 100%, then collect 3 more loads lowering harvesting speed to 80%, 66%, and 50%.

Repeat the process, if more loads are to be collected.

NOLMWLO,0000181-19-25NOV19

## Yield | Mass Flow Rate

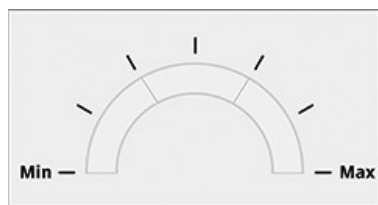
Mass Flow Rate indicates the flow of crop being harvested.



Current Flow Rate

H119403—UN—18JAN17

**Current Flow Rate**— current flow rate of harvested crop.



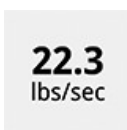
Gauge

H119422—UN—18JAN17

**Gauge**— graphically displays flow rate.

Min = 0%

Max = 100%



Numeric Display

H119402—UN—18JAN17

**Numeric Display**— displays flow rate numerically.

NOLMWLO,0000182-19-25NOV19

## Yield | Weight Indicator

Weight Indicator displays when enough crop has been harvested to perform the calibration.



Current Weight

H119403—UN—18JAN17

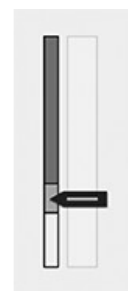
**Current Weight**— current calculated weight of the sample.



Gray Zone

H119404—UN—18JAN17

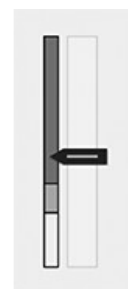
**Gray Zone**— sample is too small for calibration to occur.



Light Green Zone

H119405—UN—18JAN17

**Light Green Zone**— sample size is sufficient for calibration but is not at the ideal level. Calibration may be inaccurate.



Green Zone

H119399—UN—18JAN17

**Green Zone**— sample size is sufficient to perform an accurate calibration.

NOLMWLO,0000183-19-25NOV19

## Yield | Recording Status

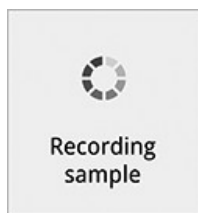
Recording Status displays status of sample recording.

Standing By

Standing By

H119406—UN—18JAN17

**Standing By**— system is ready to record sample once Start button is selected.



Recording Sample

H119400—UN—18JAN17

3. Select OK button to confirm.



Cancel

N118094—UN—18JAN17

**NOTE:** Select Cancel button to return to the previous screen without making any changes.

N0LMWLO,0000185-19-25NOV19

**Recording Sample**— sample is being recorded.

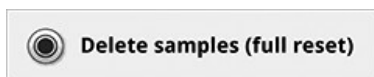
**NOTE:** Once sample has been recorded and saved, the system returns to stand by. The number of unmatched samples increases by one on the main page after a sample is collected.

N0LMWLO,0000184-19-25NOV19

## Yield | Reset

Reset allows you to delete all stored samples and return the system to the factory calibration value. You can also reset the calibration value to the factory default while retaining all samples.

### Reset Types:



Delete Samples (full reset)

H119429—UN—18JAN17

**Delete Samples (full reset)**— deletes all stored samples and the current calibration value. Calibration value is set to the factory default.



Keep Samples and Use Manual Calibration Mode

H119430—UN—18JAN17

**Keep Samples and Use Manual Calibration Mode**— calibration value is reset to the factory value. All stored samples are retained.

### Procedure to Modify:



Reset

H119409—UN—18JAN17

1. Select Reset button.
2. Select desired reset type.



OK

H114654—UN—05JAN17

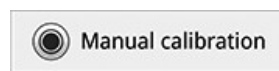
## Yield | Edit/Select Calibration

Edit/Select Calibration allows you to choose samples to use for manual calibration. Edit sample scale weights or delete samples.

### Modify When:

- Specific samples must be selected to obtain accurate yield.
- Automatic selection does not perform as desired.
- A new sample is not necessary.
- Incorrect scale weight was entered for a sample.

### Procedure to Modify Selected Samples:



Manual Calibration

H119411—UN—18JAN17

1. Select Manual Calibration.



Edit/Select Samples

H119412—UN—18JAN17

2. Select Edit/Select Samples button.



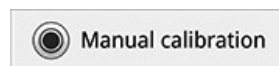
Checkmark

N118434—UN—22JAN20

3. Select checkmarks next to desired samples to use for calibration.

**NOTE:** For the most accurate calibration, select samples that are high quality, have a 0-3 percent margin, and represent the three flow ranges.

### Procedure to Modify Scale Weight:



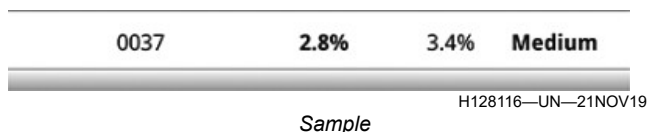
Manual Calibration

H119411—UN—18JAN17

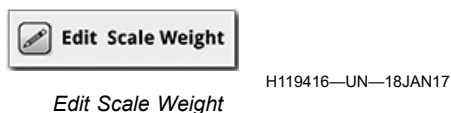
1. Select Manual Calibration.



2. Select Edit/Select Samples button.



3. Select sample to modify.

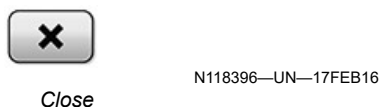


4. Select Edit Scale Weight.

5. Enter desired scale weight using the keypad.

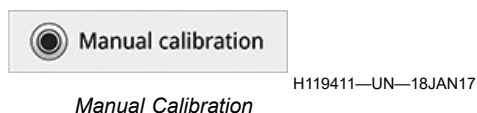


6. Select Save button to confirm.



7. Select Close button to return to the previous page.

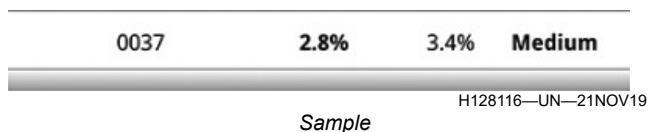
#### Procedure to Delete a Sample:



1. Select Manual Calibration.



2. Select Edit/Select Samples button.



3. Select sample to delete.



4. Select Delete Sample.



5. Select OK button to confirm.



**NOTE:** Select Cancel button to return to the previous screen without making any changes.



6. Select Save button to finalize.

N0LMWLO,0000186-19-25NOV19

## Yield | Advanced Edit

Advanced Edit allows you to manually adjust the calibration value or transfer calibration from another machine.

#### Procedure to Modify:



1. Select Manual Calibration.



2. Select Advanced Options button.



3. Select Advanced Edit.

4. Follow the on-screen directions to complete the desired procedure.

N0LMWLO,0000187-19-25NOV19

## Yield | Delete Unused Samples

Delete Unused Samples allows you to delete any samples not being used for the calibration.

### Procedure to Modify:



Delete Unused Samples

H119414—UN—18JAN17

1. Select Delete Unused Sample button.



OK

H114654—UN—05JAN17

2. Select OK button to confirm.



Cancel

N118094—UN—18JAN17

**NOTE:** Select Cancel button to return to the previous screen without making any changes.

SS43267,000087C-19-25NOV19



Status

N118420—UN—02NOV16

**Status Indicator**— indicates the status of sample.



Advanced Settings

N118004—UN—22OCT15

**Advanced Settings**— access further adjustments and less common settings.

### Details Displayed on Page:

Example:

Crop Type	Corn
Accepted Samples	10
Last Accepted	32 min ago

NOLMWLO,0000188-19-21NOV19

## ActiveYield™

This procedure automatically calibrates the estimated yield to more closely match actual scale weight of yields.

**NOTE:** For the best performance of ActiveYield™, perform the Mass Flow Vibration Calibration before performing the ActiveYield™ calibration.

### Items Accessible on ActiveYield™ Page:



ON/OFF

H114647—UN—05JAN17

**Master ON/OFF**— use toggle button to turn ActiveYield™ ON/OFF.



Quality

H119366—UN—18JAN17

**Quality**— indicates the quality of the calibration samples.

## ActiveYield™ | Status Indicator

**NOTE:** A sample is not a complete grain tank. Recording of a sample starts when the ActiveYield™ sensors are fully covered with grain and stops at about 3000 kg (6614 lbs). A sample can be rejected in the following conditions:

**Inconsistent Flow**— the mass flow variation was too large to generate acceptable calibration load.

**Uneven Loading/Grain Pile Shift Detected**— grain tank loading was not within the parameters to generate an accepted calibration load. This could be due to excessive grain shifts in the grain tank caused by quick acceleration/deceleration of the machine or travelling over rough terrain.

**Pitch or Roll Too Large**— if the pitch or roll angle of the machine was larger than 4° during sample collection, the load will be rejected.

**Collection Interrupted**— if harvesting stopped or the unloading auger was engaged while sample collection was in progress, the load will be rejected.

**400 Seconds Exceeded**— a load will be rejected if it has not reached its minimum load size after 400 seconds (6 minutes and 40 seconds).

**Mass Flow Vibration Calibration Not Conducted**— not performing the mass flow vibration calibration can trigger inconsistent flow conditions or cause the mass

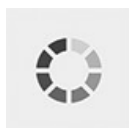


flow to not be detected at all. A load can be rejected or will not start to be recorded.

### Status Indicators

Status Indicator displays the status of Record Samples and a message about that status.

Status options are as follows:



Progress Indicator

H119424—UN—18JAN17

**Progress Indicator**— displays when a sample is being collected.



Green

N118420—UN—02NOV16

**Waiting for Sample**— ActiveYield™ is not currently performing any activity.



Gray

N118019—UN—22OCT15

**Master OFF**— ActiveYield™ is OFF.



Blue

N118021—UN—13JAN17

**Collecting Sample**— sample recording is being collected.



Green

N118420—UN—02NOV16

**Calibration Updated**— sample recording is being updated.



Green

N118420—UN—02NOV16

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**Sample Rejected**— sample recording has been rejected. Explanation for rejection displayed.



Amber

N118020—UN—22OCT15

**Crop Type Unsupported**— crop type is not currently supported.

N0LMWLO,0000189-19-26NOV19

### ActiveYield™ | Advanced Settings

Advanced Settings allows you to access further adjustments and less common settings.

*NOTE: The ActiveYield™ Factory Reset will not have an impact on the samples collected in Yield Calibration.*

#### Modify When:

- Resetting to the factory defaults.
- There is a discrepancy between the calculated yield values and the measured yield values.

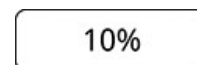
#### Items Accessible on Advanced Settings Page:



Reset

H119409—UN—18JAN17

Reset—reset the system to the factory default.



Correction Value

H119130—UN—10JAN17

Calibration Correction— use to correct discrepancies between calculated and measured yield values.

N0LMWLO,000018A-19-26NOV19

### ActiveYield™ | Reset

Reset allows you to delete all stored samples and returns the system to the factory calibration value.

#### Procedure to Modify:



Reset

H119409—UN—18JAN17

**NOTE:** Select Cancel button to return to the previous screen without making any changes.

N0LMWLO,000018C-19-26NOV19

1. Select Reset button.
2. Select desired reset type.



OK

H114654—UN—05JAN17

3. Select OK button to confirm.



Cancel

N118094—UN—18JAN17

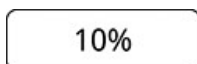
**NOTE:** Select Cancel button to return to the previous screen without making any changes.

N0LMWLO,000018B-19-26NOV19

## ActiveYield™ | Calibration Correction

Calibration Correction allows you to fix discrepancies between the calculated yield values and the measured yield values.

### Procedure to Modify:



Correction Value

H119130—UN—10JAN17

1. Select to open number pad and enter desired correction value.  
Minimum: -99%  
Maximum: 99%

**NOTE:** A value of 0% applies no correction.



OK

H116106—UN—27JAN17

2. Select OK button to confirm.



Cancel

N118094—UN—18JAN17

## Unloading Auger Engage

This procedure calibrates Unloading Auger Engage by measuring the time it takes to engage the auger when commanded, and then adjusts to make a softer auger engagement.

### Perform Calibration When:

- Unloading auger belt, hydraulic, drive, electrical or associated components are replaced/adjusted.
- Unloading auger engagement is more difficult than expected.

### Items Accessible on Unloading Auger Engage Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 1-2 min

N0LMWLO,0000191-19-26NOV19

## Unloading Auger Engage Calibration Procedure

### Procedure Requirements:

Engine State	Running at high idle
Operating State	Unloading auger disengaged Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

#### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000192-19-26NOV19

## Shrouds

This procedure calibrates the position of the left and right spreader shrouds.

#### Perform Calibration When:

- The physical shroud position doesn't match the displayed position.
- Control Unit LC2, shroud actuators, or associated components have been replaced.

#### Items Accessible on Shrouds Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

#### Details Displayed on Page:

Estimated Time Required	Approximately 2 min
-------------------------	---------------------

N0LMWLO,0000170-19-26NOV19

## Shrouds Procedure

#### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface
Separator State	Off

#### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

#### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000171-19-26NOV19

## Chopper Vane

This procedure calibrates the position of the tailboard vanes.

#### Perform Calibration When:

- The physical vane position doesn't match the displayed position.
- Control unit LC2, chopper vane, or associated components have been replaced.

#### Items Accessible on Chopper Vane Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

#### Details Displayed on Page:

Estimated Time Required	Approximately 5 min
-------------------------	---------------------

N0LMWLO,0000172-19-26NOV19

## Chopper Vane Procedure

### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000173-19-26NOV19

## Deck Plate Spacing

This procedure calibrates the deck plate opening by identifying the fully opened and closed positions of the deck plates. Properly calibrated deck plates provide the best results for the harvest setting recommendations provided in the Corn Head Operator's Manual.

### Perform Calibration When:

- Before each harvest season.
- For each different corn head that was previously attached.
- Deck plate position sensor, or associated components are replaced/adjusted.
- Deck plate opening does not appear to match what is being displayed in the cab.

### Items Accessible on Deck Plate Spacing Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 1-2 min

N0LMWLO,0000193-19-26NOV19

## Deck Plate Spacing Calibration Procedure

### Procedure Requirements:

Engine State	Running at high idle
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.



Retry

N118122—UN—02MAY16

### If Calibration Fails:

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

AZ06166,0000748-19-31MAR20

## Feeder House Raise Speed

This procedure calibrates Feeder House Raise Speed by providing the rate of response at which the feeder

house raise or lower reacts. A properly calibrated Feeder House Raise Speed provides smooth feeder house raise and lowering characteristics and prevents movement that is too fast or slow.

#### Perform Calibration When:

- Each header type is connected to the combine for the first time.
- Attachments of significant weight are added to or removed from header.

#### Items Accessible on Feeder House Raise Speed Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

#### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 3-4 min

N0LMWLO,0000194-19-26NOV19

### Feeder House Raise Speed Calibration Procedure

#### Procedure Requirements:

Engine State	Running at high idle
Operating State	Parked on a level surface

#### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

- Select Begin Calibration to begin procedure.
- Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

- Confirm Calibration by selecting Save.

#### If Calibration Fails:

« Retry

Retry

N118122—UN—02MAY16

- Select Retry button.
- Verify all requirements listed on-screen have been met.
- If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000195-19-02DEC19

### Header Calibration

This procedure calibrates the coarse and fine movement of the header. Calibration is done by raising and lowering the header to set sensor ranges.

*NOTE: Factory calibrations are stored on the header for HD draper series headers. User calibration of these headers is only needed following replacement of a position sensor, controller, or sensor linkage.*

#### Perform Calibration When:

- Each header type is connected to the combine for the first time.
- Header height control sensor or associated components are replaced/adjusted.



Begin Calibration

N120226—UN—23FEB16

#### Items Accessible on Header Calibration Page:

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

#### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 5 min

N0LMWLO,0000196-19-30NOV20

### Header Calibration Procedure Procedure Requirements

Engine State	Running at high idle
Operating State	Parked on a level surface

#### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

#### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

NOLMWLO,0000197-19-26NOV19

## Feeder House Tilt Fore/Aft Range

This procedure calibrates Feeder House Tilt Fore/Aft Range by measuring current commanded and associated range of the feeder house tilt. Performing this calibration improves feeder house tilt range when operating with header height lateral tilt control active.

#### Perform Calibration When:

- Before connecting header.
- Feeder house fore/aft tilt sensor or associated components are replaced/adjusted.

#### Items Accessible on Feeder House Tilt Fore/Aft Range Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure

Requirements— machine state required for calibration.

#### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 3-4 min

NOLMWLO,0000198-19-20NOV20

## Feeder House Tilt Fore/Aft Range Calibration Procedure

#### Procedure Requirements:

Engine State	Running at high idle
Operating State	Parked on a level surface

#### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

#### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

NOLMWLO,0000199-19-26NOV19

## Feeder House Lateral Tilt Range

This procedure calibrates Feeder House Lateral Tilt Range by measuring current commanded and associated range of the feeder house tilt. Performing this calibration improves feeder house tilt range when operating with header height lateral tilt control active.

#### Perform Calibration When:

- Before connecting header.
- Feeder house lateral tilt sensor or associated components are replaced/adjusted.

## Items Accessible on Feeder House Lateral Tilt Range Page:



*Begin Calibration*

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 3-4 min

N0LMWLO,000019A-19-26NOV19

## Feeder House Lateral Tilt Range Calibration Procedure

### Procedure Requirements:

Engine State	Running at high idle
Operating State	Parked on a level surface

### Procedure Overview:



*Begin Calibration*

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



*Save*

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



*Retry*

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,000019B-19-26NOV19

## Feeder House Lateral Tilt Speed

This procedure calibrates Feeder House Lateral Tilt Speed by measuring current commanded and associated speed of the feeder house tilting. Performing this calibration improves feeder house tilt response when operating with header height lateral tilt control active.

### Perform Calibration When:

- Before connecting header.
- Feeder house lateral tilt sensor or associated components are replaced/adjusted.

## Items Accessible on Feeder House Lateral Tilt Speed Page:



*Begin Calibration*

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 3-4 min

N0LMWLO,000019C-19-26NOV19

## Feeder House Lateral Tilt Speed Calibration Procedure

### Procedure Requirements:

Engine State	Running at high idle
Operating State	Parked on a level surface

### Procedure Overview:



*Begin Calibration*

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



*Save*

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:

« Retry

Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,000019D-19-26NOV19

## Wings (Folding Corn Head)

This procedure calibrates Folding Corn Head by folding and unfolding the wings of the corn head and measuring associated sensor voltage at each position. This allows the system to detect the position of each wing. This prevents mechanical damage to the combine or equipment by not allowing the header to contact the machine if the wings are folded or engage in any other non-desired condition.

### Perform Calibration When:

- First time each header is connected to combine.
- Mechanical adjustments have been made to the head.
- Folding corn head wing position sensor, or associated components are replaced/adjusted.

### Items Accessible on Folding Corn Head Page:

CAL Begin Calibration

Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 3-4 min

N0LMWLO,000019E-19-26NOV19

## Wings (Folding Corn Head) Calibration Procedure

### Procedure Requirements

Engine State	Running
Operating State	Parked on a level surface

### Procedure Overview:

CAL Begin Calibration

Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.

✓ Save

Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:

« Retry

Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,000019F-19-26NOV19

## Reel and Cutterbar Position

This procedure calibrates Reel and Cutterbar by extending/retracting the cutterbar and moving the reel to the minimum and maximum positions to associate the mechanical limits with sensor voltages. Performing this calibration allows the control unit to calculate positions and prevent potential damaging collisions between the Reel and Cutterbar.

### Perform Calibration When:

- Reel/Cutterbar position sensors or associated components are replaced/adjusted.

### Items Accessible on Reel and Cutterbar Page:

CAL Begin Calibration

Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:



Recommended Interval	As Needed
Estimated Time Required	Approximately 3-4 min

N0LMWLO,00001A0-19-26NOV19

## Reel and Cutterbar Position Calibration Procedure

### Procedure Requirements

Engine State	Combine in field mode Running at high idle
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### Recommended Measurements:

Verify the distance between the reel and the cutterbar.

622X, 625X, 722X, and 725X Extendable Platforms	5 cm (2 in)
630X, 640X, 730X, and 740X Extendable Platforms	6 cm (2-3/8 in)
635X and 735X Extendable Platforms	7 cm (2-13/16 in)

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,00001A1-19-26NOV19

## Amber Flasher

This calibration measures current demands of the amber lights. A normal current is used to compare the current demands when lights are used to detect if the trailer is attached or for bad bulb detection.

### Perform Calibration When:

- Amber Flasher bulbs, or associated components are replaced/adjusted.

### Items Accessible on Amber Flasher Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 1-2 min

N0LMWLO,00001A2-19-26NOV19

## Amber Flasher Calibration Procedure

### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,00001A3-19-26NOV19

## Left Concave Leveling

This procedure calibrates the left concave to ensure a level and even flow of grain during harvest. Performing this calibration will reduce risk of damage.

### Perform Calibration When:

- Threshing clearance sensor or associated components are replaced/adjusted.
- Left concave has recently been installed or replaced.

### Items Accessible on Left Concave Leveling Page:



Begin

H129112—UN—03MAR20

Begin— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 4min

N0LMWLO,000025F-19-03MAR20

## Left Concave Leveling Calibration Procedure

### Procedure Requirements:

Engine State	OFF
Operating State	Parked on a level surface

### Procedure Overview:



Begin

H129112—UN—03MAR20

1. Select Begin to begin procedure.
2. Follow messages on-screen to complete procedure.



OK

H116106—UN—27JAN17

3. Confirm Calibration by selecting OK.



Done

H127524—UN—08OCT19

- Select Done to return to Calibrations & Procedures.



Threshing Clearance Calibration

H116669—UN—30JAN17

- Select Threshing Clearance Calibration to allow the system to identify the fully opened and closed positions of the concaves.

*NOTE: Concaves will remain in manual control mode until Threshing Clearance Calibration is performed.*

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000263-19-03MAR20

## Right Concave Leveling

This procedure calibrates the right concave to ensure a level and even flow of grain during harvest. Performing this calibration will reduce risk of damage.

### Perform Calibration When:

- Threshing clearance sensor or associated components are replaced/adjusted.
- Right concave has recently been installed or replaced.

### Items Accessible on Right Concave Leveling Page:



H129112—UN—03MAR20

Begin

**Begin**— begin calibration procedure.

**Requirements**— machine state required for calibration.

#### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 4 min

NOLMWLO,0000260-19-03MAR20

## Right Concave Leveling Calibration Procedure

### Procedure Requirements:

Engine State	OFF
Operating State	Parked on a level surface

### Procedure Overview:



H129112—UN—03MAR20

Begin

1. Select Begin to begin procedure.
2. Follow messages on-screen to complete procedure.



OK

H116106—UN—27JAN17

3. Confirm Calibration by selecting OK.



Done

H127524—UN—08OCT19

- Select Done to return to Calibrations & Procedures.



H116669—UN—30JAN17

Threshing Clearance Calibration

- Select Threshing Clearance Calibration to allow the system to identify the fully opened and closed positions of the concaves.

**NOTE:** Concaves will remain in manual control mode until Threshing Clearance Calibration is performed.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

NOLMWLO,0000264-19-03MAR20

## Chaffer Position

This procedure calibrates the chaffer position.

### Perform Calibration When:

- Chaffer element or chaffer actuator has been replaced/adjusted.
- Element clearance on –the left side and right side are not matched.

### Items Accessible on Chaffer Page:



Begin Calibration

N120226—UN—23FEB16

**Begin Calibration**— begin calibration procedure.

**Requirements**— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 5 min

NOLMWLO,0000261-19-23NOV20

## Chaffer Position Calibration Procedure

### Procedure Requirements:

Engine State	Not Running
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

## Sieve Position Calibration Procedure

### Procedure Requirements:

Engine State	Not Running
Operating State	Parked on a level surface

### Procedure Overview:



Save

N118093—UN—16FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000265-19-23NOV20

## Sieve Position

This procedure calibrates the sieve position.

### Perform Calibration When:

- Sieve element or sieve actuator has been replaced/adjusted.
- Element clearance on the left side and right side are not matched.

### Items Accessible on Sieve Position Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 5 min

N0LMWLO,0000262-19-23NOV20



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

N0LMWLO,0000266-19-23NOV20

## Header Suspension Service Mode

This procedure can be used to release hydraulic pressure from the hinged draper suspension systems. Releasing hydraulic load makes service and maintenance possible and can be controlled for either wing of the header.

**CAUTION:** There is stored hydraulic energy on the header even when the header is not running and not attached to a combine. Service of the suspension system requires discharging of the system via the header suspension service mode. Follow the instructions to ensure the system is completely discharged prior to service.

**IMPORTANT:** Hydraulic suspension service mode drains hydraulic oil from the header into the machine's hydraulic reservoir. The hydraulic reservoir on S-series machines does not have enough capacity to hold the oil stored in both sides of the header along with the oil already present in the hydraulic reservoir. Service one side of the header at a time.

#### Perform Calibration When:

- Service or maintenance is required on front end equipment suspension systems.

#### Items Accessible on Header Suspension Service Mode Page:



*Begin Procedure*

H127521—UN—08OCT19

Begin Procedure— begin procedure.

Requirements— machine state required for calibration.

#### Details Displayed on Page:

Recommendations	Ensure the machine is in park. Ensure the key is in the ON position. Ensure ample volume is available in the hydraulic reservoir for discharge.

N0LMWLO,00001B3-19-20NOV20

### Header Suspension Service Mode | Procedure

#### Procedure Requirements:

Engine State	Running
Machine State	Parked on a level surface
Header State	Not engaged

#### Procedure Overview:

- Follow messages on-screen.

**CAUTION:** Header equipment may be in motion momentarily upon pressure release. To avoid injury, ensure area surrounding the machine is clear.



*Accept*

H127523—UN—08OCT19

- Press Accept to enable Pressure Control.



*Cancel*

N118094—UN—18JAN19

Press Cancel to exit header suspension service mode and return to the Begin Procedure screen.

N0LMWLO,00001B4-19-20NOV20

### Header Suspension Service Mode | Pressure Control

Header Suspension Service Mode allows you to use the controls to manipulate hydraulic pressures on front end equipment suspension systems.

**IMPORTANT:** This procedure is for performing service to the hinged draper suspension system. Adjustments made in suspension service mode do not affect machine performance. Make adjustments to suspension on the Ground Conditions and Gauge Wheels pages.

Dropping pressure in the suspension system drains fluid from the hinged draper.

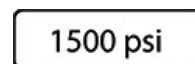
#### Items Accessible on the Header Suspension Service Mode Page:



*Status*

N118420—UN—02NOV16

**Status**— indicates the readiness to begin increasing/decreasing pressure.



*Readings*

H131370—UN—01DEC20

**Readings**— displays current pressure readings for each section.



*Plus (+) Button*

H114791—UN—22JAN20

**Plus (+) Button**— press and hold the button to increase hydraulic pressure for the desired header section. Releasing the button will stop the increasing of pressure.



Minus (-) Button

H114792—UN—22JAN20

**Minus (-) Button**— press and hold the button to release hydraulic pressure from the desired header section. Releasing the button will stop the decreasing of pressure.

**NOTE:** When the header is attached to an S700 Series machine, only one section of the header can be drained at a time.



Done

H127524—UN—08OCT19

**Done**— press to end header suspension service mode.

N0LMWLO,00001B5-19-20NOV20

## Grain Loss Monitor Tap Test

This procedure can be used to verify that various grain loss monitor sensors are functioning normally and detecting loss strikes. After the procedure begins, physically tapping each sensor should result in a positive detection.

**NOTE:** Harvester and all separating machinery should be stopped before beginning the procedure. Ensure accidental activation of machinery is not possible.

### Perform Test When:

- The functionality of a grain loss sensor or system component is in question.
- A grain loss sensor or system component is replaced.

### Items Accessible on Grain Loss Monitor Tap Test Page:



Begin

H129813—UN—07APR20

**Begin**— begin the loss sensor tap test.

### Details Displayed on Page:

Recommended Interval	As Needed
Last Run	Displays Date When The Procedure Was Last Performed

PR79369,00002A7-19-01DEC20

## Grain Loss Monitor Tap Test Procedure

This procedure can be used to verify that various grain loss monitor sensors are functioning normally and detecting loss strikes. After the procedure begins, physically tapping each sensor should result in a positive detection.

**NOTE:** Harvester and all separating machinery should be stopped before beginning the procedure. Ensure accidental activation of machinery is not possible.

### Procedure Requirements:

Operating State	Harvesting and separating functions stopped. Ensure accidental activation of machinery is not possible.
Engine State	Key switch in the RUN position is required. Can also be performed with the engine running.

### Procedure Overview:



Begin

H129813—UN—07APR20

1. Select Begin to begin the procedure.
2. Find and physically tap each sensor to test for signal response. For best results, tap the sensors with a metallic object like a screwdriver.

After striking each sensor, you will see either a green check mark or a red strikethrough.



Green Checkmark

H129816—UN—07APR20

- A green checkmark indicates the sensor signal test was successful.



Red Strikethrough

H129817—UN—07APR20

- A red strikethrough indicates an error state.



Gray Circle

H131533—UN—02DEC20

- A gray circle indicates the sensor has not been tested yet.



Done

H129814—UN—07APR20

3. Select Done at any time to close the grain loss monitor sensor tap test screen and return to the previous screen.



Reset

H129815—UN—07APR20

Select Reset to return all sensors to their default states to test again.

#### If Calibration Fails:

1. If the test fails twice, change the crop type to a medium grain such as wheat or barley and repeat the test on the failed sensors. The strike detection algorithm is tuned differently for different crop types. Striking the sensor with a screwdriver is different compared to striking the sensor with a seed or piece of grain.
2. If a sensor tap test continues to fail, see your John Deere dealer or qualified service provider.

PR79369,00002A8-19-01DEC20

## Gauge Wheel Speed

This procedure calibrates the extension and retraction rates of the gauge wheels to ensure optimal performance of cut height adjustments.

#### Perform Calibration When:

- A hydraulic gauge wheel proportional valve or related component has been replaced.
- Mechanical adjustments have been made to the head.

Items Accessible on Gauge Wheel Speed Page:



Begin Calibration

N120226—UN—23FEB16

**Begin Calibration**— begin calibration procedure.

**Requirements**— machine state required for calibration.

#### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 5 min

PR79369,00002A9-19-01DEC20

## Gauge Wheel Speed Calibration Procedure

#### Procedure Requirements:

Engine State	Machine in field mode Running at high idle
Operating State	Parked on a level surface

#### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm calibration by selecting Save.

#### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

PR79369,00002AA-19-01DEC20

## Hinged Draper Wing Position

This procedure calibrates the Hinged Draper Wing Position. This procedure calibrates the position of the frame wings.

#### Perform Calibration When:

- A wing position sensor or related component is changed.

### Items Accessible on Hinged Draper Wing Position Page:



*Begin Calibration*

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 2 min

PR79369,00002AB-19-01DEC20

## Hinged Draper Wing Position Calibration Procedure

### Procedure Requirements:

Engine State	Machine in field mode
Operating State	Header must be disengaged

### Procedure Overview:



*Begin Calibration*

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



*Save*

N118093—UN—16FEB16

3. Confirm calibration by selecting Save.

### If Calibration Fails:



*Retry*

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.

3. If calibration fails twice, see your John Deere dealer or qualified service provider.

PR79369,00002AC-19-01DEC20

## Windscreen Position

This procedure calibrates the Windscreen Position.

### Perform Calibration When:

- The windscreen position sensor or related components are replaced/adjusted.

### Items Accessible on Windscreen Position Page:



*Begin Calibration*

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 2 min

PR79369,00002AD-19-01DEC20

## Windscreen Position Calibration Procedure

### Procedure Requirements:

Engine State	Machine in field mode Running at high idle
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### Procedure Overview:



*Begin Calibration*

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



*Save*

N118093—UN—16FEB16

3. Confirm calibration by selecting Save.

### If Calibration Fails:



« Retry

N118122—UN—02MAY16

Retry

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

PR79369,00002AE-19-01DEC20

## Tailings Calibration

This procedure calibrates the empty level of the tailings elevator. Performing this calibration may improve tailings system performance.

### Perform Calibration When:

- Control unit, tailings sensors, elevator chain, or related components are replaced or adjusted.
- Lower auger or return auger is replaced.

### Items Accessible on Tailings Calibration Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 1 min

PR79369,00002AF-19-01DEC20

## Tailings Calibration Procedure

### Procedure Requirements:

Engine State	Set to high idle
Operating State	Header must be disengaged Separator must be engaged

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.

✓ Save

Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:

« Retry

Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

PR79369,00002B0-19-02DEC20

## Left Threshing Clearance

This procedure calibrates left threshing clearance by identifying the fully opened and closed portions of the concaves. A properly calibrated threshing clearance provides the best results for the harvest setting recommendation. See your Operator's Manual for more details.

**IMPORTANT: Calibration should not be completed with round bar concave covers installed. An incorrect zero position results.**

### Perform Calibration When:

- Preparing for each harvest season.
- Physical concave opening does not match what is being displayed in the cab.
- Concaves are replaced with a new or different set of concaves.
- Threshing clearance sensor, or associated components are replaced/adjusted.

### Items Accessible on Left Threshing Clearance Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 1-2 min

PR79369,00002B1-19-02DEC20

## Left Threshing Clearance Calibration Procedure

### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

PR79369,00002B2-19-02DEC20

## Right Threshing Clearance

This procedure calibrates right threshing clearance by identifying the fully opened and closed positions of the concaves. A properly calibrated threshing clearance provides the best results for the harvest setting recommendation. See your Operator's Manual for more details.

**IMPORTANT: Calibration should not be completed with round bar concave covers installed. An incorrect zero position results.**

### Perform Calibration When:

- Preparing for each harvest season.
- Physical concave opening does not match what is being displayed in cab.
- Concaves are replaced with a new or different set of concaves.
- Threshing clearance sensor, or associated components are replaced/adjusted.

### Items Accessible on Right Threshing Clearance Page:



Begin Calibration

N120226—UN—23FEB16

Begin Calibration— begin calibration procedure.

Requirements— machine state required for calibration.

### Details Displayed on Page:

Recommended Interval	As Needed
Estimated Time Required	Approximately 1-2 min

PR79369,00002B3-19-02DEC20

## Right Threshing Clearance Calibration Procedure

### Procedure Requirements:

Engine State	Running
Operating State	Parked on a level surface

### Procedure Overview:



Begin Calibration

N120226—UN—23FEB16

1. Select Begin Calibration to begin procedure.
2. Follow messages on-screen to complete procedure.



Save

N118093—UN—16FEB16

3. Confirm Calibration by selecting Save.

### If Calibration Fails:



Retry

N118122—UN—02MAY16

1. Select Retry button.
2. Verify all requirements listed on-screen have been met.
3. If calibration fails twice, see your John Deere dealer or qualified service provider.

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PR79369,00002B4-19-02DEC20

# Combine Advisor™ Application

## Access Combine Advisor™

### Access Application Through Display:



Menu

H113668—UN—22OCT15

#### 1. Menu



Combine Advisor™

H125018—UN—01FEB19

#### 2. Combine Advisor™

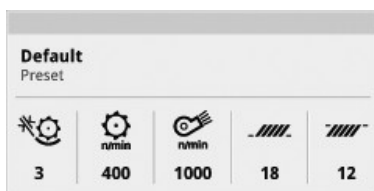
AZ06166,00005F5-19-21NOV19

## Combine Advisor™ Main Page

Combine Advisor™, formerly Interactive Combine Adjustment 2, is where you can access Optimize Performance, HarvestSmart™, Active Terrain Adjustment™, and Auto Maintain.

### Items Accessible on Combine Advisor™ Main Page:

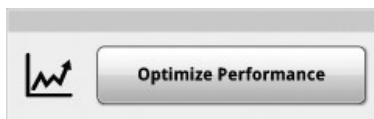
**NOTE:** Some of the following items displayed are only listed if machine is equipped with the associated option.



Current Settings

H126941—UN—26SEP19

**Current Settings**— select Current Settings screen area to access Harvest Settings Application.

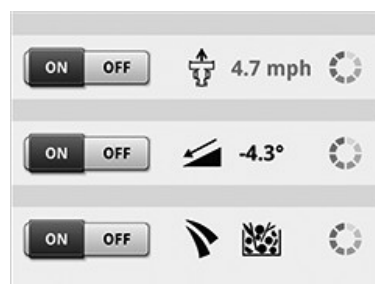


Harvest Optimization

H126942—UN—26SEP19

**Harvest Optimization**— takes you to the Optimize Performance application, formerly Interactive Combine Adjustment.

HarvestSmart is a trademark of Deere & Company  
Active Terrain Adjustment is a trademark of Deere & Company



Automation Status

H129164—UN—27FEB20

**Automation Status**— Automation Status displays the status of any individual system such as HarvestSmart™, Active Terrain Adjustment™, or Auto Maintain.

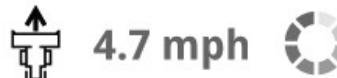


Advanced Settings

N118004—UN—22OCT15

**Advanced Settings**— advanced settings allows you to access further adjustments and less common settings.

### HarvestSmart™



HarvestSmart

H126949—UN—26SEP19

**HarvestSmart™**— varies ground speed to maintain a constant engine power. These changes are based on the several harvesting factors which maximize productivity and reduce operator fatigue. To access HarvestSmart™ settings, select the screen area to the right of the ON/OFF button.

If used in the following conditions, the system may not perform optimally:

- Extreme Hill Conditions
- Tangled or Lodged Crop Conditions
- Excessively Muddy Conditions

**NOTE:** Blue text indicates that HarvestSmart™ is controlling the ground speed. Black text indicates that the user is controlling the ground speed.



ON/OFF

H116937—UN—05FEB19

**Automation**— allows you to enable or disable HarvestSmart™.



HarvestSmart™ Ground Speed Limit

H126950—UN—26SEP19

**NOTE:** The ground speed indicator shown here indicates that the Ground Speed Limit has been reached.

### Active Terrain Adjustment™



Active Terrain Adjustment™

H129163—UN—27FEB20

**Active Terrain Adjustment™**— automatically adjusts the cleaning fan, chaffer, and sieve to compensate for uphill and downhill terrain. These adjustments are dependent upon the machine pitch while harvesting. To access Active Terrain Adjustment™ settings, select the screen area to the right of the ON/OFF button.

**NOTE:** Blue dial indicates that offset adjustments are being made because of a change in terrain.



ON/OFF

H116937—UN—05FEB19

**Automation**— allows you to enable or disable Active Terrain Adjustment™.

**NOTE:** Active Terrain Adjustment™ does NOT require a performance target to be set.

### Auto Maintain



Auto Maintain

H126954—UN—26SEP19

**Auto Maintain**— automatically adjusts the threshing speed, threshing clearance, cleaning fan, chaffer, and sieve to compensate for changes in grain quality and grain loss throughout the day. To access Auto Maintain settings, select the screen area to the right of the ON/OFF button.

**NOTE:** Blue dial indicates that offset adjustments are being applied to maintain the performance target.

Active Terrain Adjustment is a trademark of Deere & Company



ON/OFF

H116937—UN—05FEB19

**Automation**— allows you to enable or disable Auto Maintain.



Live Camera

H113740—UN—05FEB19

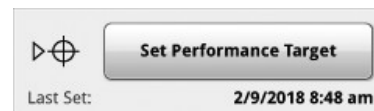
**Live Camera**— allows you to view the clean grain and tailings elevator camera feeds.



History

H125041—UN—05FEB19

**History**— allows you to view current and past adjustments made by Auto Maintain and Active Terrain Adjustment™ and view a graph of the machine performance for the previous 30 minutes.



Last Set:

2/9/2018 8:48 am

Set Performance Target

H126944—UN—26SEP19

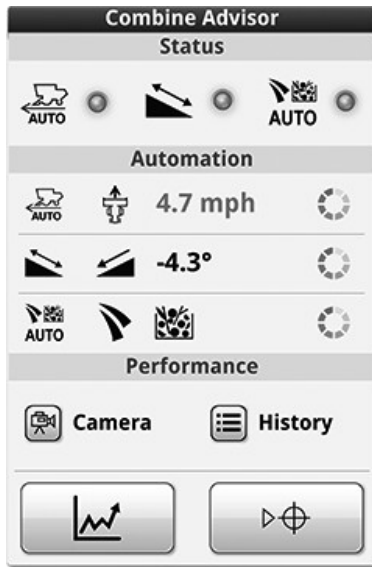
**Set Performance Target**— allows you to set a new performance target at existing loss, grain quality, and engine power levels.

**NOTE:** Selecting Set Performance Target sets targets for both HarvestSmart™ and Auto Maintain.

### Run Page Module

Modules for this application can be added to run pages using Layout Manager.

Example:



H129165—UN—27FEB20

Combine Advisor™

The run page module takes on a distinct state to reflect current automation status. The page also offers links to HarvestSmart™, Active Terrain Adjustment™, Auto Maintain settings, and links to performance history and graphs.

*NOTE: Different run page modules can be available for your application.*

### Shortcut Keys

Shortcut keys for this application can be added to the shortcut bar using [Layout Manager](#).

Example:



Advisor

H125230—UN—01FEB19

**Advisor**— use for quick access to Combine Advisor™.

N0LMWLO,00000C3-19-01APR20

### Advanced Settings

Advanced Settings allows you to set Tuning Parameters. See your John Deere dealer for information on what to set the parameters to.

MM95366,00003F5-19-26NOV19

### Grain System Video

Allows you to view the ActiveVision™ Clean Grain elevator and the Tailings elevator camera feeds through the Live Camera screen.

*NOTE: Some of the following items displayed are only listed if machine is equipped with the associated option.*

#### Items Accessible on the Grain System Video Page:



H128686—UN—06FEB20

Live Camera

**Live Camera**— displays a live view from the selected source.



H125039—UN—01FEB19

Source

**Source**— allows you to choose Grain Camera, Tailings Camera, or Both.



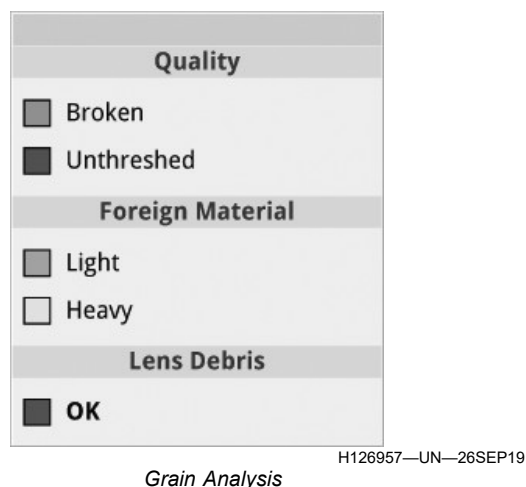
H113730—UN—30JAN17

ON/OFF

**View Grain Analysis**— ON/OFF toggle enables the color overlays for grain analysis (only available for Grain Camera).

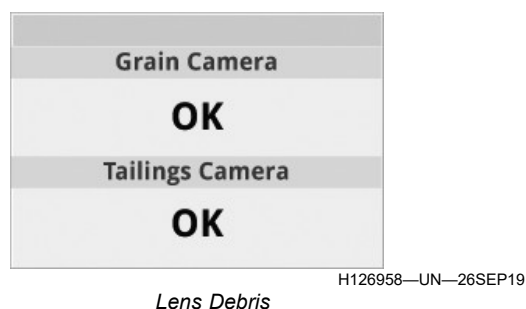
*NOTE: When operating with an Auto Maintain unsupported crop type, the View Grain Analysis is locked in the OFF position.*

*NOTE: Turning on the Grain Analysis overlays slows down the live video feed.*



**Grain Analysis Legend**— displays a color legend for grain quality and foreign material when the Grain Analysis toggle is ON.

*NOTE: The Quality and Foreign Material items listed can fluctuate depending on what is available for the selected crop type.*



**Lens Debris**— indicates if the lens needs to be cleaned.

NOLMWLO,00000C4-19-06FEB20

## History

History allows you to view the adjustments Auto Maintain and Active Terrain Adjustment™ have made in the last 12 hours. It also includes viewing graphs of the machine performance for the previous 30 minutes.

*NOTE: Some of the following items displayed are only listed if machine is equipped with the associated option.*

### Items Accessible on History Page:



- Select to access **Performance** history monitor.



- Select to access **Active** adjustments page.



- Select to access **Completed** adjustments page.

NOLMWLO,00000C5-19-25NOV19

## History | Performance

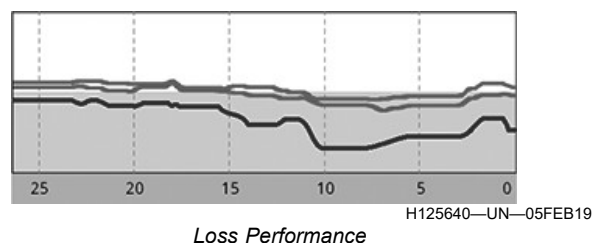
Performance monitor is used to show the performance target and current performance displayed on a timeline. To view the performance monitor, select History and choose Performance tab at top.

*NOTE: Some of the following items displayed are only listed if machine is equipped with the associated option.*

### Items Accessible on Performance Monitor Page:



**Performance/Active/Complete**— use the Performance/Active/Completed toggle to switch between Performance Monitor, Active Adjustments, and Completed Adjustments.

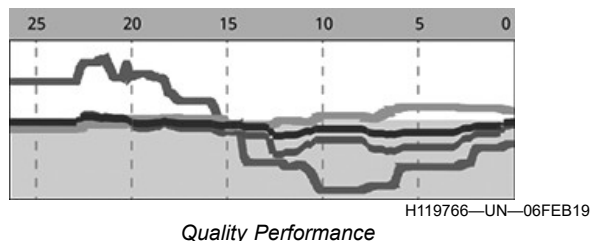


**Loss Performance**— chart view of the Separator, Shoe, and Tailings.

*NOTE: The Loss Performance graphs may not match the VisionTrak™ display. The information shown on the graph is long-term trends while the VisionTrak™ displays the current loss.*

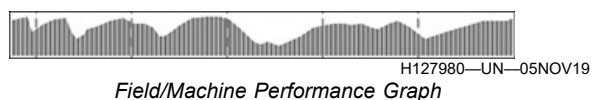
**Quality Performance**— chart view of the Broken Grain, Foreign Material Light, Foreign Material Heavy, and Unthreshed.

**NOTE:** The items shown can depend on what is available for the selected crop type.

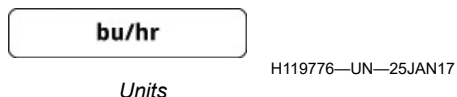


**NOTE:** If a parameter is operating in the green area of the chart it indicates that it is operating within the performance target.

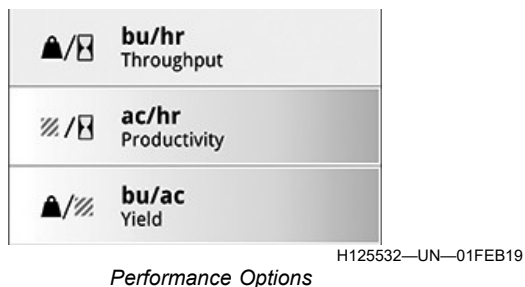
**NOTE:** If a parameter is operating in the white area of the chart it indicates that it is not within the performance target. Auto Maintain then adjusts to correct the issue to bring it into the green area.



**Field/Machine Performance Graph**— displays Throughput, Productivity, or Yield over a 30 minute time.



**Performance Options**— select to change the information being displayed.



Select between Throughput, Productivity, and Yield graphs.

N0LMWLO,00000C6-19-21NOV19

## History | Active

The Active tab shows adjustments currently applied by Auto Maintain and Active Terrain Adjustment™. The list includes the setting that was adjusted, the reason the

adjustment was made, and how long the adjustment has been applied.

### Items Accessible on History | Active Page:

**NOTE:** Some of the following items displayed are only listed if machine is equipped with the associated option.



**Performance/Active/Complete**— use the Performance/Active/Completed toggle to switch between Performance Monitor, Active Adjustments, and Completed Adjustments.



**System Icon**— an icon indicates if the row is for Active Terrain Adjustment™ or Auto Maintain.



**Offset**— indicates the current adjustments applied to the settings.



**Reason**— indicates why the adjustment is being applied.



**Timestamp**— indicates how long since the first adjustment was made for the corresponding reason.



To view Offset Details on a particular adjustment, select an adjustment in the History List.



Close

H114674—UN—06FEB19

Select to close.

N0LMWLO,00000C7-19-23NOV20

## History | Completed

The Completed tab shows adjustments Auto Maintain and Active Terrain Adjustment™ have made in the last 12 hours. The list includes the system that made the adjustment, the reason the adjustment was made, and how long ago it was completed.

### Items Accessible on History | Completed Page:

*NOTE: Some of the following items displayed are only listed if machine is equipped with the associated option.*



Performance/Active/Completed

H125228—UN—05FEB19

**Performance/Active/Complete**— use the Performance/Active/Completed toggle to switch between Performance Monitor, Active Adjustments, and Completed Adjustments.



System Icon

H132327—UN—11NOV20

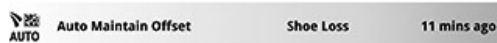
**Feature**— indicates which system made the adjustment.



Active Terrain Adjustment

H125510—UN—01FEB19

**Active Terrain Adjustment™ Offset**— Active Terrain Adjustment™ made a temporary adjustment.



Auto Maintain Offset

H125509—UN—01FEB19

**Auto Maintain Offset**— Auto Maintain made a temporary adjustment.

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Auto Maintain

Separator Loss

10 mins ago

H125507—UN—01FEB19

Auto Maintain Permanent Adjustment

**Auto Maintain**— Auto Maintain made a permanent adjustment.

Foreign Material Light

Reason

H125565—UN—01FEB19

**Reason**— indicates why the adjustment was applied.

11 mins ago

Timestamp

H125593—UN—01FEB19

**Completed**— indicates how long ago the adjustment was completed.

To view Offset Details or Adjustment Details on a particular adjustment, select an adjustment in the History List.



Close

H114674—UN—06FEB19

Select to close.

### Procedure to Modify:

*NOTE: The most recent adjustment is listed at the top.*



Scroll Arrows

H116672—UN—30JAN17

1. Use Scroll Arrows to move up and down list.



Close

H114674—UN—06FEB19

2. Select to close.

N0LMWLO,00000C8-19-23NOV20

## Offset Details

Offset Details allows you to view current and past adjustments, the reasons they were made, and when they were made. If the adjustment is "Active", the adjustments are currently applied to the settings. If the adjustment is "Complete", the adjustments have been removed and the settings were reverted to their previous value.

**NOTE:** Only some items show on this page depending on available options.

### Items Accessible on the Offset Details Page for Active Adjustments:



Active Offset

**Active Offset**— shows the currently applied offsets.

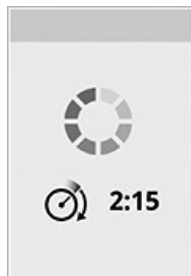


Auto Maintain Reason



Active Terrain Adjustment™ Reason

**Reason**— indicates why the adjustment is applied (the current pitch for Active Terrain Adjustment™ and the current detected issues for Auto Maintain).



Timestamp

**Timestamp**— shows how long since the first offset was applied for the corresponding reason.



Live Camera

H113740—UN—05FEB19

**Live Camera**— view the Clean Grain Elevator and Tailings elevator camera feeds.

### Items Accessible on the Offset Details Page for Completed Adjustments:



Active Offset

H125594—UN—01FEB19

**Active Offset**— shows the maximum offset made to each setting for the corresponding reason.



Timestamp

H127981—UN—05NOV19

**Timestamp**— shows how long ago the last offset was removed for the corresponding reason.



Duration

H119866—UN—30JAN17

**Duration**— shows how much time passed from when the first offset was made to when the last offset was removed for the corresponding reason.



Auto Maintain Reason

H129176—UN—27FEB20



Active Terrain Adjustment™ Reason

H129175—UN—27FEB20

**Reason**— indicates the reasons the listed offsets were made.



Live Camera

H113740—UN—05FEB19

**Live Camera**— view the Clean Grain Elevator and Tailings elevator camera feeds.

N0LMWLO,00000C9-19-27FEB20



Live Camera

H113740—UN—05FEB19

## Adjustment Details

Adjustment Details allows you to view which adjustments have been made and the reasons the adjustments were made. It shows when the adjustment was completed.

*NOTE: This Adjustment Details screen is only applicable to permanent Auto Maintain adjustments.*

### Items Accessible on the Adjustment Details Page:



Adjustment

H125251—UN—06FEB19

**Adjustment**—indicates the adjustment that was made.



Before

H125252—UN—01FEB19

**Before**—indicates the setting value before the adjustment.



After

H125253—UN—01FEB19

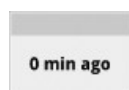
**After**—indicates the setting value after the adjustment.



Auto Maintain Reason

H129176—UN—27FEB20

**Reason**— indicates the issues Auto Maintain adjusted for.



Timestamp

H127981—UN—05NOV19

**Timestamp**—displays when the adjustment was made.

**Live Camera**—view the clean grain elevator and tailings elevator camera feeds.

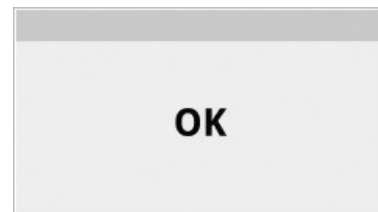
N0LMWLO,00000CA-19-27FEB20

## Lens Debris

Lens Debris shows the amount of dirt or smudges on the grain and tailings camera lens.

### Lens Debris States:

The ActiveVision™ cameras have three levels of lens debris indicators that allow you to monitor the status of cameras.



OK

H126959—UN—26SEP19

**OK**—indicates that there is little to no debris on the lens.



Moderate

H126960—UN—26SEP19

**Moderate**—indicates that there is some debris on the lens. Auto Maintain continues functioning, but it is recommended to clean your cameras as soon as possible.



Severe

H126961—UN—26SEP19

**Severe**—indicates that there is a significant amount of

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debris on the lens. Auto Maintain turns OFF and is not functional until the cameras are cleaned.

**NOTE:** Cleaning frequency varies depending on a number of factors, including operating conditions, weather, and crop conditions.

N0LMWLO,00000CB-19-21NOV19

## Automation Status

Automation Status shows the status of HarvestSmart™, Active Terrain Adjustment™, and Auto Maintain.

**NOTE:** Some of the following items displayed are only listed if machine is equipped with the associated option.



H126945—UN—26SEP19

HarvestSmart™ Status

HarvestSmart™ Status— select to open.



H129170—UN—27FEB20

Active Terrain Adjustment™ Status

Active Terrain Adjustment™ Status— select to open.



H126947—UN—26SEP19

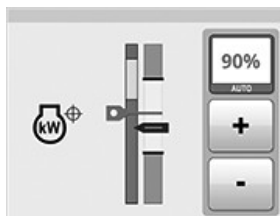
Auto Maintain Status

Auto Maintain Status— select to open.

N0LMWLO,00000CC-19-27FEB20

## HarvestSmart™ Settings

HarvestSmart™ settings can be used to adjust the HarvestSmart™ system. To access HarvestSmart™ settings, select the screen area to the right of the ON/OFF button.

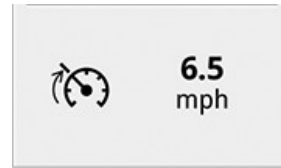


H127982—UN—05NOV19

Engine Power Target

Engine Power Target— sets target engine power for HarvestSmart™ to maintain.

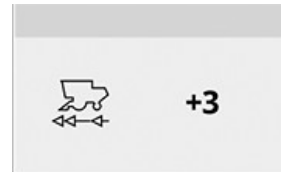
**NOTE:** When managing engine power target while grain loss is enabled and changing the engine power target, the engine power target turns blue.



H118568—UN—20JAN17

Speed Limit

Speed Limit— sets the maximum allowable ground speed for HarvestSmart™ to operate.



H114682—UN—20JAN17

Response Aggressiveness

Response Aggressiveness— controls how quickly the HarvestSmart™ system responds to changes in harvesting conditions.



H125233—UN—01FEB19

Manage Target With Grain Loss

Manage Target With Grain Loss— select to have HarvestSmart™ adjust the speed to maintain grain loss levels.

**NOTE:** The target will be displayed in blue while being managed.

Refer to the Performance Monitor within the Combine Advisor™ application to view the performance target and performance history for all Combine Advisor™ systems. VisionTrak™ on the corner post display is now only a visual guide. You can refer to the VisionTrak™ display periodically to know when an increase or decrease in the total loss amount occurs.

N0LMWLO,00000CD-19-02DEC20

## Speed Limit

Speed Limit sets the maximum allowable ground speed for HarvestSmart™ to operate.

**Modify When:**

- You want to set the maximum operating speed.

- You do not want the machine running over a specific speed because the terrain is rough or feeding conditions exist that could plug the header.

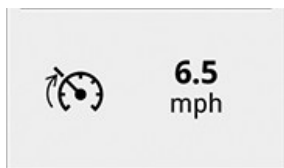
**Example:** The header becomes limited at 8 km/h (5 mph). Set ground speed to 7.5 km/h (4.7 mph).

- You want to prevent the machine from going too fast through places in the field where there is little to no crop. This results in the machine going too fast when crop yields return to normal. Set the speed limit slightly higher than the expected harvesting speed.

**Example:** You expect to harvest at an average speed of 5.5 km/h

(3.4 mph). Set the ground speed to 7km/h (4.3 mph).

#### Procedure to Modify:



Speed Limit

H118568—UN—20JAN17

1. Select to adjust Speed Limit.



Speed Limit

H118570—UN—31JAN17

2. Select plus (+) to increase or minus (-) to decrease the desired ground speed.

Minimum— 2.0 km/h (1.2 mph)

Maximum— 14.0 km/h (8.7 mph)

Increments— 0.1 km/h (0.1 mph)

Set speed limit slightly higher than your expected average harvesting speed.

**Example:** If you would like to harvest at 5.5 km/h (3.4 mph) set speed limit to 7 km/h (4.4 mph). If you would like to harvest at 8 km/h (5.0 mph) set speed limit to 10 km/h (6.2 mph).



Close

H114674—UN—06FEB19

3. Select to close.

#### Alternative Procedure to Modify:



Speed Limit

H118573—UN—20JAN17

1. Select to activate Armrest Adjustment Dial.



Armrest Adjustment Dial

H115034—UN—28MAR16

2. Use Armrest Adjustment Dial to select desired ground speed.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

Minimum— 2.0 km/h (1.2 mph)

Maximum— 14.0 km/h (8.7 mph)

Increments— 0.1 km/h (0.1 mph)

N0LMWLO,00000CE-19-21NOV19

## Response Aggressiveness

Response Aggressiveness controls how quickly the HarvestSmart™ system responds to changes in harvesting conditions. Response Aggressiveness is determined together with the HarvestSmart™ performance target.

**Setting 1—** Minimum

**Setting 2—** Lowered Setting

**Setting 3—** Default

**Setting 4—** Increased

**Setting 5—** Maximum

**Modify When:**

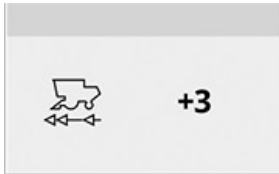
**Increase When:**

You want the machine to react faster to changes in harvesting conditions.

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**Decrease When:**

You want the machine to react slower to changes in harvesting conditions.

**Procedure to Modify:**

H114682—UN—20JAN17

Aggressiveness

1. Select to access Response Aggressiveness.



H125211—UN—05FEB19

Aggressiveness

2. Select plus (+) to increase or minus (-) to decrease desired aggressiveness.

Minimum— 1

Maximum— 5

Increments— 1

Default— 3

**NOTE:** Response Aggressiveness will default back to 3 when a new performance target is set.



Close

H114674—UN—06FEB19

3. Select to close.

N0LMWLO,00000CF-19-02DEC20

header and maintain a static ground speed. Move the multi-function lever to take control of the ground speed.

**Procedure to Modify:**

Toggle Button

H113848—UN—04JAN17

1. On the Combine Advisor Main Page, select the toggle button under HarvestSmart™ to turn HarvestSmart™ automation on or off.

**NOTE:** The remaining steps of this procedure can only be performed if HarvestSmart™ is turned on.



Header Activation Buttons

H128157—UN—16JAN20

2. Press header activation button 2 or 3 on the front of the multi-function lever to lower the header.



AutoTrac™ Resume Button

H117005—UN—15APR16

3. Engage AutoTrac™ AutoTrac™ and enter crop.

**NOTE:** To achieve the best performance, engage HarvestSmart™ after the machine has begun harvesting and material has reached the rotor.

**HarvestSmart™ | Automation**

Automation allows you to enable or disable the HarvestSmart™ system.

**Modify When:**

- Performing a turn at a headland. Press header activation button 1 to raise the header and maintain a static ground speed. Move the multi-function lever to take control of the ground speed.
- You want to maintain a constant ground speed while unloading. Press reconfigurable button.
- Preparing to cross waterways or rough terrain. Press reconfigurable button to maintain a static ground speed or press header activation button 1 to raise the



Reconfigurable Buttons

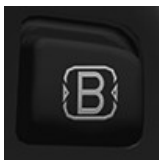
H128156—UN—14JAN20

4. Press reconfigurable button on the side of the multi-function lever to activate HarvestSmart™. The machine will slowly move to the previously determined average harvesting speed.

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AutoTrac is a trademark of Deere & Company

Press reconfigurable button at any time to pause HarvestSmart™. The machine will continue harvesting and maintain a static ground speed.



Reconfigurable Button B

T8T8737—UN—18DEC19

**NOTE:** HarvestSmart™ pause/resume is assigned to reconfigurable button B by default. This function can be assigned to any reconfigurable single position button in Controls Setup. If you want to assign HarvestSmart™ to header activation buttons 2 or 3, see your John Deere dealer.



Header Activation Button 1

T8T8738—UN—18DEC19

5. Press header activation button 1 on the front of the multi-function lever to raise the header.

#### HarvestSmart™ Will Pause If:

- The reconfigurable button on the side of the multi-function lever is pressed while HarvestSmart™ is active.
- The header activation button 1 is pressed while HarvestSmart™ is active.
- The unloading auger is engaged. When the unloading auger is shut off, HarvestSmart™ will resume automatic control of the ground speed.

**NOTE:** If the engine becomes overloaded while the unloading auger is engaged, HarvestSmart™ will slow the ground speed. HarvestSmart™ will not increase the ground speed until the unloading auger is turned off.

#### HarvestSmart™ Will Disengage If:

- The multi-function lever is moved.
- The ground speed is lowered below 2 km/h (1.2 mph).
- The brake pedals are pressed.

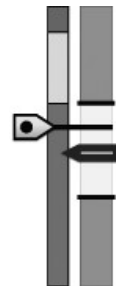
NOLMWLO,00000D0-19-23NOV20

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## Engine Power Target

Engine Power Target sets the target engine power that HarvestSmart™ should maintain.

#### Items Accessible on Engine Power Target:



Engine Power Meter

H128154—UN—16DEC19

**Engine Power Meter**—shows engine power usage and maximum engine power setting. The system does not allow the target to be set in the red.



Target Indicator

H118584—UN—20JAN17

**Target Indicator**—shows the Engine Power Target.

**NOTE:** The target will be displayed in blue while being automatically managed.



Usage Indicator

H118585—UN—20JAN17

**Usage Indicator**—shows current engine power usage.

#### Modify When:

- Operating with a draper platform:
  - Near 85-95% in consistent conditions.
  - Near 80-90% in changing conditions.
  - Near 75-85% in down crop or tough feeding conditions.
- Operating with an auger platform:
  - Near 80-90% in consistent conditions.
  - Near 75-85% in changing conditions.
  - Near 70-80% in down crop or tough feeding conditions.
- Less experienced operator. Set a lower engine power target.
- Bad crop flow in the header causes inconsistent feeding of the rotor. Set a lower engine power target.
- Consistent, smooth feeding allows you to set a higher engine power target.
- Harvesting in dry conditions, level terrain, even feeding, and standing crop. Operating at a higher

engine power target can promote more capacity and efficiency.

- Harvesting in muddy conditions, steep terrain, slug feeding, and lodged crop. Operating at a lower engine power target allows for more consistent performance.

**NOTE:** If harvesting in mud, steep hills, or adverse conditions, targeting near 85-95% is recommended to allow for additional power consumption and more consistent system performances.

2. Use Armrest Adjustment Dial to select desired engine power.

- Turn dial clockwise to increase value.
- Turn dial counterclockwise to decrease value.

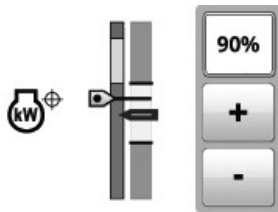
Minimum— 60%

Maximum— 100%

Increments— 1%

NOLMWLO,00000D1-19-20JAN20

## Procedure to Modify:



H128155—UN—16DEC19

Engine Power Target

1. Select to adjust the Engine Power Target.



H127986—UN—20NOV19

Engine Power Target

2. Select plus (+) to increase or minus (-) to decrease the Engine Power Target.

Minimum— 60%

Maximum— 100%

Increments— 1%

## Alternative Procedure to Modify:



H118572—UN—20JAN17

Engine Power Target

1. Select to activate Armrest Adjustment Dial.



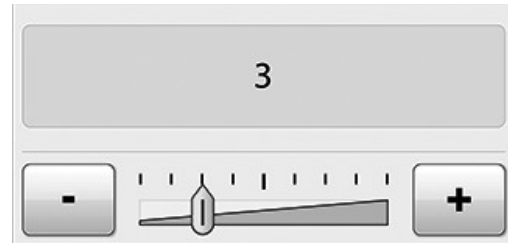
H115034—UN—28MAR16

Armrest Adjustment Dial

## Active Terrain Adjustment™ Settings

Active Terrain Adjustment™ allows cleaning fan, chaffer, and sieve to adjust automatically depending on the machine pitch when harvesting in uphill or downhill terrain. To access Active Terrain Adjustment™ settings, select the screen area to the right of the ON/OFF button.

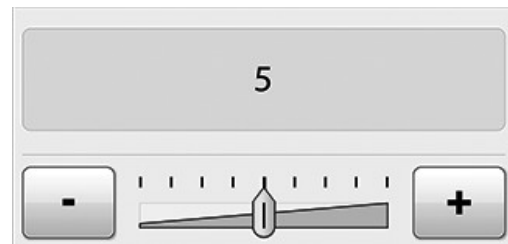
### Items Accessible on Active Terrain Adjustment™ Settings Page:



H125216—UN—05FEB19

Uphill Sensitivity

Uphill Sensitivity— accelerates or decelerates the system reaction to vehicle pitch while harvesting uphill to help reduce grain loss and tailings.



H125217—UN—05FEB19

Downhill Sensitivity

Downhill Sensitivity— accelerates or decelerates the system reaction to vehicle pitch while harvesting downhill to help maintain harvested grain cleanliness.

Active Terrain Adjustment is a trademark of Deere & Company





Chaffer

H127987—UN—20NOV19

**Offset Tuning | Chaffer**— this feature allows changes to the size of adjustments made by Active Terrain Adjustment™ to the chaffer.



Sieve

H127988—UN—20NOV19

**Offset Tuning | Sieve**— this feature allows changes to the size of adjustments made by Active Terrain Adjustment™ to the sieve.



Cleaning Fan

H127989—UN—20NOV19

**Offset Tuning | Cleaning Fan**— this feature allows changes to the size of adjustments made by Active Terrain Adjustment™ to the speed of the cleaning fan.

NOLMWLO,0000D2-19-25NOV19

## Uphill Sensitivity

Uphill Sensitivity allows you to accelerate or decelerate system reaction to vehicle pitch helping to reduce grain loss and tailings while traveling uphill.

**NOTE:** Higher sensitivity values react more quickly to changes in pitch and lower sensitivity react slower to changes in pitch while harvesting uphill.

### Modify When:

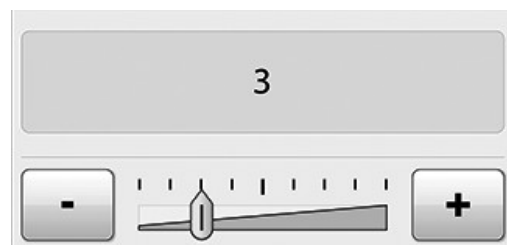
- Active Terrain Adjustment™ system is adjusting too soon or too late, causing grain loss or tailings to be higher while harvesting uphill than on level land.
- Grain tank is not clean while harvesting uphill. Adjust the sensitivity lower.
- Cleaning shoe loss or tailings levels are elevated while harvesting uphill. Adjust the sensitivity higher.

**Setting 1**— no adjustments (-100)

**Setting 5**— adjusts at default pitch levels (0)

**Setting 9**— adjusts twice as soon as default pitch levels (100)

### Procedure to Modify:



Sensitivity

H125216—UN—05FEB19

Select plus (+) to increase or minus (-) to decrease desired sensitivity.

NOLMWLO,0000154-19-02DEC20

## Downhill Sensitivity

Downhill Sensitivity allows you to accelerate or decelerate system reaction to vehicle pitch to help maintain grain cleanliness while harvesting downhill.

**NOTE:** Higher sensitivity values react more quickly to changes in pitch and lower sensitivity values react slower to changes in pitch while harvesting downhill.

### Modify When:

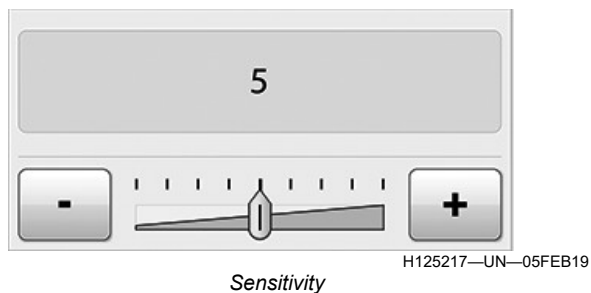
- Active Terrain Adjustment™ system is adjusting too soon or too late, causing grain loss or tailings to be higher while harvesting downhill than on level land.
- Cleaning shoe loss or tailings levels are elevated while harvesting downhill. Adjust the sensitivity lower.
- Grain tank is not clean while harvesting downhill. Adjust the sensitivity higher.

**Setting 1**— no adjustments (-100)

**Setting 5**— adjusts at default pitch levels (0)

**Setting 9**— adjusts twice as soon as default pitch levels (100)

### Procedure to Modify:

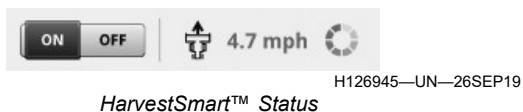


Select plus (+) to increase or minus (-) to decrease desired sensitivity.

N0LMWLO,0000155-19-02DEC20

## HarvestSmart™ Status

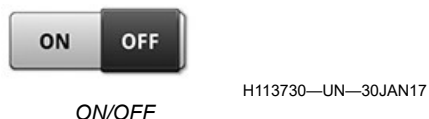
HarvestSmart™ Status is used to communicate the current state of the HarvestSmart™ system. HarvestSmart™ Status also allows you to view requirements that must be met for the system to operate properly and errors that are affecting the system. To see more details, select HarvestSmart™ Status.



*NOTE: Some of the following items displayed are only listed if machine is equipped with the associated option.*

### Items Displayed on HarvestSmart™ Status Page:

*NOTE: Not all possibilities are listed here. To open a list of current statuses, select the HarvestSmart™ Status.*



**Automation ON/OFF**— indicates whether the system is on or off.



**Idle**— displayed when system is in standby state or preparing targets status.



**Active**— displayed when the system is in the active state or maintaining state.



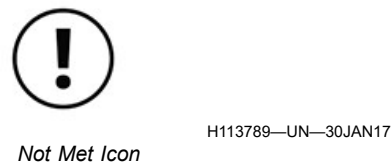
**Issue**— displayed when the system has one or more severe faults present.



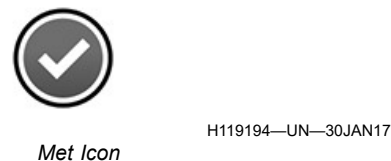
**Ground Speed Limit**— displayed when the ground speed limit is reached.

### HarvestSmart™ Requirements:

- HarvestSmart™ automation must be ON.
- Performance Target must be set.
- Machine must be ready to harvest:
  - Separator must be engaged.
  - Header must be engaged.
  - Engine must be set to high idle.
- Multi-function lever must be set to at least 2 km/h (1.25 mph)



An icon appears when a requirement is not met.



Once a condition has been met, a green checkmark appears.



Close

H114674—UN—06FEB19

Select to close.

NOLMWLO.0000156-19-02DEC20

## Active Terrain Adjustment™ Status

Active Terrain Adjustment™ Status is used to communicate the current state of the Active Terrain Adjustment™ system. Active Terrain Adjustment™ Status also allows you to view requirements that must be met for the system to operate properly and errors affecting the system.

*NOTE: Some of the following items displayed are only listed if machine is equipped with the associated option.*



H129170—UN—27FEB20

Active Terrain Adjustment™ Status

To see more details select Active Terrain Adjustment™ Status.

### Items Displayed on Active Terrain Adjustment™ Status Page:

*NOTE: Not all possibilities are listed here. To open a list of current statuses, select the Active Terrain Adjustment™ Status.*



ON/OFF

H113730—UN—30JAN17

**Automation ON/OFF**— indicates whether the system is on or off.



Idle

H126951—UN—26SEP19

**Idle**— displayed while not applying offsets (due to lack of incline/decline).



Active

H129163—UN—27FEB20

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**Active**— displays an uphill or downhill indication of what the system is accommodating for.



Issue

H114663—UN—05JAN17

**Issue**— displayed when the system has one or more severe faults present.

### Active Terrain Adjustment™ Requirements:

- Active Terrain Adjustment™ automation must be ON.
- Machine must be ready to harvest:
  - Separator must be engaged.
  - Header must be engaged.
  - Engine must be set to high idle.
- Header must be below record stop height.



Message

H113789—UN—30JAN17

A message appears when a requirement is not met.



Green Checkmark

H119194—UN—30JAN17

Once a condition has been met, a green checkmark appears.



Header Details

H118541—UN—30JAN17

Requirement not met for "Header must be below record stop height", select to access [Header Details](#) page.



Close

H114674—UN—06FEB19

Select to close.

NOLMWLO.0000157-19-02DEC20

## Auto Maintain Status

Auto Maintain Status is used to communicate the

current state of the Auto Maintain system. Auto Maintain Status also allows you to view requirements that must be met for the system to operate properly.

**NOTE:** Some of the following items displayed are only listed if machine is equipped with the associated option.



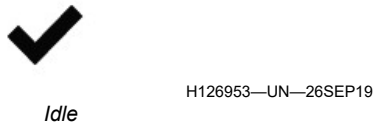
Select the Auto Maintain status to see more details.

#### Items Displayed on Auto Maintain Status Page:

**NOTE:** Not all faults are listed here. To open a list of current statuses, select the Auto Maintain Status.



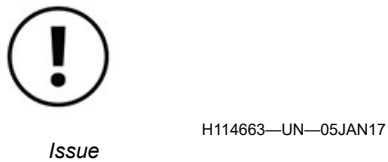
**Automation ON/OFF**— indicates whether the system is on or off.



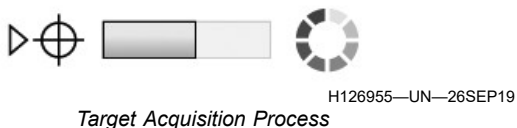
**Idle**— displayed when system is on and no issues are detected.



**Active**— displayed when the system is accommodating for loss or quality.



**Issue**— displayed when the system has one or more severe faults present.



**Target Acquisition Process**— displayed when the system is acquiring performance targets.

#### Auto Maintain Requirements:

- Auto Maintain automation must be ON.
- Performance Target must be set.
- Machine must be ready to harvest:
  - Separator must be engaged.
  - Header must be engaged.
  - Engine must be set to high idle.
- Header must be below record stop height.
- Must be in the consistent crop conditions:
- Machine must have steady ground speed.
- Crop flow must be present.



Not Met Icon

H113789—UN—30JAN17

An icon appears when a requirement is not met.



Met Icon

H119194—UN—30JAN17

Once a condition has been met, a green check appears.



Close

H114674—UN—06FEB19

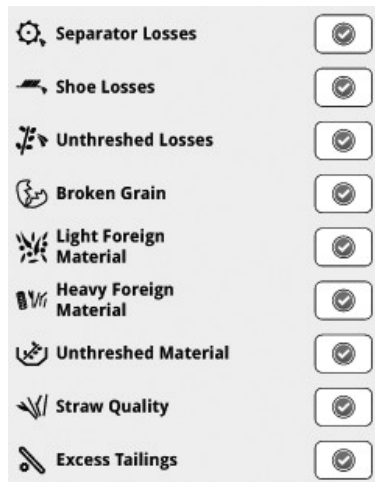
Select to close.

N0LMWLO,0000158-19-02DEC20

#### Optimize Performance

Optimize Performance, formerly Interactive Combine Adjustment, recommends adjustments to the user based on one or more reported issues.

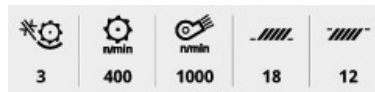
#### Items Accessible on Optimize Performance Main Page:



H127037—UN—26SEP19

Performance Issues

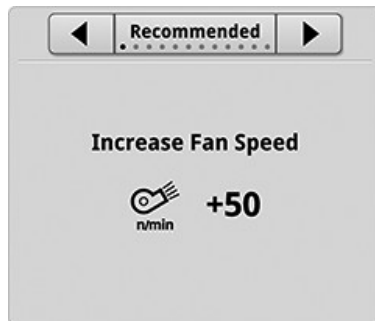
**Performance Issues**— select to report one or more performance issues that apply to the machine.



H127038—UN—26SEP19

Current Settings

**Current Settings**— select to open Harvest Settings application.



H125517—UN—01FEB19

Solution

**Solutions**— displays after one or more performance issues are reported. Allows you to toggle through the system recommended solutions and apply them to the machine.



H126962—UN—26SEP19

Stop

**Stop**— select to clear all issues.

**NOTE:** Stop is only selectable when one or more performance issues are selected.



H126963—UN—26SEP19

Apply

**Apply**—select to apply the currently selected solution.

**NOTE:** Apply is only selectable when one or more performance issues are selected.



H116936—UN—30JAN17

Close

Select to close.

**NOTE:** If you close Optimize Performance with issue severities selected, the system remembers your current selections. Reopening triggers the system to find recommendations based on those selections.

NOLMWLO,0000159-19-21NOV19

## Offset Tuning Chaffer

Offset Tuning | Chaffer adjusts the Step Size amount to the chaffer when commanded by the Active Terrain Adjustment™ system.

### Include in Automation

#### Modify When:

**Include in Automation**— check if you want Active Terrain Adjustment™ to adjust the chaffer. If you do not want Active Terrain Adjustment™ adjusting the chaffer, uncheck Include in Automation.

#### Procedure to Modify:

Uncheck to prevent Active Terrain Adjustment™ from adjusting the chaffer.



**Include in automation**

H126183—UN—24APR19

Include in automation

**NOTE:** "Include in automation" defaults to different states depending on the crop type.

**NOTE:** If "Include in automation" is checked, the word "Managed" appears on the main screen. If not checked, then the word "Ignored" appears on-screen

### Step Size

Active Terrain Adjustment is a trademark of Deere & Company

**Modify When:**

*NOTE: Adjust the step sizes if sensitivity adjustments are ineffective.*

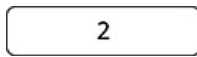
*NOTE: Step sizes are the size of individual adjustments made by Active Terrain Adjustment™, not the total range of the adjustments or number of adjustments.*

**Increasing Step Size:**

Use when maximum sensitivity setting is not achieving desired results, or when all but one component (fan speed, chaffer, or sieve) needs more adjustment than the others.

**Decreasing Step Size:**

Use when minimum sensitivity setting is not achieving desired results, or when all but one component (fan speed, chaffer, or sieve) needs less adjustment than the others.

**Procedure to Modify:**

Step Size

H125580—UN—01FEB19

1. To open number pad, select Step Size and enter desired value.



Chaffer

H114645—UN—05JAN17

Minimum: 1

Default: Based on crop being harvested.

Maximum: 3

Increment: 1



Close

H114674—UN—06FEB19

2. Select to close.

NOLMWLO,000015A-19-21NOV19

**Offset Tuning Sieve**

Offset Tuning | Sieve adjusts the Step Size amount to the sieve when commanded by the Active Terrain Adjustment™ system.

**Include in Automation**

Active Terrain Adjustment is a trademark of Deere & Company

**Modify When:**

**Include in Automation**— select check if you want Active Terrain Adjustment™ to adjust the sieve. If you do not want Active Terrain Adjustment™ adjusting the sieve, uncheck Include in Automation.

**Procedure to Modify:****Include in automation**

H126183—UN—24APR19

Include in automation

Uncheck to prevent Active Terrain Adjustment™ from adjusting the sieve.

*NOTE: "Include in automation" defaults to different states depending on the crop type.*

*NOTE: If "Include in automation" is checked, the word "Managed" appears on the main screen. If not checked, then the word "Ignored" appears on-screen*

**Step Size****Modify When:**

*NOTE: Adjust the step sizes if sensitivity adjustments are ineffective.*

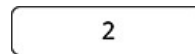
*NOTE: Step sizes are individual increments, not the total range of the adjustments or number of adjustments.*

**Increasing Step Size:**

Use when maximum sensitivity setting is not achieving desired results, or when all but one component (cleaning fan, chaffer, or sieve) needs more adjustment than the others.

**Decreasing Step Size:**

Use when minimum sensitivity setting is not achieving desired results, or when all but one component (cleaning fan, chaffer, or sieve) needs less adjustment than the others.

**Procedure to Modify:**

Step Size

H125580—UN—01FEB19

1. Select Step Size to open number pad and enter desired value.



Sieve

H114646—UN—05JAN17

Minimum: 1

Default: Based on crop being harvested.

Maximum: 3

Increment: 1



H114674—UN—06FEB19

Close

2. Select to close.

N0LMWLO,000015B-19-20NOV19

## Cannot Maintain Target

Combine Advisor™ Cannot Maintain Target states that Combine Advisor™ may not be able to maintain the Performance Target in the current conditions.

**Items Accessible on Cannot Maintain Target Page:**



**Set New Auto Maintain Target**

H126964—UN—26SEP19

Set New Auto Maintain Target

**Set New Auto Maintain Target**— starts the Set Targets process. It has the same function as pressing the "Set Performance Target" button.



**Check Manual Adjustments**

H126965—UN—26SEP19

Check Manual Adjustments

**Check Manual Adjustments**— opens the Harvest Settings Outside Configuration Overlay and turns OFF Auto Maintain.



**Auto Maintain OFF**

H126969—UN—26SEP19

Auto Maintain OFF

**Auto Maintain OFF**— closes this overlay and turns off Auto Maintain.



H113840—UN—06FEB19

Next

Select to proceed.

**Procedure to Modify:**

**Set New Auto Maintain Target**



**Set New Auto Maintain Target**

H126964—UN—26SEP19

Set New Auto Maintain Target

1. Select to set a new Auto Maintain target.



Next

H113840—UN—06FEB19

2. Select to proceed.

## Check Manual Configuration



**Check Manual Adjustments**

H126965—UN—26SEP19

Check Manual Configuration

1. Select to check manual configuration.



Next

H113840—UN—06FEB19

2. Select to open Harvest Settings Outside Configuration

## Turn Off Auto Maintain



**Auto Maintain OFF**

H126969—UN—26SEP19

Auto Maintain OFF

1. Select to turn off Auto Maintain.



Next

H113840—UN—06FEB19

2. Select to proceed.

N0LMWLO,000015C-19-02DEC20

## Offset Tuning Cleaning Fan

Offset Tuning | Cleaning Fan adjusts the Step Size amount to the fan speed when commanded by the Active Terrain Adjustment™ system.

*NOTE: The Cleaning Fan is always "Included in Automation", so the word "Managed" always appears on the Active Terrain Adjustment™ settings page*

**Modify When:**

*NOTE: Adjust the step sizes if sensitivity adjustments are ineffective*

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**NOTE:** Step sizes are individual increments, not the total range of the adjustments or number of adjustments.

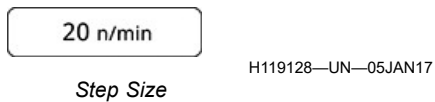
### Increasing Step Size:

Use when maximum sensitivity setting is not achieving desired results, or when all but one component (fan speed, chaffer, or sieve) needs more adjustment than the others.

### Decreasing Step Size:

Use when minimum sensitivity setting is not achieving desired results, or when all but one component (fan speed, chaffer, or sieve) needs less adjustment than the others.

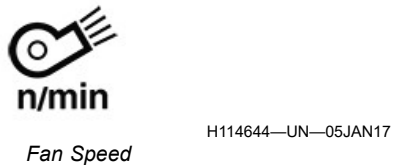
### Procedure to Modify:



1. Select to open Step Size page.



2. Select desired value.

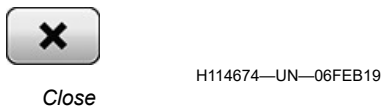


Minimum: 20 n/min

Default: Based on crop being harvested.

Maximum: 50 n/min

Increment: 10 n/min



3. Select to close.

NOLMWLO,000015D-19-21NOV19

## Set Performance Target

Set Performance Target allows you to inform the system that existing grain loss, grain quality, and engine power levels are acceptable. The system initiates and performs the necessary changes to create the new

"maintain" threshold. Performance Targets are needed to run Auto Maintain and HarvestSmart™.

**NOTE:** Acquiring a performance target can take about 30 minutes in a field with varying crop conditions. If you are satisfied with an existing performance target, you do not need to set a new performance target when changing fields.

**NOTE:** Some of the following items displayed are only listed if machine is equipped with the associated option.

### Modify When:

- You optimize the machine; set a new performance target after optimization is complete.
- Auto Maintain has detected several issues while harvesting and you are still satisfied with the current performance.
- Moving to a new field with a significant change in yield, moisture, or variety.
- You want to automatically set the Engine Power Target for HarvestSmart™.
- Ground speed is oscillating while HarvestSmart™ is engaged.

### Procedure to Modify:

**NOTE:** If there is not a valid target available, you are prompted to set a new target when you turn on HarvestSmart™ or Auto Maintain.

- Operate machine at the preferred harvest speed/engine power level, grain quality, and grain loss levels.



- Select to Set Performance Target.

**NOTE:** Targets are saved by crop type and during key and battery cycles.

**NOTE:** If automation systems are not able to maintain the current performance target, Cannot Maintain Target is shown.

NOLMWLO,000015E-19-02DEC20

## Performance Issues

Performance Issues let you change the severity of the

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issues you are experiencing to generate recommendations in Optimize Performance. Select all issues you are currently experiencing.

#### Items Accessible:

**Select Severity**— select to change the severity of the issue you are experiencing.

*NOTE: Any time the severity changes from what was previously reported, the system goes through the "Finding Recommendations" state.*



OK

H125174—UN—01FEB19

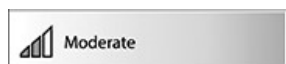
**OK**— Machine is optimally running to your specifications.



Minor

H125175—UN—01FEB19

Minor



Moderate

H125176—UN—01FEB19

Moderate

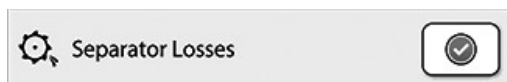


Major

H125177—UN—01FEB19

Major

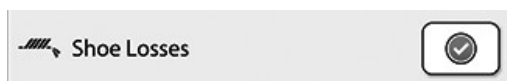
#### Types of Performance Issues:



Separator Losses

H125191—UN—05FEB19

**Separator Losses**— select if grain is exiting the machine through the separator.



Shoe Losses

H125192—UN—05FEB19

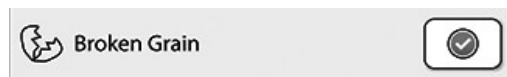
**Shoe Loss**— select if grain is exiting the machine through the cleaning shoe.



Unthreshed Losses

H125193—UN—05FEB19

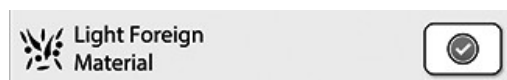
**Unthreshed Loss**— select if grain on the ground is remaining attached to the plant material.



Broken Grain

H125194—UN—05FEB19

**Broken Grain**— select if damaged or broken grain is in the grain tank.



Light Foreign Material

H125195—UN—05FEB19

**Light Foreign Material**— select if there are pieces of light and fluffy material in the grain tank.



Heavy Foreign Material

H125196—UN—05FEB19

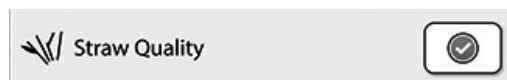
**Heavy Foreign Material**— select if pieces of cob or short sections of stem/stalk are in the grain tank.



Unthreshed Material

H125197—UN—05FEB19

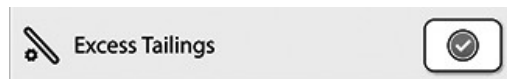
**Unthreshed Material**— select if grain in the grain tank is remaining attached to cob, grain head, or pod.



Straw Quality

H125198—UN—05FEB19

**Straw Quality**— select if Straw Quality is an area you would like to improve.



Excess Tailings

H125199—UN—05FEB19

**Excess Tailings**— select if you have high tailings volume.

## Separator Losses

Separator Losses are loose kernels that leave the machine through the discharge/overshot beater. A large amount of free grain at the rear of the grain return pan is an indicator.

### How to Determine:

- View Separator Losses on the VisionTrak™ display.
- Perform Power Shutdown, refer to Operator's Manual for more information.

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N0LMWLO,0000160-19-02DEC20

## Shoe Losses

Shoe Losses is grain that has exited the machine through the cleaning shoe, either by air current or by contact with the chaffer.

### How to Determine:

- View Shoe Losses on the VisionTrak™ display.
- Perform Power Shutdown, refer to Operator's Manual for more information.

*NOTE: Always measure the losses in normal working conditions. Measure losses over the complete working width several times. If swathing straw, also measure where the chaff is spread.*

---

N0LMWLO,0000161-19-02DEC20

## Unthreshed Losses

Unthreshed Losses is grain on the ground remaining attached to the cob, grain head, or pod.

### How to Determine:

- Perform a power shutdown. See your Operator's Manual for more information.
- Inspect the processed material on the ground behind the machine.

---

N0LMWLO,0000162-19-23NOV20

## Broken Grain

Broken Grain is damaged or broken grain in the grain tank.

### How to Determine:

View the grain tank and inspect the grain sample.

---

MM95366,0000413-19-02DEC19

## Light Foreign Material

Light Foreign Material is pieces of light and fluffy material in the grain tank with the clean grain. These pieces are something that you would expect air to blow away.

### How to Determine:

View the grain tank and inspect the grain sample.

---

N0LMWLO,000016D-19-02DEC19

## Heavy Foreign Material

Heavy Foreign Material is pieces of cob or short sections of stem/stalk in the grain tank with the clean grain. These pieces are something that you would not expect air to blow away.

### How to Determine:

View the grain tank and inspect the grain sample.

---

N0LMWLO,000016E-19-02DEC19

## Unthreshed Material

Unthreshed Material is grain in the grain tank remaining attached to cob, grain head, or pod.

### How to Determine:

View the grain tank and inspect the grain sample.

---

MM95366,0000416-19-21NOV19

## Straw Quality Issues

Windrow mode only. Straw is excessively broken, too short, or tangled.

### How to Determine:

Inspect straw windrow.

---

MM95366,0000417-19-21NOV19

## Excess Tailings

Tailings volume is high enough to cause tailings full alarm or higher than expected by operator.

### How to Determine:

- View tailings on VisionTrak™ display.
- Check composition of tailings:
  - A high amount of free grain in tailings can indicate too little sieve clearance.
  - Unthreshed kernels can indicate a threshing issue.
  - High tailings volume with only chaff can indicate high chaff load on cleaning shoe.

**NOTE:** Properly set machines have some tailings volume.

N0LMWLO,0000163-19-02DEC20

## Solutions

Recommended Solutions allows you to see a complete list of suggested solutions and specifics about the intended adjustment.

### Items Accessible on "Solution Display":



Progress Indicator

H113801—UN—04JAN17

**Finding Recommendations**— displays the progress indicator while the system is searching for recommended solutions.



Recommended Solutions

H125496—UN—01FEB19

**Recommended Solutions**— allows access to list of suggested solutions.



Left

H116623—UN—25JAN17



Right

H116624—UN—25JAN17

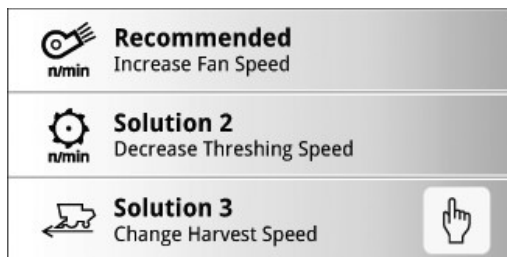
**Left and Right Controls**— allows you to scroll through the complete list of suggested solutions, showing adjustment specifics.



Recommended Solution

H125497—UN—01FEB19

Select to view the entire list of recommended solutions.



Select Solution

H127029—UN—26SEP19

**NOTE:** Solutions that require you to adjust settings manually, or climb out of the cab, have a slightly different appearance within the Solutions multi-pane toggle view. The "hand icon", "Manual", or "Out of Cab" wording on the screen indicate these solutions. These types of adjustments replace the "Apply" button with a "Next" button, indicating there can be more actions required.

**NOTE:** For out-of-cab adjustments, refer to the machine Operator's Manual.

### Ground Speed Adjustments

### Separator Vane Adjustments

### Out-of-Cab Adjustments



Stop

H126962—UN—26SEP19

**Stop**— select to clear all issues.

**NOTE:** If you stop the optimization process at any time, a message appears on the display.



Apply

H126963—UN—26SEP19

**Apply**— select to apply the currently selected recommended solution.

**NOTE:** When the adjustment is complete, a message appears on the display and you are returned to a blank issue selection page.

N0LMWLO,0000164-19-21NOV19

## Ground Speed Adjustment

A Ground Speed Adjustment requires you to make manual machine adjustments. These adjustments are necessary for the Combine Advisor™ application to auto-advance to the next step of the process.

### Ground Speed Adjustments:



H125240—UN—01FEB19  
Change Ground Speed to 3 mph

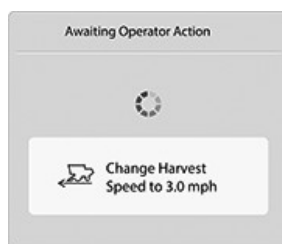
Optimize Performance recommends a ground speed adjustment.



Next

H127027—UN—26SEP19

Select to accept the Ground Speed adjustment.



Awaiting Operator Action

H128110—UN—21NOV19

You make the speed adjustment. Once the speed adjustment is made, Optimize Performance shows a message and returns to a blank issue selection screen.



Back

H127028—UN—26SEP19

To choose a different recommendation, select to return to the Solution list.



Stop

H126962—UN—26SEP19

Select to clear all issues.



Close

H116310—UN—30JAN17

Select to close the Optimize Performance application.

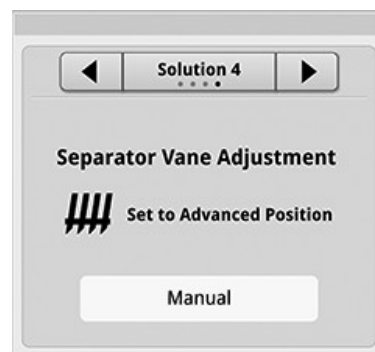
**NOTE:** Optimize Performance will resume in the same place when you open the application again after closing.

NOLMWLO,0000165-19-21NOV19

## Separator Vane Adjustments

Separator Vane Adjustments may require you to make manual machine adjustments. These adjustments are necessary in order for the Optimize Performance application to auto-advance to the next step of the process.

### Separator Vane Adjustments:



Separator Vane Adjustment

H125518—UN—01FEB19

Optimize Performance recommends a Separator Vane adjustment.



Next

H127027—UN—26SEP19

Select to accept the Separator Vane adjustment.



Separator must be disengaged

H125180—UN—01FEB19

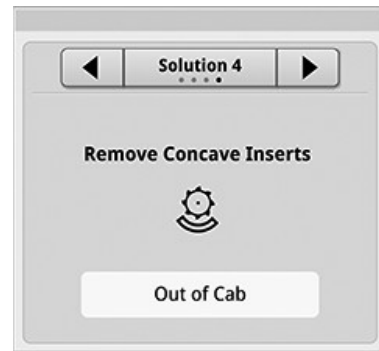
Optimize Performance prompts you to disengage the separator.

**NOTE:** If the separator is already disengaged, Optimize Performance skips this step and automatically adjust the Separator Vanes.



Applying Solution

H125181—UN—01FEB19



Remove Concave Inserts

H125183—UN—01FEB19

Optimize Performance makes the separator vane adjustment. Once the adjustment is completed, Optimize Performance shows a message and returns to a blank issue selection page.



Back

H127028—UN—26SEP19

To choose a different recommendation, select to return to the Solution list.



Stop

H126962—UN—26SEP19

Select to clear all issues.



Close

H116310—UN—30JAN17

Select to close the Optimize Performance application.

**NOTE:** Optimize Performance will resume in the same place when you open the application again after closing.

NOLMWLO,0000166-19-21NOV19

## Out-of-Cab Adjustments

Out-of-Cab Adjustments are machine optimization adjustments that you make outside of the cab.

### Out-of-Cab Adjustments:

To perform Out-of-Cab adjustments, refer to Operator's Manual.

**IMPORTANT:** Shut down the machine before performing the recommended adjustments.



Next

H127027—UN—26SEP19

Select to accept Out-of-Cab adjustment.



Awaiting Operator Action

H125184—UN—01FEB19



Message

H116316—UN—25JAN17

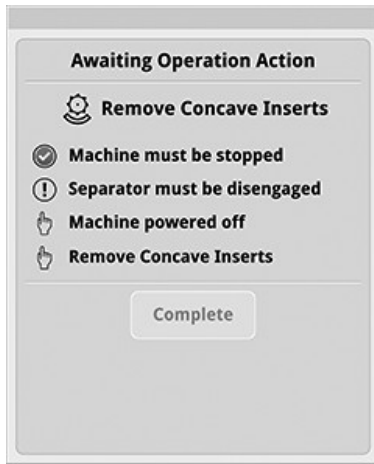
**NOTE:** An icon appears when a requirement is not met.



Hand Icon

H125188—UN—01FEB19

**NOTE:** Out-of-Cab adjustments needed are shown as hand icons.



H125185—UN—01FEB19

Awaiting Operator Action



H116336—UN—30JAN17

Green Check Mark

**NOTE:** As you meet the prerequisites, a check mark replaces the original icon.



H125186—UN—01FEB19

Adjustment Completed



H125586—UN—01FEB19

Complete

Select "Complete" to confirm that the adjustment has been performed.



Next

H127028—UN—26SEP19

To choose a different recommendation, select to return to the Solutions list.



Stop

H126962—UN—26SEP19

Select to clear all issues.

**NOTE:** Turning off the machine prompts an "Optimize Complete" display to be present when machine is turned back on. The machine considers the adjustment to be complete. Select "OK" to close the window. Select "Optimize Performance" to return to the Optimize Performance application.



Close

H114674—UN—06FEB19

Select to close the Optimize Performance application.

**NOTE:** Optimize Performance will resume in the same place when you open the application after closing.

N0LMWLO,0000167-19-21NOV19

## Auto Maintain | Settings

Auto Maintain | Settings allows you to set the response aggressiveness and sensitivity levels for grain loss, broken grain, and foreign material. To access Auto Maintain settings, select the screen area to the right of the ON/OFF button.

### Items Accessible on Auto Maintain | Settings Page:

**Instructions**— describes how aggressiveness and sensitivity affect the system.



Target Acquisition

H126152—UN—21NOV19

**Target Acquisition Process**— this state displays when the system is ON and in the Target Acquisition Process.

**NOTE:** Acquiring performance targets is always enabled, allowing the system to set HarvestSmart™, or Auto Maintain targets at any time.



Message

H114663—UN—05JAN17

**System Fault**— this state displays when the system has one or more severe faults present.



H125211—UN—05FEB19

Response Aggressiveness

**Response Aggressiveness**— controls how frequently Auto Maintain adjusts when issues are present.



H125212—UN—05FEB19

Grain Loss Sensitivity

**Grain Loss Sensitivity**— the amount of change in grain loss needed for Auto Maintain to detect an issue.



H125213—UN—05FEB19

Broken Grain Sensitivity

**Broken Grain Sensitivity**— the amount of change in broken grain needed for Auto Maintain to detect an issue.



H125214—UN—05FEB19

Foreign Material Sensitivity

**Foreign Material Sensitivity**— the amount of change in foreign material needed for Auto Maintain to detect an issue.

N0LMWLO,0000168-19-23NOV20

## Response Aggressiveness

Response Aggressiveness controls how frequently Auto Maintain adjusts the machine when an issue is present.

**Setting 1**— Minimum

**Setting 2**— Lowered

**Setting 3**— Default

**Setting 4**— Increased

**Setting 5**— Maximum

**Modify When:**

**Increase When:**

Auto Maintain is not adjusting frequently enough to resolve the issues that are found.

**Decrease When:**

Auto Maintain is adjusting too frequently to resolve the issues that are found.

**Procedure to Modify:**



H119857—UN—30JAN17

Aggressiveness

Select Plus (+) button to increase and Minus (-) button to decrease.

N0LMWLO,0000169-19-26NOV19

## Grain Loss | Sensitivity

Grain Loss | Sensitivity controls how fast the system recognizes grain loss before making an automatic change.

Setting 1— Minimum

Setting 2— Lowered

Setting 3— Default

Setting 4— Increased

Setting 5— Maximum

**Modify When:**

**Increase When:**

You see shoe loss or separator loss and Auto Maintain is not detecting the issue.

**Decrease When:**

Auto Maintain is detecting a shoe loss or separator loss issue and the performance of that area is still acceptable to you.

**Procedure to Modify:**



H119857—UN—30JAN17

Sensitivity

Select Plus (+) button to increase and Minus (-) button to decrease.

N0LMWLO,000016A-19-21NOV19

## Broken Grain | Sensitivity

Broken Grain | Sensitivity controls how fast the system recognizes broken grain.

**Setting 1**— Minimum

**Setting 2**— Lowered

**Setting 3**— Default

**Setting 4**— Increased

**Setting 5**— Maximum

**Modify When:**

**Increase When:**

You see an unacceptable amount of broken grain in the grain tank and Auto Maintain is not detecting an issue.

**Decrease When:**

Auto Maintain is detecting a broken grain issue and the performance of that area is still acceptable to you.

**Procedure to Modify:**



*Sensitivity*

H119857—UN—30JAN17

Select Plus (+) button to increase and Minus (-) button to decrease.

N0LMWLO,000016B-19-21NOV19

- Light Foreign Material (chaff, small bits of leaves and hulls).
- Heavy Foreign Material (cobs, larger leaves, and sticks or stems).
- Unthreshed Material in the grain tank.

**Procedure to Modify:**



*Sensitivity*

H119857—UN—30JAN17

Select Plus (+) button to increase and Minus (-) button to decrease.

N0LMWLO,000016C-19-02DEC19

## Foreign Material | Sensitivity

Foreign Material | Sensitivity controls how fast the system recognizes foreign material.

**Setting 1**— Minimum

**Setting 2**— Lowered

**Setting 3**— Default

**Setting 4**— Increased

**Setting 5**— Maximum

**Modify When:**

**Increase When:**

You see an unacceptable amount of one or more of the following and Auto Maintain is not detecting an issue.

- Light Foreign Material (chaff, small bits of leaves and hulls).
- Heavy Foreign Material (cobs, larger leaves, and sticks or stems).
- Unthreshed Material in the grain tank.

**Decrease When:**

Auto Maintain is detecting one or more of the following and the performance of that area is still acceptable to you.



# Combine Overview

## Combine Overview

*NOTE: Underscored text identifies that additional information is available within this section or another section of this publication.*

Combine Overview outlines the controls and features found inside the cab. Knowledge of these items helps you to correctly operate the machine as well as enhancing your comfort and operating experience.

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Front Console

H126664—UN—23JUL19

Front Console— items located in front of you near the steering wheel.



H126666—UN—26SEP19

Corner Post Display— on the front right-hand corner post.



H126665—UN—23JUL19

CommandARM

CommandARM™ Console and Display— switches for machine operation, attached to the right-hand side of the seat.



H118300—UN—22DEC16

Multi-Function Lever

Multi-Function Lever— items on the multi-function lever located on the CommandARM™ .



H127948—UN—31OCT19

Navigation Bar

Navigation Bar— items on navigation bar located below the monitor.

CommandARM is a trademark of Deere & Company



H126667—UN—23JUL19

*Right-Hand Cab Items*

Right-Hand Cab Items— connectors and ports for information input and powering auxiliary devices, on the right-hand fender well near the window.



H126668—UN—23JUL19

*Left-Hand Cab Items*

Left-Hand Cab Items— items located on the left-hand side of the front console.



H127949—UN—31OCT19

*Overhead Controls*

Overhead Controls— items located in the headliner above you.



H127090—UN—26SEP19

*Seat Controls*

Seat Controls— allow adjustment to the seat to increase your operating comfort.

AZ06166,0000725-19-02DEC19

## Front Console

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*

Key Switch

Adjusting Steering Wheel

Operate Turn Signals, Horn, and High/Low Beam

Operate Windshield Wiper/Washer



H127044—UN—26SEP19

*Footrest*

**Footrest**— place feet on footrests as needed to decrease fatigue and improve comfort.

AZ06166,0000723-19-02DEC19

## Corner Post Display

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



H117815—UN—28MAR16

*Left-Hand Turn Indicator*

**Left-Hand Turn Indicator**— left-hand turn signal is active. Simultaneous operation of right-hand/left-hand turn indicators shows your warning lights are activated.



H117820—UN—28MAR16

*Trailer Lights Indicator*

**Trailer Lights Indicator**— when the trailer harness is connected, lights illuminate when turn signals and brakes are applied.



H117819—UN—28MAR16

*Stop Operation*

**Stop Operation (Red)**— illuminates and requires the machine be stopped at once and the problem corrected. Diagnostic trouble code is shown on the armrest display until the problem is resolved.



H117807—UN—28MAR16

*High Beam Indicator*

**High Beam Indicator**— illuminates when the high beam lights are activated.



H117817—UN—28MAR16

*Operator Alert*

**Operator Alert (Yellow)**— illuminates and flashes when a problem exists with the machine. Requires the machine be stopped at earliest convenience. Diagnostic trouble code is shown on the armrest display.



H129118—UN—02DEC20

*High Exhaust System Temperature (HEST) Indicator*

**High Exhaust System Temperature (HEST) Indicator**— illuminates when engine exhaust temperature is elevated.



H117818—UN—28MAR16

*Information Alert*

**Information Alert (Blue)**— illuminates and flashes when diagnostic trouble code is active. Alerts you to be aware of a condition. When the alert is acknowledged, the screen message disappears.



H117822—UN—22DEC16

*Engine Power Meter Indicator*

**Engine Power Meter Indicator**— indicates the percentage of power the engine is using at any given time.



H117816—UN—28MAR16

*Right-Hand Turn Indicator*

**Right-Hand Turn Indicator**— right-hand turn signal is active. Simultaneous operation of right-hand/left-hand turn indicators shows your warning lights are activated.



H117823—UN—22DEC16

*Engine Temperature Indicator*

**Engine Temperature Indicator**— indicates the engine temperature. Green area indicates normal operating temperature, red indicates overheating condition.



Fuel Gauge Indicator

H117824—UN—22DEC16

**Fuel Level Indicator**— indicates the amount of fuel remaining in the fuel tank.



Diesel Exhaust Fluid (DEF) Level Indicator

H118085—UN—22DEC16

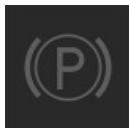
**Diesel Exhaust Fluid (DEF) Level Indicator**— indicates how much fluid remains in the tank.



Transmission Range Indicator

H118558—UN—22DEC16

**Transmission Range Indicator**— 1 or 2 illuminates indicating the current gear selected.



Park Brake Indicator

H117827—UN—28MAR16

**Park Brake Indicator**— illuminates when the park brake is engaged.



Neutral Indicator

H117828—UN—28MAR16

**Neutral Indicator**— illuminates when the neutral position is selected.



Engine Speed Indicator

H126457—UN—10JUN19

**Engine Speed Indicator**— indicates the engine rpm speed.



Vehicle Speed Indicator

H126458—UN—10JUN19

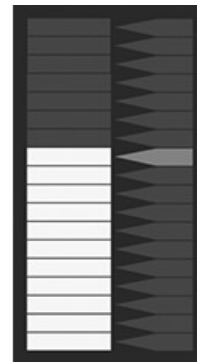
**Vehicle Speed Indicator**— indicates the machine speed (km/h or mph).



Header Height Numeric Display

H116357—UN—22DEC16

**Header Height Numeric Display**— when running on ground height sensing psi or bar will be illuminated depending on units selected. In off ground height sensing the numbers will fluctuate according to sensor feedback and neither psi or bar will be illuminated.



Header Height Display

H116356—UN—20DEC16

**Header Height Display**— the green arrow is the set point and the white bars represent the current position.



Header Activation Number

H116354—UN—19DEC16

**Header Activation Number**— indicates the currently selected activation button.



H116362—UN—19DEC16

*Deck Plate Position Resume*

**Deck Plate Position Resume**— illuminates when deck plate position resume is enabled.



H116360—UN—19DEC16

*Auto Reel Speed*

**Auto Reel Speed**— illuminates when Auto Reel Speed is enabled.



H116361—UN—19DEC16

*Reel Resume*

**Reel Resume**— illuminates when reel the resume is enabled.



H116353—UN—19DEC16

*Header Height Resume*

**Header Height Resume**— illuminates when the header height resume is enabled.



H116358—UN—19DEC16

*Header Height Sensing*

**Header Height Sensing**— illuminates when header height sensing is active.



H117843—UN—22JUN17

*Active Header Float*

**Active Header Float**— illuminates when the active header float is active.



H116359—UN—19DEC16

*Lateral Tilt Display*

**Lateral Tilt Display**— indicates position of the feeder house frame.

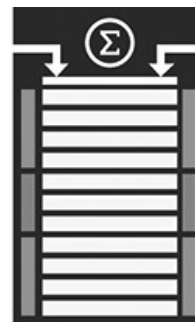


H117835—UN—22DEC16

*Shoe Loss Indicator*

**Shoe Loss Indicator**— indicates grain loss from the left shoe and right shoe. The bars on the left-hand side of the shoe loss indicator show the loss for the left shoe. The bars on the right-hand side of the shoe loss indicator show the loss for the right shoe.

**NOTE:** *Shoe Loss Indicator is part of the VisionTrak™ system.*

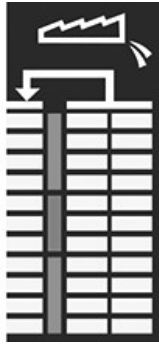


H117836—UN—22DEC16

*Total Loss Indicator*

**Total Loss Indicator**— indicates the combined grain loss from shoe and separator area.

**NOTE:** *Total Loss Indicator is part of the VisionTrak™ system.*

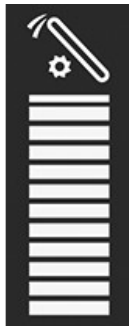


Separator Loss Indicator

H117837—UN—22DEC16

**Separator Loss Indicator**— indicates the grain loss from the left-hand side separator area and the right-hand side separator area. The bars on the left-hand side of the separator loss indicator are for the left-hand side separator area. The bars on the right-hand side of the separator loss indicator show the loss for the right-hand side separator area.

*NOTE: Separator Loss Indicator is part of the VisionTrak™ system.*



Tailings Volume Indicator

H117838—UN—22DEC16

**Tailings Volume Indicator**— indicates volume of tailings return.

*NOTE: Tailings Loss Indicator is part of the VisionTrak™ system.*

NOLMWLO,0000098-19-02DEC20

## CommandARM™ Console and Display

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*

**Harvesting Controls**— controls for the cleaning fan, threshing clearance, separator speed, and other harvesting functions.

**HVAC**— select to adjust temperature, fan speed, and air flow mode inside of cab and view outside temperature.

**Engine and Ground Drive**— controls for engine speed, park brake, and ground drive.

**Lights**— select to access light presets that you can configure.

**Console and Display**— select for adjustments to the console and display.

**Radio**— controls for seek, volume control, and mute.

**Phone**— controls for Push-To-Talk (PTT) and end call.

*CommandARM is a trademark of Deere & Company*

NOLMWLO,0000099-19-01NOV19

## Multi-Function Lever

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Movement

H126543—UN—20JUN19

**Movements**— multi-function lever can be pushed forward to move the machine forward, pulled backward to move the machine in reverse, and placed in the middle position to put the machine in a neutral state.



Quick Stop Switch

H117033—UN—15APR16

**Quick Stop Switch**— allows you to simultaneously shut OFF multiple systems in the case of an emergency. When the separator is engaged this button also brings the machine to a quick, controlled stop.



H117003—UN—22DEC16

Unloading Auger Switch

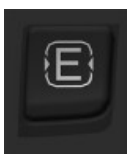
Unloading Auger Swing Switch— allows you to swing unloading auger in or out manually or automatically.



H123658—UN—02MAR18

Unloading Auger Drive Switch

Unloading Auger Drive Switch— allows you to engage or disengage the unloading auger and indicator light.



H117006—UN—28MAR16

Programmable Button

**Programmable Buttons**— depending on the machine options and header types, the buttons are programmable to different functions. (See Controls Setup Application in Onscreen Help for more information.)



H117005—UN—15APR16

AutoTrac

AutoTrac™ Resume Button— allows you to activate the AutoTrac™ system.



H116348—UN—19DEC16

Header Raise/Lower Switch

Header Raise/Lower and Tilt Switch— allows you to raise or lower header and tilt the feeder house.



H116349—UN—19DEC16

Reel Raise/Lower, Reel Fore/Aft

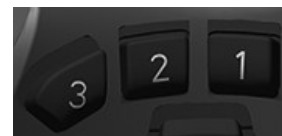
Reel Raise/Lower, Reel Fore/Aft (If Equipped) Switch— allows you to control the position of the reel.



H116349—UN—19DEC16

Feeder House Backshaft Speed, Adjustable Corn Head Deck Plates

Feeder House Backshaft Speed, Adjustable Corn Head Deck Plates Switch (If Equipped)— allows you to control feeder house backshaft speed or adjustable corn head deck plates.



H116346—UN—19DEC16

Header Activation Buttons

Header Activation Buttons— allows you to activate multiple automatic header control systems by pressing one of the three buttons.

N0LMWLO,000009A-19-02MAR20

## Navigation Bar



H129119—UN—02DEC20

Dial

**Adjustment Dial**— Turn the Adjustment Dial to increase or decrease selected input field. The button located in the center of the adjustment wheel is called the Close Button. Pressing this button closes pages on the CommandCenter™.



*Home Page Scroll*

H129120—UN—02DEC20

**Home Page Scroll**— press to scroll through custom Run Pages.



*Header*

H129121—UN—02DEC20

**Header**— press to open the Header Application.



*Harvest Settings*

H129122—UN—02DEC20

**Harvest Settings**— press to open the Harvest Settings Application.



H129123—UN—02DEC20

**Engine**— press to open the Engine Application.



*Grain Handling*

H129124—UN—02DEC20

**Grain Handling**— press to open the Grain Handling Application.



*Residue Management*

H129125—UN—02DEC20

**Residue Management**— press to open the Residue Management Application.



*Folding*

H129126—UN—02DEC20

**Folding**— press to open the Folding Application.



*Work Monitor*

H129127—UN—02DEC20

**Work Monitor**— press to open the Work Monitor Application.



*Control Setup*

H129128—UN—02DEC20

**Control Setup**— press to open the Control Setup Application.



*HVAC*

H129129—UN—02DEC20

**HVAC**— press to open the HVAC Application.



*Lights*

H132589—UN—02DEC20

**Lights**— press to open the Lights Application.



*Audio*

H132590—UN—02DEC20

**Audio**— press to open the Audio Application.



*Phone*

H132591—UN—02DEC20

**Phone**— press to open the Phone Application.



*Video*

H132592—UN—02DEC20

**Video**— press to open the Video Application.

N0LMWLO,000009B-19-02DEC20

## Right-Hand Cab Items



*Auxiliary Outlet*

N128645—UN—15FEB17

**Auxiliary Outlet**— used when connecting accessories (12 V).





USB Outlet

N122943—UN—02MAY16

**USB Outlet**— used for exporting information to a flash drive, loading information to the display, and display programming.



Auxiliary Display Connector

H121339—UN—18MAY17

**Auxiliary Display Connector**— used for connecting auxiliary equipment.



Auxiliary (AUX) Input

N122944—UN—05MAY16

**Auxiliary (AUX) Input**— used for playing music from an auxiliary source on the radio when that mode is selected on the radio.



Auxiliary Power Outlet Strip

H118079—UN—19JAN17

**Auxiliary Power Outlet Strip**— is equipped with six additional electrical outlets which are at the lower rear of the right-hand window. These outlets provide key-switched or unswitched power.

**NOTE:** Maximum combined current draw for switch power is 20 amps and unswitched power is 20 amps.

- Spade terminal (A) is direct positive power at all times.
- Spade terminal (B) is ground.
- Spade terminal (C) is auxiliary power (key switch ON).



USB Input

N122945—UN—05MAY16

**USB Input**— used for playing music from an USB source on the radio when that mode is selected on the radio.



2630 Ethernet Input

H121337—UN—18MAY17

**2630 Ethernet**— used to connect a 2630 display as a secondary monitor.



4600 Extended Monitor Port

H121338—UN—18MAY17

**4600 Extended Monitor Port**— used to connect a 4600 extended monitor for a secondary display.



Emergency Exit

H127294—UN—26SEP19

**Emergency Exit**— allows you to exit the combine in case of emergency.

- Pull down to remove the emergency exit device.

- Use the hammer to break the window and exit cab if doors do not open.
- Use the knife in the handle to cut seat belts if they do not unbuckle.



H127304—UN—26SEP19

Manual Storage Location

**Manual Storage Location**— compartment located behind the operator's seat that stores the Operator's Manual.



H127293—UN—26SEP19

Brake Pedals

**Brake Pedals**— allows you to stop the machine.

Leave the brake pedals unlocked for field use and locked together when transporting.

N0LMWLO,000009C-19-02DEC20

## Left-Hand Cab Items



H127382—UN—26SEP19

Refrigerator

**Refrigerator (If Equipped)**— provides a space to keep food or beverages cool throughout the day.

*NOTE: Refrigerator operates only when the key switch is in the Run position and MUST remain plugged into the auxiliary outlet to keep food or beverages cold.*

Raise the seat bottom to open the refrigerator top cover.

Refrigerator front cover can also be opened without raising the seat bottom.



H127383—UN—26SEP19

Refrigerator Controls

**Refrigerator Controls**— press the power button to turn the refrigerator on or off. Press the temperature control button to adjust temperature. The largest light indicates the coldest setting.

*NOTE: If there is a problem, the power light will flash a pattern for troubleshooting. (For pattern information, see Troubleshooting in the Operator's Manual.)*

N0LMWLO,000009D-19-02DEC19

## Overhead Controls



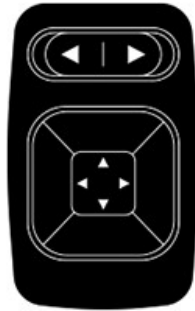
H118065—UN—22DEC16

Mirror Heater Button

**Mirror Heater Button**— activates mirror heaters to remove ice and fog.

- Press top of the switch to activate mirror heat.
- Press bottom of the switch to deactivate mirror heat.

*NOTE: Key switch must be in the Run position.*



H118066—UN—15APR16

Mirror Control Buttons

**Mirror Control Buttons**— allow you to select and adjust either the right-hand or left-hand external cab mirrors.

*NOTE: The upper mirrors are fixed and cannot be adjusted. Only the lower mirrors are adjustable.*

- Select mirror to adjust using the top button.
- Selected mirror can be moved up or down or left or right using the bottom button. Move the button in the direction you desire the mirror to move.

*NOTE: Key switch must be in the Run position.*

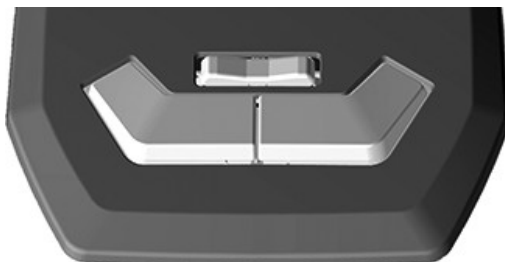


H127126—UN—26SEP19

Microphone

**Microphone (Optional)**— allows you to communicate hands-free using a Bluetooth® cell phone. (Bluetooth® must be enabled.)

*NOTE: Key switch must be in the Run position.*



N148304—UN—06JAN20

Dome Light

**Dome Light**— allows you to illuminate the interior of the cab.

- **Switch**— leave the switch in the center position

*Bluetooth is a trademark of Bluetooth SIG*

(door) to set the dome light to illuminate when the door is opened. Press the switch toward the left (off) to set the dome light to remain off at all times. Press the switch to the right (on) to set the dome light to remain illuminated until switched off.

- **Buttons**— press the left-hand or right-hand light to toggle that light on or off.



E93030—UN—13FEB20

Front Sun Shade

**Front Sun Shade**— blocks sunlight from interfering with your vision. Pull the sun shade downward into the desired position. Push the sun shade upward completely to place the sun shade into the storage position.

NOLMWLO,000009E-19-13FEB20

## Seat Controls

ComfortCommand™ Operator's Seat (Basic Seat)

ComfortCommand™ Operator's Seat (Premium Cloth Seat)

ComfortCommand™ Operator's Seat (Ultimate Leather Seat)

Seat Belts

Instructional Seat

*ComfortCommand is a trademark of Deere & Company*

NOLMWLO,000009F-19-01NOV19

## Key Switch

**CAUTION:** Sound horn before starting the engine to clear people away from the machine.

To avoid the possibility of personal injury or death, start **ONLY** from the operator seat. Do **NOT** start the engine by shorting across starter terminals. Machine starts in gear if normal circuit is bypassed.



Key Switch

H127222—UN—26SEP19

Key switch is on the right-hand side of the steering column and has three positions:



Stop

H127127—UN—26SEP19

**Stop**— shut OFF the engine and all accessory functions.



Run

H127128—UN—26SEP19

**Run**— allows all accessories to operate and the engine to run once it has been started.



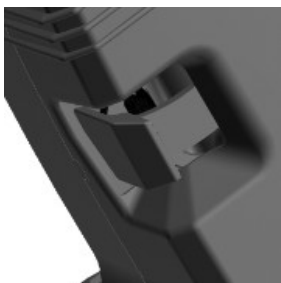
Start

H127129—UN—26SEP19

**Start**— momentary switch position that automatically cranks the engine until the engine starts. Once the switch is released, it returns to the run position.

NOLMWLO,00000A0-19-17JAN20

## Adjusting Steering Wheel



Tilt/Telescope

H127043—UN—26SEP19

**Tilt/Telescope**— pull lever away from the steering column to allow adjustments. Move the steering column to the desired position. Push lever toward the steering column to lock the position.



Memory

H127042—UN—26SEP19

**Memory**— push down on the foot pedal on the floor of the cab to permit steering column to move up and out of your way for easy entry or exit. Push down on the foot pedal and pull down on steering wheel to return steering column to previous setting.

NOLMWLO,00000A1-19-02DEC19

## Operate Turn Signals, Horn and High and Low Beam

**CAUTION:** Accidental collision with another vehicle can cause serious injury or death to you or others. Always comply with traffic regulations when driving machine on a road. Dim headlights to low-beam for oncoming vehicles.

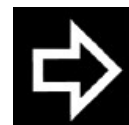
**NOTE:** For information on additional lighting controls found on the CommandArm™, see the [Lights](#) page. For information on the lights application, see the [Lights Application](#) page.



Turn Signals

H127048—UN—26SEP19

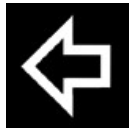
**Turn Signals**— push or pull lever to first notch for a momentary signal which turns off automatically. Holding the lever in either position will activate the momentary signal until released. Push or pull lever to the second notch for a continuous signal. The continuous signal remains on until you move the lever to any other notch.



Right-Hand Turn

H127087—UN—26SEP19

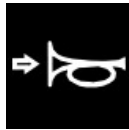
**Right-Hand Turn**— push lever up for a right-hand turn.



Left-Hand Turn

H127086—UN—26SEP19

**Left-Hand Turn**— pull down for a left-hand turn.



Horn

H127049—UN—26SEP19

**Horn**— push inward on the end of the lever to activate the horn.



Headlights

H127088—UN—26SEP19

**Headlights**— with Road Lights mode selected on the CommandARM™, push lever forward to toggle between the high-beam and low-beam headlights. Pull lever toward you and release to momentarily flash the high-beam headlights.

*NOTE: With the lights off, push or pull the lever to momentarily activate the high-beam headlights.*

N0LMWLO,00000A2-19-02DEC20

## Operate Windshield Wiper and Washer



Switch

H127089—UN—26SEP19

*NOTE: Fill washer reservoir with non-freezing solution to prevent damage to washer system in cold temperatures.*

**Switch**— rotate knob to operate the wiper at desired speed. Arrow indicates current setting.



Wiper ON

H127093—UN—26SEP19

**Wiper ON**— select to operate the windshield wiper continuously.



Intermittent

H127299—UN—26SEP19

**Intermittent**— turn the knob to operate the wiper intermittently.



OFF

H127091—UN—26SEP19

**OFF**— select to turn off the wiper.



Windshield Washer

H127092—UN—26SEP19

**Windshield Washer**— press and hold button to operate the windshield washer.

*NOTE: Some items below are only displayed if machine is equipped with the associated option.*



Switch

H127301—UN—26SEP19

**Switch**— move lever to operate side wiper at desired speed.



*Intermittent*

H127302—UN—26SEP19

**Intermittent**— select to operate the wiper intermittently.



*OFF*

H127091—UN—26SEP19

**OFF**— select to turn off the wiper.



*Windshield Washer*

H127303—UN—26SEP19

**Windshield Washer**— press and hold lever to operate the windshield washer.

NOLMWLO,00000A3-19-02MAR20

## ComfortCommand™ Operators Seat (Basic Seat)



*Fore/Aft Adjustment Handle*

H127296—UN—26SEP19

**Fore/Aft Adjustment Handle**— pull up on the handle to slide seat forward or rearward for the best working position.



*Lateral Isolation Adjustment Handle*

H127096—UN—26SEP19

**Lateral Isolation Adjustment Handle**— push the handle forward to release side-to-side movement. Pull the handle rearward to lock.



*Vertical Shock Dampener Control*

H127097—UN—26SEP19

**Vertical Shock Dampener Control**— limits amount of upward motion the seat suspension provides. Push control forward for a soft ride or pull handle rearward for a firm ride. Between these two positions is medium firmness.



*Fore/Aft Isolation Adjustment Handle*

H127098—UN—26SEP19

**Fore/Aft Isolation Adjustment Handle**— pull up on the handle to lock forward or rearward movements. Push down on the handle to release.



*Lumbar Adjustment Handle*

H127099—UN—26SEP19

**Lumbar Adjustment Handle**— rotate handle forward to increase lumbar support.



*Seat Swivel Handle*

H127125—UN—26SEP19

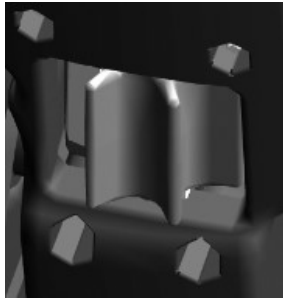
**Seat Swivel Handle**— lift the handle to allow the seat to swivel. Push down on the handle to lock seat in position.



H127121—UN—26SEP19

*Backrest Angle Adjustment Handle*

**Backrest Angle Adjustment Handle**— adjusts the seat back angle. Pull up on handle and adjust backrest to desired position and release handle.



H127122—UN—26SEP19

*Armrest Angle Adjustment Knob*

**Armrest Angle Adjustment Knob**— adjusts the armrest angle up or down. Rotate knob clockwise to decrease angle and counterclockwise to increase angle.



H127124—UN—26SEP19

*Weight/Height Adjustment Switch*

**Weight/Height Adjustment Switch**— press and hold to increase or decrease seat height.



H127295—UN—26SEP19

*Armrest Height Adjustment*

**Armrest Height Adjustment**— loosen the nut to adjust

the left-hand armrest. Tighten the nut to lock the height into the desired position.

NOLMWLO,00000A4-19-26NOV19

## ComfortCommand™ Operators Seat (Premium Cloth Seat)



H127307—UN—26SEP19

*Seat Bottom Depth/Angle Adjustment Control*

**Seat Bottom Depth/Angle Adjustment**— push the control forward or backward to slide seat forward or rearward for the best working position. Push the front of the control upward or downward to raise or lower the angle of the seat bottom.



H127306—UN—26SEP19

*Backrest Angle Adjustment Control*

**Backrest Angle Adjustment Control**— adjusts the seat back angle. Press the top of the control forward to raise the angle of the seat back. Press the top of the control backward to lower the angle of the seat back.



H127305—UN—26SEP19

*Lumbar Adjustment Controls*

**Lumbar Adjustment Controls**— press forward or back to increase or decrease lumbar support. Press up or down to raise or lower lumbar position.



H127125—UN—26SEP19

*Seat Swivel Handle*

**Seat Swivel Handle**— lift the handle to allow the seat to swivel. Push down on the handle to lock seat in position.



H127124—UN—26SEP19

*Weight/Height Adjustment Switch*

**Weight/Height Adjustment Switch**— press and hold the top or bottom of the switch to increase or decrease seat height.



H127378—UN—26SEP19

*Back Bolster Adjustment Control*

**Back Bolster Adjustment Control**— push plus (+) or minus (-) on the control to adjust the amount of support from the backrest bolsters.



H127379—UN—26SEP19

*Cushion Length Adjustment Control*

**Cushion Length Adjustment Control**— push the top or bottom of the control to increase or decrease the seat cushion length.



H127295—UN—26SEP19

*Armrest Height Adjustment*

**Armrest Height Adjustment**— loosen the nut to adjust the left-hand armrest. Tighten the nut to lock the height into the desired position.



H117047—UN—28MAR16

*Armrest Control Console*

**Armrest Control Console**— loosen knob and slide the armrest control console up/forward or down/back in slots on outer plate. Tighten knob.

#### Passive Suspension Items:



H127096—UN—26SEP19

*Lateral Isolation Adjustment Handle*

**Lateral Isolation Adjustment Handle**— push the handle forward to release side-to-side movement. Pull the handle rearward to lock.



H127097—UN—26SEP19

*Vertical Shock Dampener Control*

**Vertical Shock Dampener Control**— limits amount of upward motion the seat suspension provides. Push control forward for a soft ride or pull handle rearward for a firm ride. Between these two positions is medium firmness.





H127098—UN—26SEP19

*Fore/Aft Isolation Adjustment Handle*

**Fore/Aft Isolation Adjustment Handle**— push control forward to lock forward or rearward movements. Push control rearward to allow forward or rearward movements.

**Active Suspension Items:**



H127308—UN—26SEP19

*Vertical Shock Dampener Control*

**Vertical Shock Dampener Control**— limits amount of upward motion the seat suspension provides. Press the plus (+) switch for a softer ride or push the minus (-) switch for a firmer ride.



H132408—UN—01DEC20

*Lateral Attenuation Lever*

**Lateral Attenuation Lever**—rotate the lever forward to lock out side-to-side movement of the seat. Rotate the lever rearward to allow side-to-side movement of the seat.

N0LMWLO,00000A5-19-19NOV20

## ComfortCommand™ Operators Seat (Ultimate Leather Seat)



H127307—UN—26SEP19

*Seat Bottom Depth/Angle Adjustment Control*

**Seat Bottom Depth/Angle Adjustment**— push the control forward or backward to slide seat forward or rearward for the best working position. Push the front of the control upward or downward to raise or lower the angle of the seat bottom.



H127306—UN—26SEP19

*Backrest Angle Adjustment Control*

**Backrest Angle Adjustment Control**— adjusts the seat back angle. Press the top of the control forward to raise the angle of the seat back. Press the top of the control backward to lower the angle of the seat back.



H127305—UN—26SEP19

*Lumbar Adjustment Controls*

**Lumbar Adjustment Controls**— press forward or back to increase or decrease lumbar support. Press up or down to raise or lower lumbar position.



H127125—UN—26SEP19

*Seat Swivel Handle*

**Seat Swivel Handle**— lift the handle to allow the seat to swivel. Push down on the handle to lock seat in position.



H127124—UN—26SEP19

*Weight/Height Adjustment Switch*

**Weight/Height Adjustment Switch**— press and hold the top or bottom of the switch to increase or decrease seat height.



H127376—UN—26SEP19

*Ventilated/Heated Seat Control*

**Ventilated/Heated Seat Control**— push the control left or right to select ventilated or heated seat.



H127377—UN—26SEP19

*Ventilated/Heated Intensity Control*

**Ventilated/Heated Intensity Control**— select off, low, or high intensity.



H127378—UN—26SEP19

*Back Bolster Adjustment Control*

**Back Bolster Adjustment Control**— push plus (+) or minus (-) on the control to adjust the amount of support from the backrest bolsters.



H127379—UN—26SEP19

*Cushion Length Adjustment Control*

**Cushion Length Adjustment Control**— push the top or bottom of the control to increase or decrease the seat cushion length.



H127380—UN—26SEP19

*Massage Pattern Control*

**Massage Pattern Control**— push the bottom or top of the control to choose between massage pattern one or two. Return the control to the center position to end the massage pattern. The massage pattern will end after about ten minutes.



H127381—UN—26SEP19

*Massage Intensity Control*

**Massage Intensity Control**— push the bottom or top of the control to choose between low or high massage intensity. Choose a massage pattern before choosing a massage intensity.



H127295—UN—26SEP19

*Armrest Height Adjustment*

**Armrest Height Adjustment**— loosen the nut to adjust the left-hand armrest. Tighten the nut to lock the height into the desired position.



H117047—UN—28MAR16

*Armrest Control Console*

**Armrest Control Console**— loosen knob and slide the armrest control console up/forward or down/back in slots on outer plate. Tighten knob.

**Passive Suspension Items:**



H127096—UN—26SEP19

*Lateral Isolation Adjustment Handle*

**Lateral Isolation Adjustment Handle**— push the handle forward to release side-to-side movement. Pull the handle rearward to lock.



H127097—UN—26SEP19

*Vertical Shock Dampener Control*

**Vertical Shock Dampener Control**— limits amount of upward motion the seat suspension provides. Push control forward for a soft ride or pull handle rearward for a firm ride. Between these two positions is medium firmness.



H127098—UN—26SEP19

*Fore/Aft Isolation Adjustment Handle*

**Fore/Aft Isolation Adjustment Handle**— push control forward to lock forward or rearward movements. Push control rearward to allow forward or rearward movements.

**Active Suspension Items:**



H127308—UN—26SEP19

*Vertical Shock Dampener Control*

**Vertical Shock Dampener Control**— limits amount of upward motion the seat suspension provides. Press the plus (+) switch for a softer ride or push the minus (-) switch for a firmer ride.



H132408—UN—01DEC20

*Lateral Attenuation Lever*

**Lateral Attenuation Lever** rotate the lever forward to lock out side-to-side movement of the seat. Rotate the lever rearward to allow side-to-side movement of the seat.

N0LMWLO,00000A6-19-19NOV20

## Seat Belts



*Seat Belt*

H118075—UN—15APR16

Seat belts are standard equipment on both operator and instructional seats. Lap type seat belts have a push-button quick release and automatic belt retraction to allow unrestricted exiting and entering.

**CAUTION:** Inspect seat belts and mounting hardware on your machine at least once a year. If the seat belt system, including mounting hardware, buckle, belt, or retractor, shows any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. For your safety, replace the belt system only with replacement parts approved for your machine. See your John Deere dealer for replacement parts.

SS43267,0000823-19-02DEC19

## Instructional Seat



*Instructional Seat*

H126670—UN—26SEP19

Seat back and seat bottom can be raised or lowered to desired operating position.

**CAUTION:** The instructional seat has been provided only for training operators or diagnosing machine problems. Keep all other riders off the machine and equipment. Always wear seat belts.

N0LMWLO,00000A7-19-01NOV19

## Harvesting Controls



*Lock*

H117027—UN—28MAR16

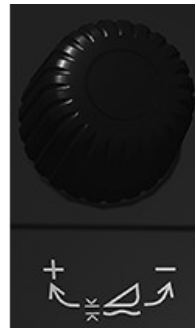
**Programmable Shortcut Lock**— sets shortcut switch to avoid accidental change. Indicator illuminates when selected.



*Reel/Belt Speed Dial*

H116352—UN—20DEC16

Reel/Belt Speed Dial— turn the dial clockwise to increase reel or belt pickup speed and setpoint or counterclockwise to decrease reel or belt pickup speed and setpoint.



*Header Height/HydraFlex*

H116347—UN—20DEC16

**Header Height/HydraFlex™ Pressure Control Dial**— select position of the header relative to the ground and return to that position automatically. Turn dial clockwise to raise header and setpoint (if equipped with HydraFlex™ increase pressure). Turn dial counterclockwise to lower header and setpoint (if equipped with HydraFlex™ decrease pressure).



H127356—UN—26SEP19

Feeder House Reverser

Feeder House Reverser— shifts the feeder house into reverse mode.



H127356—UN—26SEP19

Belt Pickup Cleanout

Belt Pickup Cleanout— delays re-engagement of the header belt drive system.



H127356—UN—26SEP19

Header Engage

Header Engage— turns on or off header functions.



H127357—UN—26SEP19

Separator Engage

Separator Engage— turns on or off separator functions.



H117017—UN—28MAR16

Discharge Swap Button

**Discharge Swap**— allows you to quickly adjust the residue spread in the opposite direction to compensate for wind interference when turning on headlands.

*NOTE: Swap is only available when the Direction adjustment is not in the center position. If the machine is equipped with Auto Swap, it is recommended to enable Auto Swap in windy conditions. See the Residue Management application for further information and settings.*



H115034—UN—28MAR16

Armrest Adjustment Dial

**Armrest Adjustment Dial**— is used to increase or decrease adjustments.

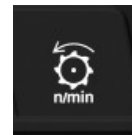
- Rotate dial clockwise to increase setting.
- Rotate dial counterclockwise to decrease setting.



H117012—UN—28MAR16

Threshing Clearance Adjust

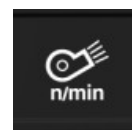
Threshing Clearance Adjust— press to activate Armrest Adjustment Dial to select desired clearance.



H117013—UN—28MAR16

Threshing Speed Adjust

Threshing Speed Adjust— press to activate Armrest Adjustment Dial to select desired speed.



H117011—UN—29MAR16

Cleaning Fan Speed Adjust

Cleaning Fan Speed Adjust— press to activate Armrest Adjustment Dial to select desired speed.



Chaffer Adjust

H117014—UN—28MAR16

Chaffer Adjust— press to activate Armrest Adjustment Dial to select desired clearance.



Sieve Adjust

H117015—UN—28MAR16

Sieve Adjust— press to activate Armrest Adjustment Dial to select desired clearance.



Programmable Buttons

H118063—UN—15APR16

**Programmable Buttons**— depending on the machine options and header type, the buttons are programmable to different functions. (See Controls Setup Application in Onscreen Help for more information.)

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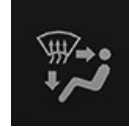
## HVAC



Fan Speed

N120890—UN—05MAY16

**Fan Speed**— press to change the in cab fan speed.



Air Flow Direction

H127977—UN—04NOV19

**Air Flow Control**— press to select desired air flow direction.



Temperature Control

N121549—UN—12MAY16

**Temperature Control**— press to change the temperature of cab.

N0LMWLO,00000AC-19-04NOV19

## Radio



Seek

N123514—UN—22SEP16

Seek— press to seek radio channel.



Volume Control

N124430—UN—22SEP16

**Volume Control**— press to change the audio volume.



H127976—UN—04NOV19

**Mute**— press to mute the microphone.

- Press to mute audio.

- Press to resume play of audio.

NOLMWLO,00000A9-19-04NOV19

## Phone



H129206—UN—27FEB20

Voice Recognition (VR) and Call Answer

Voice Recognition (VR) and Call Answer— allows you to answer incoming calls and perform various functions depending on the radio state and the length of the button press.

**NOTE:** Voice recognition (VR) only functions on machines equipped with the John Deere touchscreen radio. The call answer function works with all John Deere radios that support Bluetooth®.



H129207—UN—27FEB20

Call End

**Call End**— press to end a call in progress or an active voice recognition (VR) session.

NOLMWLO,00000AD-19-28FEB20

## Voice Recognition (VR) and Call Answer



H129206—UN—27FEB20

Voice Recognition (VR) and Call Answer

Voice Recognition (VR) and Call Answer button allows you to answer incoming calls and perform various functions depending on the radio state and the length of the button press.

**NOTE:** Voice recognition (VR) only functions on machines equipped with the John Deere touchscreen radio. The call answer function works with all John Deere radios that support Bluetooth®.

*Native means voice recognition (VR) is running through radio.*

Bluetooth is a trademark of Bluetooth SIG

Current State of Radio	Apple ® CarPlay ® Not Running	
	Short Press	Long Press
Idle	Start Native VR Session	
Idle (Phone Connected Through Bluetooth ®)	Start Native VR Session	Start Device VR (Siri® or Other Phone Voice Assistant)
Incoming Phone Call	Accept Phone Call	—
Active Phone Call	Start Native VR Session	
Listening for Command	—	Aborts Native VR Session
Processing Command		
Playing Voice Prompt	Interrupts Voice Prompt	

Siri is a trademark of Apple Inc.

Current State of Radio	Apple ® CarPlay ® Running	
	Short Press	Long Press
Idle	Talk to Siri®	
Incoming Phone Call	Accept Phone Call	
Active Phone Call	—	
Active VR Session	Ends VR Session	

Siri is a trademark of Apple Inc.

NOLMWLO,00000AE-19-28FEB20

## Engine and Ground Drive



ProDrive™ XL

H117917—UN—22DEC16

**ProDrive™ XL (If Equipped)**— press the desired button (1 or 2) to select the desired ground speed range. You can set the maximum speed of each range through the Transmission application. Indicator illuminates when selected.

*ProDrive is a trademark of Deere & Company*



H127515—UN—30SEP19

*Engine Speed (Slow Speed)*

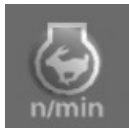
**Engine Speed (Slow Speed)**— press for slow engine speed. Indicator illuminates when selected.



H127516—UN—30SEP19

*Engine Speed (Medium Speed)*

**Engine Speed (Medium Speed)**— press for medium engine speed. Indicator illuminates when selected.



H127517—UN—30SEP19

*Engine Speed (Fast Speed)*

**Engine Speed (Fast Speed)**— press for fast engine speed. Indicator illuminates when selected.

**NOTE:** Machine will not enter road mode if separator is engaged. Warning alarm message appears indicating separator is engaged. Shut OFF separator to engage the road transport disconnect switch.



H127518—UN—30SEP19

*Road Transport Disconnect*

**Road Transport Disconnect**— press prior to transporting the machine on roadway. Indicator illuminates when selected.



H129182—UN—27FEB20

*Four-Wheel Drive High Speed*

**Four-Wheel Drive High Speed (If Equipped)**— press to control the speed of the four-wheel drive system.



H129181—UN—27FEB20

*Four-Wheel Drive Slow Speed*

**Four-Wheel Drive Slow Speed (If Equipped)**— press to control the speed of the four-wheel drive system.



H127520—UN—30SEP19

*Differential Lock*

**Differential Lock (If Equipped)**— press to manually engage/disengage the differential lock to resolve traction problems in the field.



H127519—UN—30SEP19

*Park Brake*

**Park Brake**— press to select park brake state. In manual mode (icon illuminated), the park brake will remain engaged and the machine will not move. In automatic mode (icon not illuminated), the park brake will automatically release/engage when you move the multi-function lever in/out of neutral.

N0LMWLO,00000AA-19-02MAR20

## Lights



H127978—UN—04NOV19

**Beacon Lights**— press to turn on beacon lights, press again to turn off. Indicator light is on when active.



H127979—UN—04NOV19

*Hazard Light*

**Hazard Light**— press to turn on hazard lights, press again to turn off. Indicator light is on when active.





Parking Lights

H127045—UN—26SEP19

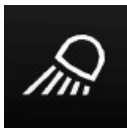
**Parking Lights**— press to turn on parking lights, press again to turn off. Indicator light is on when active.



Road Lights

H127046—UN—26SEP19

**Road Lights**— press button to turn road lights on. Press button again to turn off. Indicator light is on when active.



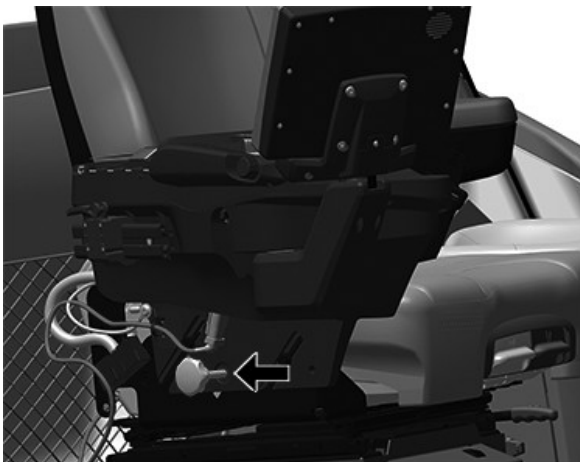
Worklights

H127047—UN—26SEP19

**Worklights**— press to turn on worklights, press again to turn off. Indicator light is on when active.

N0LMWLO,00000AB-19-30NOV20

## Console and Display



Armrest Control Console

H118078—UN—19JAN17

**Armrest Control Console**— loosen knob and slide the armrest control console up/forward or down/back in slots on outer plate. Tighten knob to lock the armrest into position.



USB Charging

N128644—UN—15FEB17

**USB Charging**— allows you to charge mobile devices. These ports are located inside the console storage compartment. They are not connected to the radio or the display.



Auxiliary Outlet

N128645—UN—15FEB17

**Auxiliary Outlet**— used for powering devices (12 V). Located inside the console storage compartment.



Arm

H117794—UN—19JAN17

**Arm**— rotate arm left/right to the desired operating position.

**NOTE:** This function is only available on machines not equipped with seat swivel configurations.



Display

H117795—UN—15APR16

**Display**— rotate display left/right to the desired operating position.

N0LMWLO,00000AF-19-04NOV19

## Feeder House Reverser



Feeder House Reverser

H127356—UN—26SEP19

Used to hydraulically shift the feeder house gearcase into reverse mode to clear a plugged feeder house or header.

**NOTE:** If operating at a high engine speed, turn feeder house reverser switch OFF and throttle engine to low idle.

### Procedure to Modify:



Switch Depressed

H127348—UN—26SEP19

1.Push down and hold the switch.



Switch Engaged

H127352—UN—26SEP19

2.Pull back to lock the switch.



Switch Off

H127346—UN—26SEP19

3.Push the switch forward once the feeder house is cleared.

N0LMWLO,00000B0-19-02DEC19

## Belt Pickup Cleanout



Belt Pickup

H127356—UN—26SEP19

Delays re-engagement of the header belt drive system, which allows an ejected slug to be reingested into the feeder house in smaller segments.

**NOTE:** In order for cleanout operation to begin, the process of engaging, reversing, and engaging again must occur within 30 seconds.

### Procedure to Modify:



H127351—UN—26SEP19

*Header Engaged*

1. Push down and forward to engage the header.



H127352—UN—26SEP19

*Reverser Engaged*

2. Pull back to engage the feeder house reverser.



H127351—UN—26SEP19

*Header Engaged*

3. Push the switch forward again to engage the header.

N0LMWLO,00000B1-19-04NOV19

### Header Engage



H127356—UN—26SEP19

*Header Engage*

Engages header functions.

**NOTE:** If you leave the seat after engagement, header continues to operate for five seconds before disengaging.

### System Requirements:

- Separator Engage must be ON.
- Road Transport Disconnect must be in field position.
- You must be seated for the header to operate.

### Procedure to Modify:



H127348—UN—26SEP19

*Switch Depressed*

1. Push down and hold the switch.



H127351—UN—26SEP19

*Switch Engaged*

2. Push forward to lock the switch.



H127346—UN—26SEP19

*Switch Off*

3. Pull back on the switch to turn off header functions.

N0LMWLO,00000B2-19-04NOV19

## Separator Engage



Separator Engage

H127357—UN—26SEP19

Engages separator functions.

**NOTE:** Separator disengages when discharge beater speed drops below 300 rpm.

If you leave the operator seat after engagement, separator rotational alarm sounds and outside lights will flash to alert operator of leaving seat while separator is still rotating. Lights and alarm sounds continue until the separator has come to a complete stop.

### System Requirements:

- Engine must be running at the low idle.
- Road Transport Disconnect must be in field position.
- You must be seated for the separator to operate.

### Procedure to Modify:



Switch Depressed

H127347—UN—26SEP19

1. Push down and hold the switch.



Switch Engaged

H127350—UN—26SEP19

2. Push forward to lock the switch.



Switch Off

H127346—UN—26SEP19

3. Pull back on the switch to turn off separator functions.

N0LMWLO,00000B3-19-04NOV19

## Threshing Clearance Adjust

Threshing Clearance Adjust allows you to increase or decrease the distance between threshing elements and concave for varying crops and conditions.

**NOTE:** For the threshing clearance settings, refer to Crop Settings section in your Operator's Manual.

### Modify When:

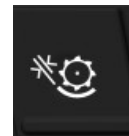
#### Increase Threshing Clearance To:

- Improve straw quality; make longer straw and generate less breakage of material.
- Improve grain quality; reduce splits and grain damage.
- Reduce power consumption; for easy threshing grain.
- Improve sample cleanliness; reduce chaff load on the cleaning shoe.

#### Decrease Threshing Clearance To:

- Reduce unthreshed separator loss; unhulled grain or grain on the cob behind the machine.
- Improve grain tank sample; reduce kernels with husks or unopened pods.

### Procedure to Modify:



Threshing Clearance Adjust

H117012—UN—28MAR16

1. Press button on the Armrest to activate the Armrest Adjustment Dial.



H115034—UN—28MAR16

Armrest Adjustment Dial

2. Use the Armrest Adjustment Dial to select the desired threshing clearance.
  - Turn dial clockwise to increase value.
  - Turn dial counterclockwise to decrease value.

**NOTE:** Depending on machine configurations, some values may not be reached.

**NOTE:** Maximum value may not be attainable if dense pack elements are installed.

Minimum: 0

Maximum: 40

Increment: 1

N0LMWLO,00000B4-19-25NOV19

## Threshing Speed Adjust

Threshing Speed Adjust allows you to modify the threshing speed for varying crop conditions.

**NOTE:** For the threshing speed settings, refer to Crop Settings section in your Operator's Manual.

### Modify When:

#### Increase Threshing Speed To:

- Improve separation.
- Improve material handling.
- Reduce amount of unthreshed grains.
- Reduce risk of blockage.
- Reduce separator losses due to insufficient centrifugal force.

#### Decrease Threshing Speed To:

- Improve straw quality.
- Reduce chaff load on cleaning shoe.
- Reduce broken kernels.
- Reduce separator losses due to high chaff load.

### Procedure to Modify:

1. Engage the separator and run engine at high idle.



H117013—UN—28MAR16

Threshing Speed

2. Press the button on the Armrest to activate the Armrest Adjustment Dial.



H115034—UN—28MAR16

Armrest Adjustment Dial

3. Use the Armrest Adjustment Dial to select the desired speed.
  - Turn the dial clockwise to increase the value.
  - Turn the dial counterclockwise to decrease the value.

The rotor has three speed ranges which can be set on the rotor transmission:

- 1st range: 300—520 rpm
- 2nd range: 420—800 rpm
- 3rd range: 720—1300 rpm

**NOTE:** Depending on machine configurations, some values may not be reached.

Minimum: 300 rpm

Maximum: 1300 rpm

Increment: 10 rpm

N0LMWLO,00000B5-19-19NOV20

## Cleaning Fan Speed Adjust

Cleaning Fan Speed Adjust allows you to modify the fan speed to improve grain cleanliness and reduce grain loss.

Fan speed motor has a thermal (heat) shut off that stops the motor from working if any of the following happen:

- Switch is used continuously for more than two or three minutes.
- Adjustment system is against stop while the motor is still trying to change speed.
- Excessive binding or dragging in linkage.

If any of the above causes are suspected, clean and adjust as necessary.

**NOTE:** Allow motor to cool 10 to 15 minutes before trying the switch again.

### Modify When:

#### Increase Fan Speed To:

- Improve sample quality. Reduce the amount of chaff or light material in the grain tank.
- Reduce losses if the crop mat is not being aerated enough.

#### Decrease Fan Speed To:

- Reduce cleaning shoe loss. Smaller, lighter grains can be carried out of the cleaning shoe.
- Reduce a high amount of free grain in the tailings system.

**NOTE:** For the fan speed settings, refer to Crop Settings section in your Operator's Manual.

### Procedure to Modify:

1. Engage the separator and run engine at high idle.



H117011—UN—29MAR16

Cleaning Fan Speed Adjust

2. Press button on the armrest to activate the Armrest Adjustment Dial.



H115034—UN—28MAR16

Armrest Adjustment Dial

3. Use the Armrest Adjustment Dial to select the desired speed.
  - Turn the dial clockwise to increase the value.
  - Turn the dial counterclockwise to decrease the value.

**NOTE:** Minimum and maximum values may change if machine is equipped with a cleaning fan slow down kit.

Minimum: 570 rpm

Maximum: 1430 rpm

Increment: 10 rpm

NOLMWLO,00000B6-19-30NOV20

## Chaffer Adjust

Chaffer Adjust allows you to modify the opening of the chaffer elements to improve the grain cleanliness and reduce the cleaning shoe loss for varying crops and conditions.

**NOTE:** For the chaffer clearance settings, refer to Crop Settings section in your Operator's Manual.

### Modify When:

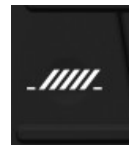
#### Increase Chaffer Clearance To:

- Reduce cleaning shoe loss; allows the grain to fall through sooner before it can escape the cleaning shoe.
- Allow the grain to fall through sooner before it is forced into the tailings.

#### Decrease Chaffer Clearance To:

- Improve sample quality; reduce the amount of larger, foreign material in the grain tank.
- Reduce high tailings volume when it does not contain free grain.

### Procedure to Modify:



H117014—UN—28MAR16

Chaffer Adjust

1. Press button on the armrest to activate Armrest Adjustment Dial.



H115034—UN—28MAR16

Armrest Adjustment Dial

2. Use the Armrest Adjustment Dial to select the desired clearance.
  - Turn the dial clockwise to increase the value.
  - Turn the dial counterclockwise to decrease the value.

**NOTE:** Depending on machine configurations, some values may not be reached.

### General Purpose:

Minimum: 0

Maximum: 22

Increment: 1

### Deep Tooth:

Minimum: 0

Maximum: 30

Increment: 1

N0LMWLO,00000B7-19-30NOV20

## Sieve Adjust

Sieve Adjust allows you to modify the opening of the sieve to improve grain cleanliness and manage tailings volumes for varying crops and conditions.

*NOTE: For the sieve clearance settings, refer to Crop Settings section in your Operator's Manual.*

### Modify When:

#### Increase Sieve Clearance To:

- Reduce tailings; allows more grain to fall through to clean grain sooner before it is recirculated in tailings.
- Increase cleaning fan air flow; increasing sieve clearance allows more cleaning fan air up through the chaffer.

#### Decrease Sieve Clearance To:

- Increase tailings; for any hard threshing grain, force any unthreshed material back through the separator.
- Improve sample quality; reduce the amount of foreign material in the grain tank.

### Procedure to Modify:



Chaffer Adjust

H117015—UN—28MAR16

1. Press button on the armrest to activate Armrest Adjustment Dial.



Armrest Adjustment Dial

H115034—UN—28MAR16

2. Use the Armrest Adjustment Dial to select the desired clearance.
  - Turn the dial clockwise to increase the value.

- Turn the dial counterclockwise to decrease the value.

*NOTE: Depending on machine configurations, some values may not be reached.*

### General Purpose:

Minimum: 0

Maximum: 22

Increment: 1

### Deep Tooth:

Minimum: 0

Maximum: 30

Increment: 1

N0LMWLO,00000B8-19-04NOV19

## Seek



Seek

N123514—UN—22SEP16

Press to seek radio channel.

- AM/FM/WX/MW/LW: Press the switch (short press) to change preset.
- AM/FM/WX/MW/LW: Press the switch (long press) to SEEK.
- SiriusXM™ Satellite Radio: Press and hold the switch to change channel.
- MP3: Press the switch to go to the beginning of the current track, to the previous track or to the next track.

SS43267,0000834-19-02MAR18

## Push Button Shift Gear (If Equipped)



Push-Button Shift Gear

H117023—UN—22DEC16

Press desired button (1, 2, or 3) to increase or decrease the machine ground speed. Selected speed indicator illuminates.

**NOTE:** Tire sizes and country code regulations limit maximum ground speed.

Machine must be stopped and multi-function lever moved to neutral position before selecting the desired gear.

**CAUTION:** Push-Button Shift Transmission: When pressing the quick stop switch with separator engaged, you are responsible for pulling back on the multi-function lever to stop the machine.

SS43267,0000835-19-27JAN17

## ProDrive™ XL (If Equipped)



ProDrive™ XL

H127669—UN—31OCT19

Press desired button (1 or 2) to select the desired ground speed range. You can set the maximum speed

of each range through the Transmission application. Indicator illuminates when selected.

**NOTE:** Tire sizes and country code regulations limit maximum ground speed. Speed can be programmed from zero to the maximum allowable ground speed.

Maximum reverse ground speed is 10 km/h (6.2 mph) and does not change when in either mode.

ProDrive™ XL mode 1 or 2 switches can be selected while the machine is moving.

**CAUTION:** ProDrive™ XL Machines: Pressing quick stop switch with separator engaged causes machine to come to a quick, controlled stop. It is always recommended to wear your seat belt to avoid serious injury.

NOLMWLO,00000B9-19-02MAR20

## Road Transport Disconnect



Road Transport Disconnect

H127518—UN—30SEP19

Press the road transport disconnect button when transporting the machine on roadway. Indicator illuminates when selected.

Road transport disconnect switch prevents the following functions:

- Separator Engage
- Header Engage
- Header Raise/Lower
- Header Height Resume
- Header Height Sensing
- Lateral Tilt
- Reel Raise/Lower and Reel Fore/Aft
- Unloading Auger
- Auger Swing
- Folding Unloading Auger (If Equipped)
- Grain Tank Covers (If Equipped)
- Four-Wheel Drive (If Equipped)

After transporting the machine on roadway and field operation is desired, press the road transport disconnect switch for two seconds allowing indicator light to turn OFF and allowing the desired switch functions to operate again.

ProDrive is a trademark of Deere & Company



## X-Series Machines

When the road transport disconnect button is engaged, engine speed is fixed at a constant 1700 rpm. This increases fuel efficiency when transporting the machine.

NOLMWLO,00000BA-19-27FEB20

## Differential Lock (If Equipped)



Differential Lock

H127520—UN—30SEP19

Press to manually engage/disengage the differential lock to resolve traction problems in the field.

**NOTE:** Differential lock does not engage when the road transport disconnect switch is ON. Differential disengages when the brake pedals are pressed.

Engagement is only possible if ground speed is below 10 km/h (6.2 mph) and automatically disengages when ground speed is above 12 km/h (7.5 mph).

NOLMWLO,00000BB-19-04NOV19

## Four-Wheel Drive (If Equipped)

Controls the engagement/disengagement and speed of the four-wheel drive system.

**IMPORTANT:** Do NOT switch four-wheel drive ON or OFF while driving machine at maximum travel speed. Decrease speed or bring machine to a stop.

Turn four-wheel drive OFF before going down steep grades.

It is OK to switch between slow (turtle) and high (rabbit) settings while machine is in motion.

### X-Series Machines:

#### Procedure to Modify:



Slow Speed

H129181—UN—27FEB20

1. Press to turn ON when more traction is required.
2. Press to turn OFF.



High Speed

H129182—UN—27FEB20

1. Press to turn ON when higher speeds are required.
2. Press to turn OFF.

**CAUTION:** Ground speed increases when four-wheel drive is turned OFF and decreases when turned ON.

**NOTE:** Ground speed is limited to below 16 km/h (10 mph) when four-wheel drive is engaged. When in road transport mode, four-wheel drive operation is disabled.

PR79369,0000100-19-02MAR20

## Park Brake



Park Brake

H127519—UN—30SEP19

Press to manually or automatically engage/disengage the park brake to prevent machine movement.

**Automatic Mode:** If the multi-function lever is in neutral position and speed is less than 1.5 km/h (1 mph), the park brake is applied. If the multi-function lever is moved out of neutral position, the park brake is released.

**Manual Mode:** If the multi-function lever is in neutral position and speed is less than 3.0 km/h (1.9 mph), the park brake is applied. If the multi-function lever is moved out of neutral position or speed is greater than 1.5 km/h (1 mph), an alarm sounds.

- Press the park brake button to activate the park brake. Park brake indicator on corner post illuminates indicating the park brake is engaged.
- Press the park brake button to disengage the park brake when multi-function lever is in neutral position. Park brake indicator on corner post turns OFF. Park brake is still engaged until multi-function lever is moved out of neutral position returning to automatic mode.

NOLMWLO,00000BC-19-02DEC19

## High Exhaust System Temperature (HEST) Indicator



H129118—UN—02DEC20

*High Exhaust System Temperature (HEST) Indicator*

High Exhaust System Temperature (HEST) Indicator illuminates when the engine exhaust temperature is elevated.

**IMPORTANT: Final Tier 4/Stage V: Damage to exhaust cleaning components may occur if the engine is turned OFF while performing exhaust filter cleaning or shortly after cleaning is complete. Alarm sounds and a warning message appears on the display. Start the machine and follow messages on the display to allow the components to cool.**

NOLMWLO.0000400-19-02DEC20

## Fuel Level Indicator



H117824—UN—22DEC16

*Fuel Gauge Indicator*

Fuel Level Indicator indicates the amount of fuel remaining in the fuel tank.

- When the level reaches 10% of remaining fuel, fuel indicator flashes, alarm sounds, and low fluid message appears.

SS43267.000083C-19-27JAN17

## Diesel Exhaust Fluid (DEF) Level Indicator



H118085—UN—22DEC16

*Diesel Exhaust Fluid (DEF) Level Indicator*

**Diesel Exhaust Fluid (DEF) Level Indicator—**indicates how much fluid is left in the tank.

- When the level reaches 10%, level indicator flashes, alarm sounds, and low fluid message appears.
- When the level reaches 0%, level indicator illuminates and stops flashing, alarm sounds, and empty fluid message and engine power limited message appears.
- When loss of prime is reached, level indicator illuminates and stops flashing. Alarm sounds and empty fluid message, engine power limited message, and speed limited message appears. Stop engine warning indicator (Red) illuminates, engine is derated and machine functions are restricted.

SS43267.000083D-19-27JAN17

## Quick Stop Switch



*Quick Stop Switch*

H117033—UN—15APR16

Quick Stop Switch allows you to simultaneously shut OFF multiple systems in the case of an emergency.

**CAUTION: ProDrive™ Machines: Pressing the quick stop switch with the separator engaged causes the machine to slowly roll to a stop. Multi-function lever must be returned to neutral position to reset the propulsion system.**

**Push-Button Shift Transmission or Mechanical Shift Machines: When pressing the quick stop switch with separator engaged, you are responsible for pulling back on the multi-function lever to stop the machine.**

**It is always recommended to wear your seat belt to avoid serious injury.**

**IMPORTANT:** Header drive can be disengaged by this switch in case of plugging.

*NOTE:* Pushing unloading auger drive switch on the multi-function lever restarts the unloading auger drive. To engage header drive, turn the header engage switch OFF and back ON.

The following systems stop when Quick Stop Switch is pressed:

- Header Engage
- Unloading Auger Drive
- Unloading Auger Swing
- Grain Tank Covers (If Equipped)
- Folding Unloading Auger (If Equipped)
- ProDrive™ XL (propulsion movement slowly stops) (If Equipped)

NOLMWLO,0000401-19-02DEC20

## Unloading Auger Swing Switch



Unloading Auger Switch

H117003—UN—22DEC16

Unloading Auger Swing Switch allows you to swing unloading auger in or out manually or automatically.

### System Requirements:

- Road transport disconnect switch must be in field position.
- You must be seated.

Press the top of the switch to swing out auger. Press the bottom of the switch to swing auger in.

**Manual Control:** Press and hold the switch part way in until auger reaches desired position. Auger stops when the switch is released.

**Automatic Control:** Press the switch all the way in and release it. Auger swings fully outward or inward without holding the switch.

*NOTE:* Automatic auger swing function does not operate when unloading auger drive is engaged. Move auger back to transport position when not in use.

SS43267,0000A65-19-13DEC17

## Unloading Auger Drive Switch



Unloading Auger Drive Switch

H123658—UN—02MAR18

Unloading Auger Drive Switch allows you to engage or disengage the unloading auger.

### System Requirements:

- Road transport disconnect switch must be in field position.
- You must be seated.

### Turn the Unloading Auger ON:

- Press the unloading auger drive switch once to turn ON. Indicator light comes ON when system is engaged.
- Unloading auger drive engages only when the button is held while the auger is in auto swing mode or when the auger is manually swung out greater than 50%.

### Turn the Unloading Auger OFF:

- Press the unloading auger drive switch once to turn OFF. The grain tank cross augers stop immediately while the unloading auger continues to run for 3 seconds to empty the auger.
- Press the unloading auger drive switch twice to immediately turn OFF the unloading auger and grain tank cross augers. The unloading auger does not continue to run for 3 seconds, which means the unloading auger does not get cleaned out.
- If you leave the seat after engagement, the unloading auger drive will continue to operate for five seconds before disengaging. To reengage the system, sit on the operator's seat and press the unloading auger drive switch again.
- In case of an emergency, the unloading auger drive can also be turned OFF using the quick stop switch. To re-engage the unloading auger if the header and unloading auger are stopped using the quick stop switch, press the unloading auger drive switch again.

NOLMWLO,00000BD-19-19NOV20

## AutoTrac™ Resume Button (If Equipped)



AutoTrac™ Resume Button

H117005—UN—15APR16

AutoTrac™ Resume Button allows you to activate the AutoTrac™ system.

AutoTrac™ resume button also activates RowSense™ system. Refer to the AutoTrac™ Operator's Manual for further information.

### System Requirements:

- Engine is running.
- Road transport disconnect switch must be in field position.
- Header switch is engaged.
- Operator in seat.

Press to engage system.

N0LMWLO,00001B2-19-17JAN20

## Header Raise Lower and Tilt Switch



Header Raise/Lower Switch

H116348—UN—19DEC16

Header Raise/Lower and Tilt Switch allows you to raise or lower header and tilt the feeder house.

### System Requirements:

- Road transport disconnect switch must be in field position.
- You must be seated.

Press and hold the top of the switch to raise header.

Press and hold the bottom of the switch to lower header.

**NOTE:** Header raise/lower switch has two detent positions. Pushing part way in on the switch causes the header to raise or lower slowly. Header raises or lowers at a faster rate when the switch is pressed in all the way.

Press and hold left-hand side or right-hand side of switch to tilt feeder house.

N0LMWLO,00000BE-19-04NOV19

## Reel Raise/Lower, Reel Fore/Aft (If Equipped) Switch



Reel Raise/Lower, Reel Fore/Aft

H116349—UN—19DEC16

Reel Raise/Lower, Reel Fore/Aft Switch allows you to control the position of the reel.

**NOTE:** These switch functions are available when a draper platform with the features mentioned is attached to the machine.

Using the switch to raise/lower the reel and to move the reel fore/aft (if equipped):

- Press and hold the top of the switch to raise reel.
- Press and hold the bottom of the switch to lower reel.
- Press and hold the left side of the switch to extend reel forward.
- Press and hold the right side of the switch to retract reel reward.

### Recommended Settings

#### Standing Crop:

- Position the reel above the cutterbar. This helps the crop to fall into the platform.
- Position the reel tines straight or slightly forward.
- The reel should barely touch the heads of the crop. Positioning the reel too low leads to header losses.
- If the reel hits the heads of the crop, reduce the reel speed. The reel should only push the heads of the crop.

#### Down Crop:

- Position the reel in front of the cutterbar to help lift up the crop.
- Position the reel tines backward for more aggressive lifting of the crop.

N0LMWLO,00000BF-19-04NOV19

## Feeder House Backshaft Speed, Adjustable Corn Head Deck Plates (If Equipped) Switch



H116349—UN—19DEC16

Feeder House Backshaft Speed, Adjustable Corn Head Deck Plates

Feeder House Backshaft Speed, Adjustable Corn Head Deck Plates Switch allows you to control the feeder house backshaft speed or the adjustable corn head deck plates.

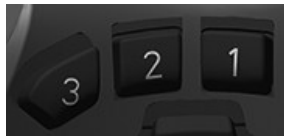
**NOTE:** These switch functions are available when a corn head with the features mentioned is attached to the machine.

Using the switch to adjust backshaft speed and adjustable corn head deck plates (if equipped):

- Press the top of the switch to increase backshaft speed.
- Press the bottom of the switch to decrease backshaft speed.
- Press the left or right side of the switch once to activate display.
- Press the left side of the switch to increase deck plate spacing.
- Press the right side of the switch to decrease deck plate spacing.

N0LMWLO,00000C0-19-02DEC19

## Header Activation Buttons



H116346—UN—19DEC16

Header Activation Buttons

Header Activation Buttons allow you to activate the following by pressing one of the three buttons.

**NOTE:** Header positions obtained by pressing the activation buttons may be overcome by pressing reel raise/lower or reel fore/aft switch or header raise/lower and lateral tilt switch. Once the activation buttons are manually overcome, press the desired activation button to reactivate.

### System Requirements:

- Properly equipped header is connected.
- Engine is running.
- Road transport disconnect switch must be in field position.
- Header Height Resume, Header Height Sensing, or Active Header Float mode are enabled.
- Header is engaged.

Pressing the header activation buttons activates the system. Header control system takes control and moves the header to your selected position.

- Header Height Resume
- Header Height Sensing

**NOTE:** Reel speed is saved automatically when header height sensing/float mode is active and reel speed is changed using the Dial-A-Speed™ or the Reel/Belt Speed dial.

- Lateral Tilt Control
- Reel Position Resume

**NOTE:** Press and hold a header activation button for 2 seconds to save the current reel position to that button.

- Deck Plate Position Resume
- Active Header Float
- Hydraulic Feeder House Fore/Aft Tilt (If Equipped)

N0LMWLO,00000C1-19-19NOV20

## VisionTrak™

VisionTrak™ monitor checks grain loss by measuring a representative sample of losses over the cleaning shoe and through the separator. VisionTrak™ continuously monitors machine performance to enable you to use maximum machine capacity. A change in loss rate is indicated by the indicators.

If there appears to be an issue with the indicator readings, such as the indicators consistently read as full (all bars lit) when not harvesting or empty (no bars lit) when harvesting, inspect the sensors related to the system showing the error. See your Operator's Manual for VisionTrak™ operational checks and sensor inspection procedures.

### System Requirements:

Engine State	Running
Road Transport Disconnect Switch	Field Position
Header and Separator Switch	Engaged

Dial-A-Speed is a trademark of Deere & Company

**Items Accessible on VisionTrak™ Page:**



*Shoe Loss Indicator*

H117835—UN—22DEC16

**Shoe Loss Indicator**— shows grain loss from the shoe.



*Loss Range Indicators*

H126288—UN—06JUN19

**Loss Range Indicators**— indicates whether or not loss levels are at an acceptable rate. The green range

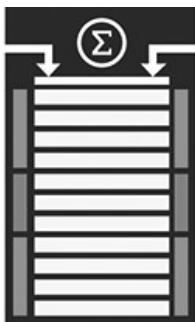
in the center of the bar graph indicates acceptable loss levels. The orange ranges above and below the green range indicate losses are not within an acceptable level.



*Summation Symbol*

H126289—UN—06JUN19

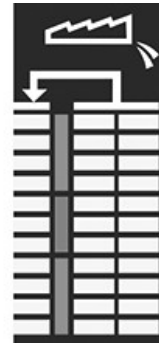
**Summation Symbol**— displays above the Total Loss Indicator.



*Total Loss Indicator*

H117836—UN—22DEC16

**Total Loss Indicator**— shows an average of grain loss from the shoe and separator areas.



*Separator Loss Indicator*

H117837—UN—22DEC16

**Separator Loss Indicator**— shows grain loss from separator area. The separator symbol above the bar graph appears when system is functioning properly.



*Tailings Volume Indicator*

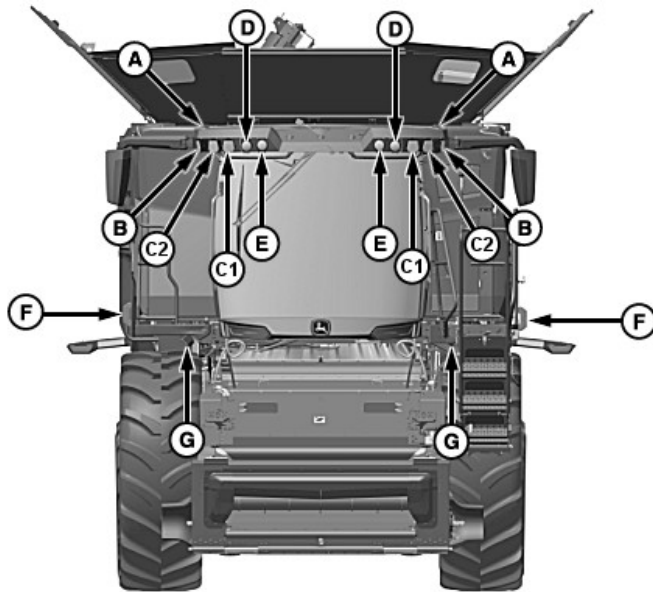
H117838—UN—22DEC16

**Tailings Volume Indicator**— shows volume of tailings return. The Tailings Volume Indicator can be referred to periodically to see if an increase or decrease in tailings volume occurs.

N0LMWLO,00000C2-19-04NOV19

# Lights and Signals

## Lighting Locations (Front and Rear View Lights)



- A—Beacon Lights (front)
- B—Row Finder Lights
- C1—Cab Worklights (inner)
- C2—Cab Worklights (outer)
- D—Cab Headlights (low-beam)
- E—Cab Headlights (high-beam)
- F—Front Hazard Lights (amber)

*NOTE: See Lights Application Help or Operator's Station Help for further information.*

### Beacon Lights

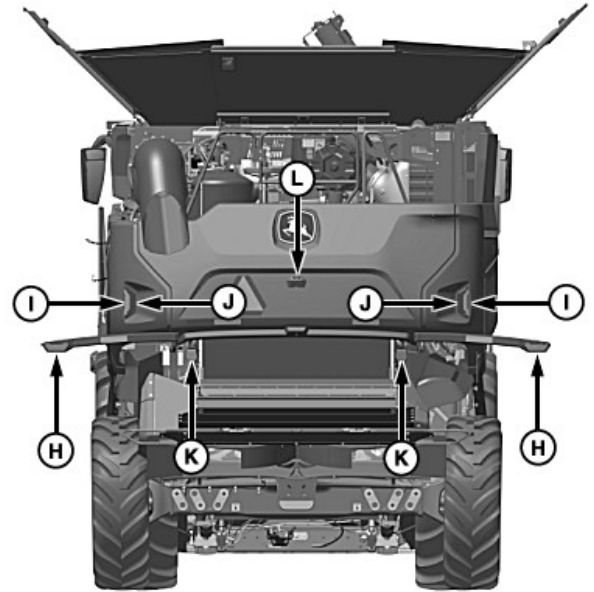
**CAUTION:** Lights must be turned ON when transporting.

- Controls beacon lights (A and L).
- Two beacon lights are at the front (left and right) and one is at the rear of the machine. These lights warn other drivers when transporting on roadways.

### Hazard Lights

**CAUTION:** Lights must be turned ON when transporting. Swing cab ladder forward to orient hazard light towards oncoming motorists.

- Controls beacon lights (A and L), front hazard lights (F), rear hazard lights (H and I), and cab headlights (D and E).
- Hazard lights are on both sides of the machine at front and rear. These lights warn other drivers when transporting on roadways.



H128029—UN—22JAN20

- G—Stubble Lights
- H—Rear Hazard/Turn Signal Lights (amber)
- I—Rear Hazard/Turn Signal Lights (amber)
- J—Tail/Brake Lights
- K—Rear Discharge Lights
- L—Beacon Light (rear)

### Road Lights

**CAUTION:** Lights must be turned ON when transporting. Swing cab ladder forward to orient hazard light towards oncoming motorists.

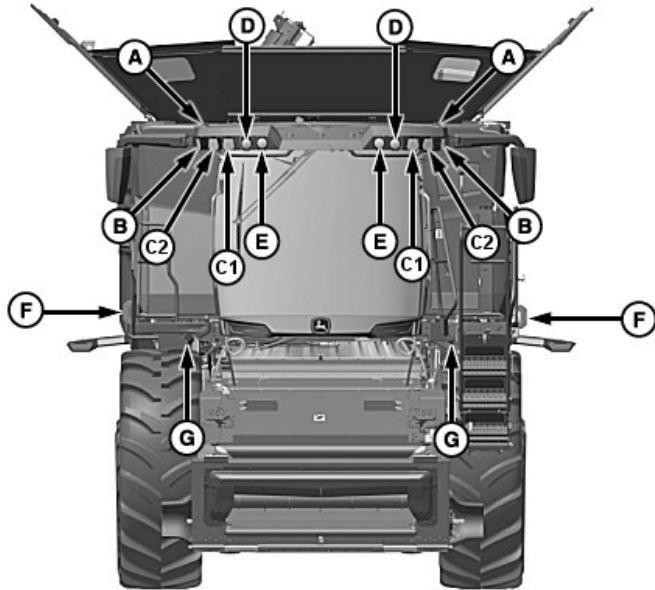
*NOTE: In low-beam mode, cab worklights (C1) and cab headlights (D) are active. In high-beam mode, cab worklights (C1), cab headlights (D and E) are active.*

*Hazard lights turn ON when road lights are activated.*

- Controls beacon lights (A and L), cab headlights (D and E), hazard lights (F, H, and I), and tail/brake lights (J).

OUC6075,0004CE3-19-23NOV20

## Lighting Locations (Front and Rear View Lights Continued)



- A—Beacon Lights (front)
- B—Row Finder Lights
- C1—Cab Worklights (inner)
- C2—Cab Worklights (outer)
- D—Cab Headlights (low-beam)
- E—Cab Headlights (high-beam)
- F—Front Hazard Lights (amber)

*NOTE: See Lights Application Help or Operator's Station Help for further information.*

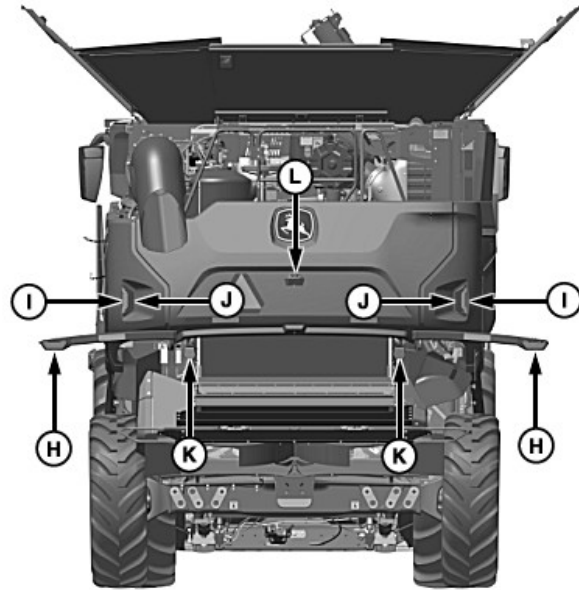
### Auto Beacon Lights

*NOTE: When auto beacon lights are enabled and grain reaches the 3/4 full sensor, the beacon lights are activated (3 seconds ON and 6 seconds OFF). When the grain reaches the grain tank full sensor, the beacon lights are continuously activated.*

- Beacon lights (A and L) illuminate when grain tank is 3/4 full. These lights provide a signal to the grain cart operator that grain tank is full and is ready to be unloaded.

### Field Lights

- Controls row finder lights (B), cab worklights (C1 and C2), cab headlights (D and E), and tail/brake lights (J).
- Field lights provide operator with area lighting for operation at night and during low light conditions.
- Row finder lights provide operator with area lighting on each side of the machine for night operation and low light conditions.



H128029—UN—22JAN20

- G—Stubble Lights
- H—Rear Hazard/Turn Signal Lights (amber)
- I—Rear Hazard/Turn Signal Lights (amber)
- J—Tail/Brake Lights
- K—Rear Discharge Lights
- L—Beacon Light (rear)

### Front Stubble Lights

**CAUTION:** To avoid motorist confusion, do not operate worklights when transporting on public roadways.

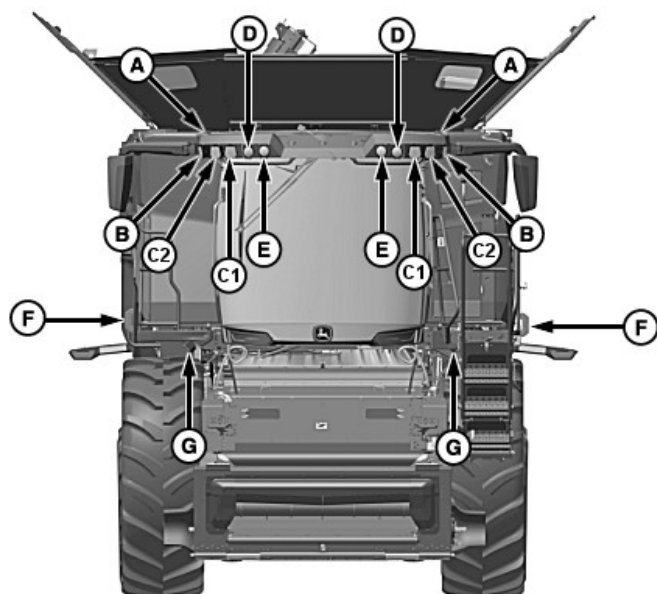
*NOTE: If operator leaves seat after separator is engaged, front stubble lights flash and will continue to flash until separator speed reaches zero.*

- Controls stubble lights (G).
- Stubble lights provide operator with more lighting behind header for night operation and low light conditions.

OUC6075,0004CE7-19-12NOV20



## Lighting Locations (Front and Rear View Lights Continued)



- A—Beacon Lights (front)
- B—Row Finder Lights
- C1—Cab Worklights (inner)
- C2—Cab Worklights (outer)
- D—Cab Headlights (low-beam)
- E—Cab Headlights (high-beam)
- F—Front Hazard Lights (amber)

*NOTE: See Lights Application Help or Operator's Station Help for further information.*

### Rear Discharge Lights

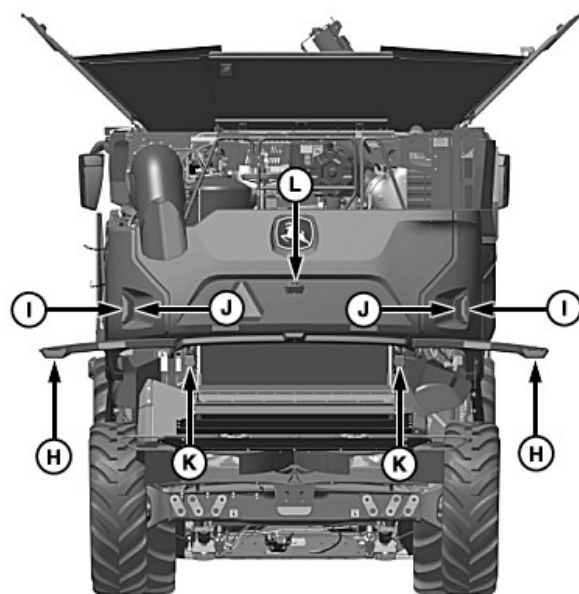
**CAUTION:** To avoid motorist confusion, do not operate worklights when transporting on public roadways.

*NOTE: If operator leaves seat after separator is engaged, rear discharge lights flash and will continue to flash until separator speed reaches zero.*

- Controls rear discharge lights (K).
- Rear discharge lights provide operator with rear area lighting for night operation and low light conditions.

### Tail/Brake Lights

- Tail/Brake lights (J) come ON when machine senses a deceleration. Lights stay on for a minimum of 2 seconds.
- Once speed is less than 1.6 km/h (1 mph), brake lights stay on for 2 minutes or until forward acceleration is sensed and speed is greater than 1.6 km/h (1 mph).



H128029—UN—22JAN20

- G—Stubble Lights
- H—Rear Hazard/Turn Signal Lights (amber)
- I—Rear Hazard/Turn Signal Lights (amber)
- J—Tail/Brake Lights
- K—Rear Discharge Lights
- L—Beacon Light (rear)

- Brakes lights turn ON when service brakes are applied.

### Parking Lights

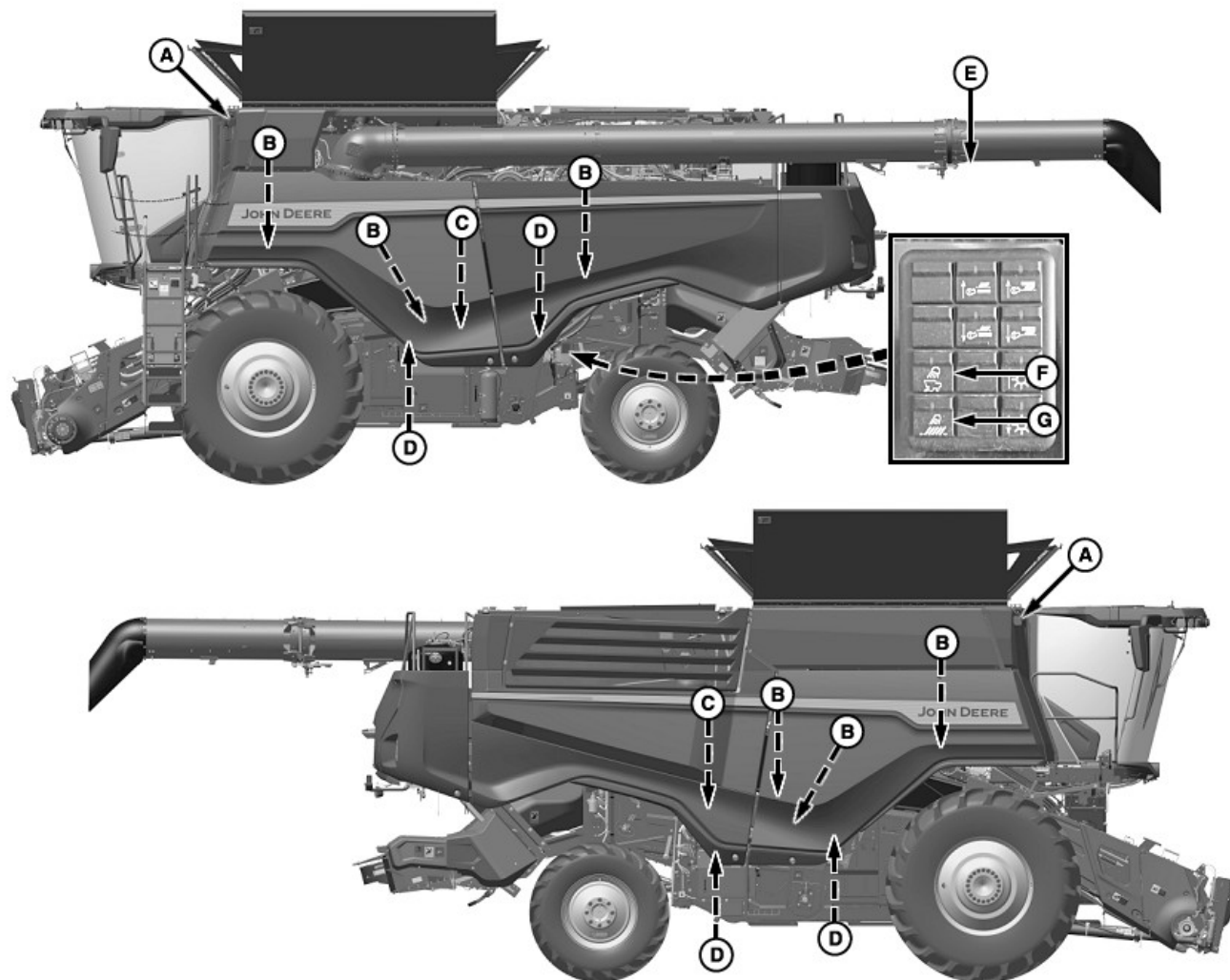
- Tail lights (J) illuminate when parking lights are enabled.

### Exit Lighting

- Cab roof lights (B—E) remain on for a configurable amount of time (1, 3, or 5 minutes) after key switch is turned OFF if the lights (road or field) were enabled within the previous 5 minutes. The operator also has the option to disable exit lighting, if desired.

OUC6075,0004CE8-19-12NOV20

## Lighting Locations (Left and Right Side View Lights)



A—360° Side Lights (optional)  
 B—Gull Wing Service Lights  
 C—Shoe Service Lights  
 D—Signature Lights (underglow) (optional)

E—Unloading Auger Light  
 F—Gull Wing Service Lights Switch  
 G—Shoe Service Light Switch

H128030—UN—12DEC19

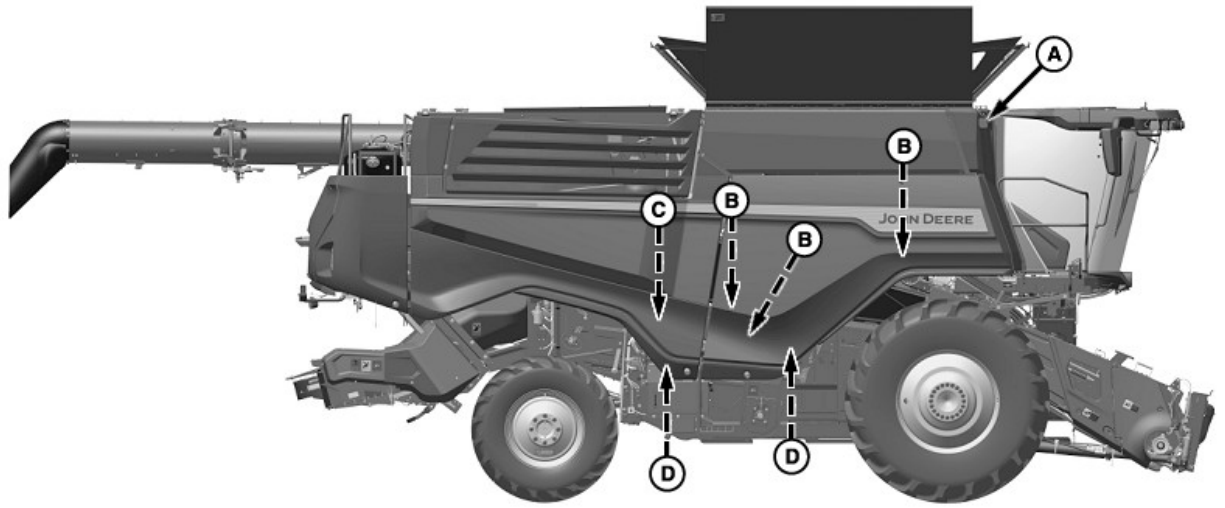
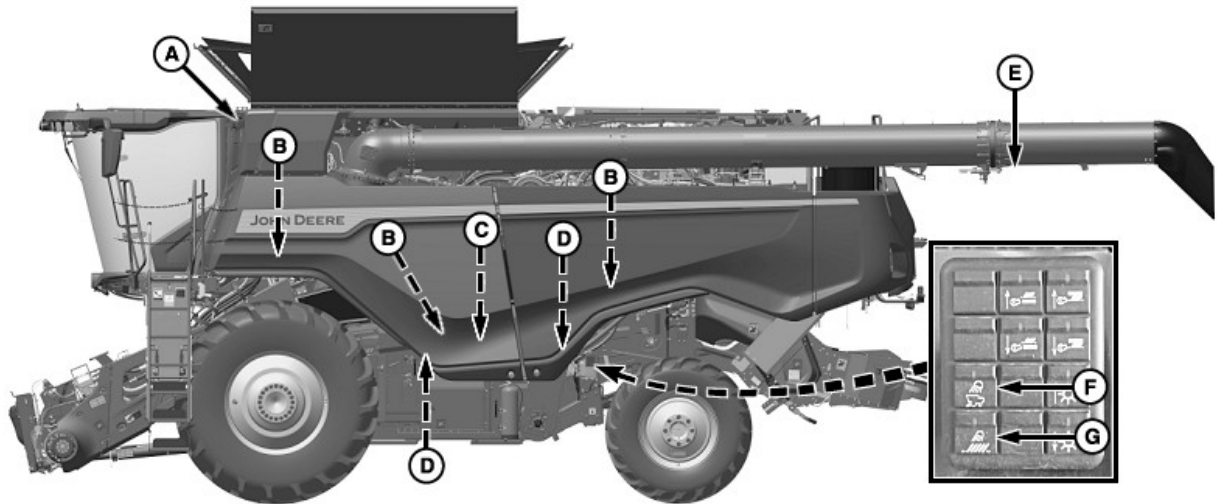
**NOTE:** See *Lights Application Help* or *Operator's Station Help* for further information.

### Field Lights

- Controls 360° side lights (A), signature lights (D), and unloading auger light (E).
- Unloading auger light comes ON when the auger is extended at least 50% with field light switch ON.
- Unloading auger light provides lighting for unloading grain tank at night or in low light conditions.

OUO6075,0004CE5-19-04NOV20

## Lighting Locations (Left and Right Side View Lights Continued)



H128030—UN—12DEC19

- A—360° Side Lights (optional)
- B—Gull Wing Service Lights
- C—Shoe Service Lights
- D—Signature Lights (underglow) (optional)

- E—Unloading Auger Light
- F—Gull Wing Service Lights Switch
- G—Shoe Service Light Switch

**NOTE:** See *Lights Application Help* or *Operator's Station Help* for further information.

### Shoe Service Lights

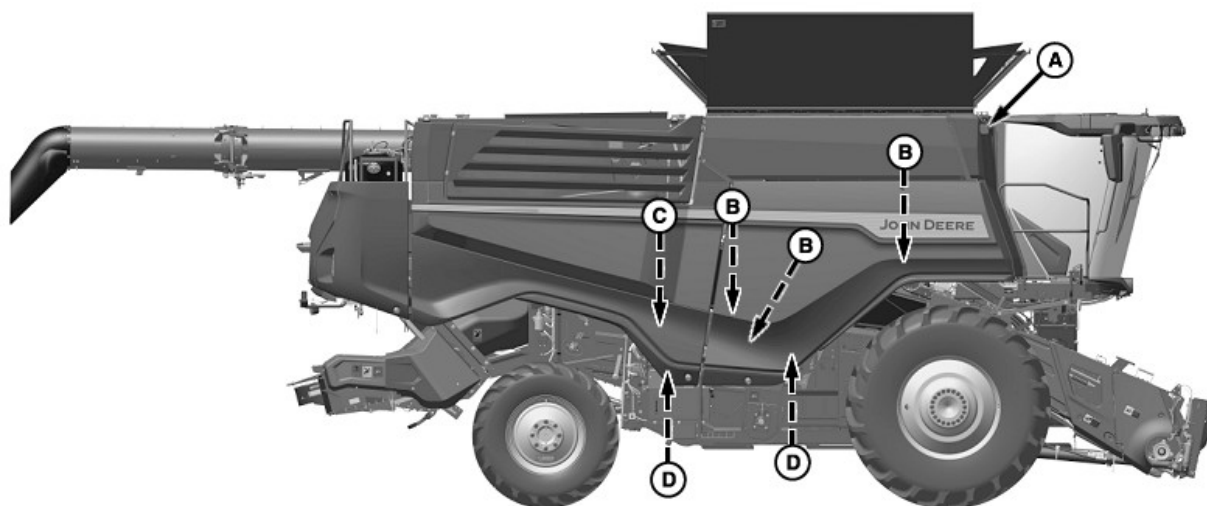
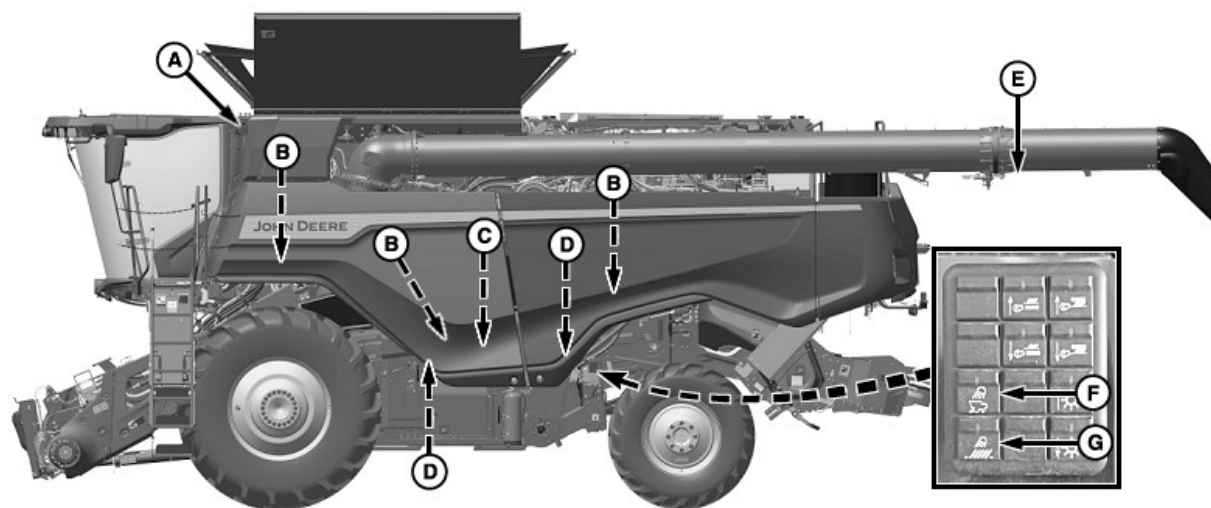
**NOTE:** If operator leaves seat after separator is engaged, shoe service lights flash and will continue to flash until separator speed reaches zero.

- Shoe service lights (C) provide operator with lighting for cleaning shoe adjustment at night or in low light conditions.
- Shoe service lights ON/OFF switch (G) is located behind the tailings elevator on the left-hand side.

- Illuminates during maintenance and service operations (not during harvest).
- Shoe service lights automatically turn OFF when the machine starts moving.

OUC6075,0004CEB-19-04NOV20

## Lighting Locations (Left and Right Side View Lights Continued)



H128030—UN—12DEC19

- A—360° Side Lights (optional)
- B—Gull Wing Service Lights
- C—Shoe Service Lights
- D—Signature Lights (underglow) (optional)

- E—Unloading Auger Light
- F—Gull Wing Service Lights Switch
- G—Shoe Service Light Switch

**NOTE:** See *Lights Application Help* or *Operator's Station Help* for further information.

- Gull wing service lights automatically turn OFF when the machine starts moving.

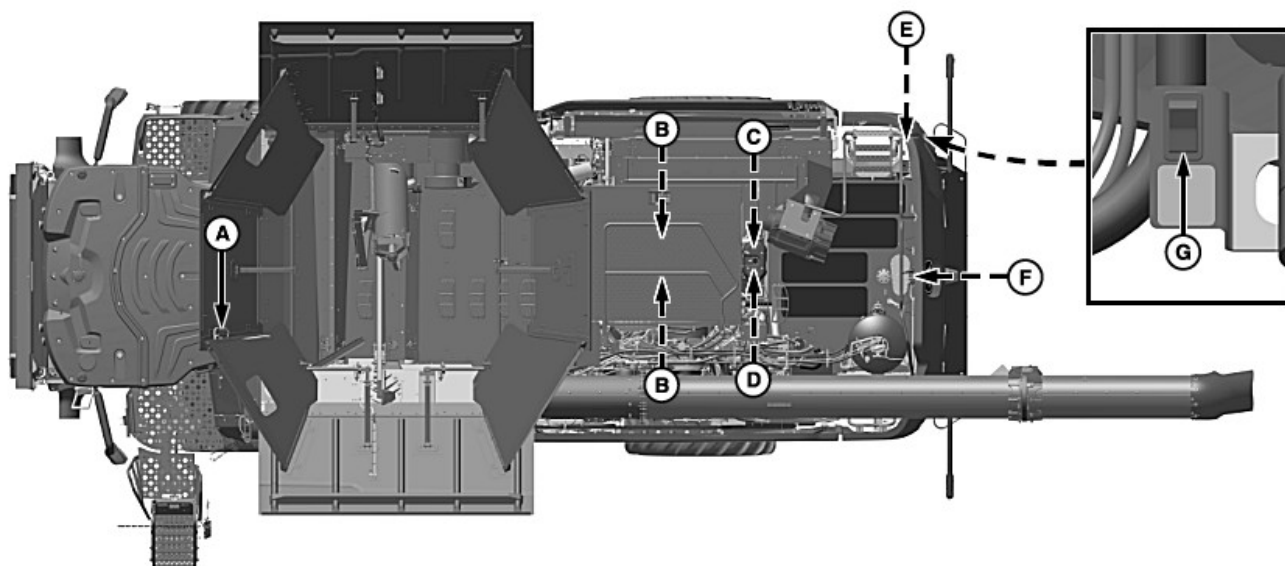
OUO6075,0004CEC-19-04NOV20

### Gull Wing Service Lights

**NOTE:** If operator leaves seat after separator is engaged, gull wing service lights flash and will continue to flash until separator speed reaches zero.

- Gull wing service lights (B and D) are provided on both sides of the machine under the gull wing doors and provide better visibility of separator area.
- Gull wing service lights ON/OFF switch (F) is located behind the tailings elevator on the left-hand side.

## Lighting Locations (Top View Lights)



- A—Grain Tank Light  
 B—Engine Service Lights (engine compartment)  
 C—Engine Service Light (coolant reservoir)  
 D—Engine Service Light (engine oil fill)

- E—Engine Service Light (rear ladder)  
 F—Engine Service Light (fuel and diesel exhaust fluid)  
 G—Engine Service Lights Switch

H128031—UN—15NOV19

*NOTE: See Lights Application Help or Operator's Station Help for further information.*

### Field Lights

- Controls grain tank light (A).
- Grain tank light provides operator with lighting in the grain tank for night operation and low light conditions.

*NOTE: If the grain tank level sensors are activated, the grain tank light will automatically turn OFF.*

### Engine Service Lights

- Engine service lights (B—F) provide lighting for engine deck area at night or in low light conditions.
- Engine service lights ON/OFF switch (G) is on the right-hand rear side of machine.
- Switch controls the various engine service lights.
- Illuminates during maintenance and service operations (not during harvest).
- Engine service lights automatically turn OFF when the machine starts moving. The engine service lights remain OFF until the switch is cycled, since vehicle movement was detected.

### Lighting Delay/Timeout

- When all the lights are first turned to the ON position (key switch OFF), there is a slight delay.
- All the lights turn OFF while the machine is attempting to start.

These features are built into the machine to help prevent too much current being drawn from the battery, which may prevent the machine from starting.

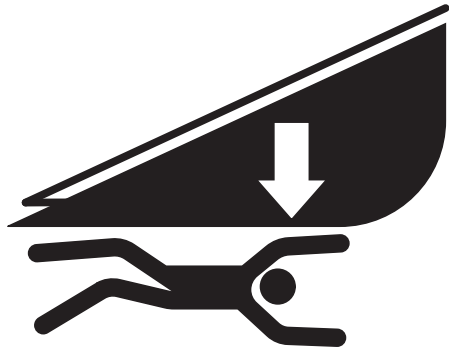
*NOTE: After the cleaning shoe lights, service lights, or engine compartment service lights are ON for over 10 minutes, lights flash and then turn OFF momentarily, then turn back ON for 20 seconds. This cycle continues for 3 minutes, then lights turn OFF until switch is cycled. If lights do not come back on after switch is cycled, machine has determined that battery voltage is too low to allow light operation. Lights come on again once the engine is running and the batteries are recharging.*

OUC6075,0004CED-19-07FEB20

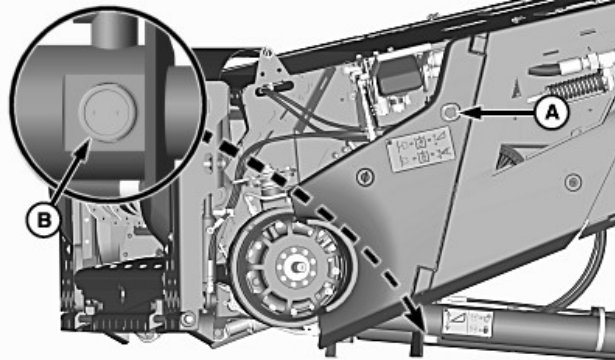
OUC6075,0004CE6-19-04NOV20

# Feeder House

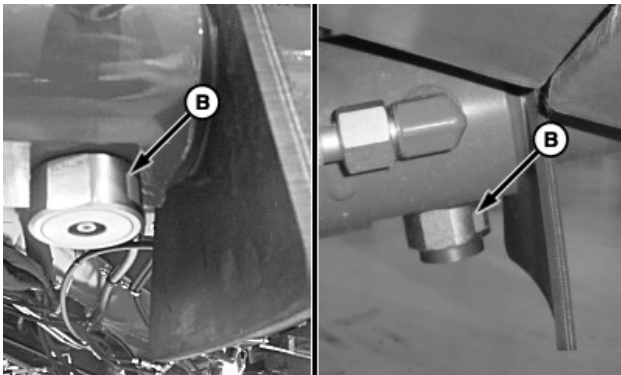
## Feeder House Safety Lock



H121063—UN—14MAR17



H126621—UN—27JAN20



H127632—UN—01OCT19

Locked/Unlocked

A—Lock Button  
B—Lock Indicator

**CAUTION:** To prevent injury, after engaging the feeder house lock, support the feeder house with solid blocking before performing non-routine service or maintenance items underneath the feeder house or header.

**NOTE:** The feeder house is equipped with a hydraulic locking system. When locked, the feeder house will not raise or lower and the fore/aft frame will not tilt.

1. Raise the feeder house and tilt the hydraulic feeder house fore/aft tilt frame as needed.

**NOTE:** When the feeder house safety lock button is pulled out, the safety lock indicator (B) may show red. Verify that the safety lock indicator is NOT red before going under the feeder house.

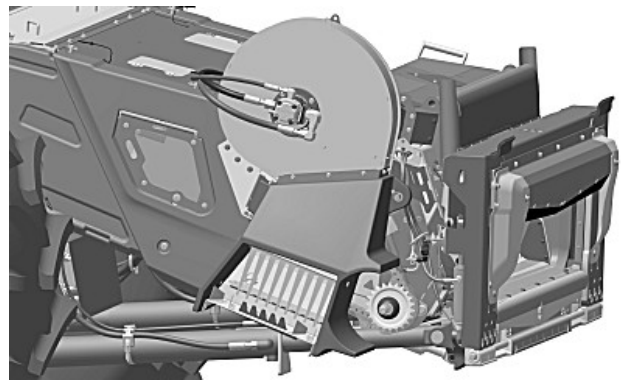
2. Push the feeder house safety lock button (A) to lock the feeder house lift cylinder position and the fore/aft tilt cylinder position.
3. Shut OFF engine, set park brake, and remove key.
4. Pull the feeder house safety lock button to disengage the safety lock.

**NOTE:** Hydraulic pressure is required to disengage safety lock.

5. Raise feeder house until the safety lock indicator extends and lower feeder house as needed.

MH69740.0000852-19-28FEB20

## Feeder House Dust Fan (If Equipped)



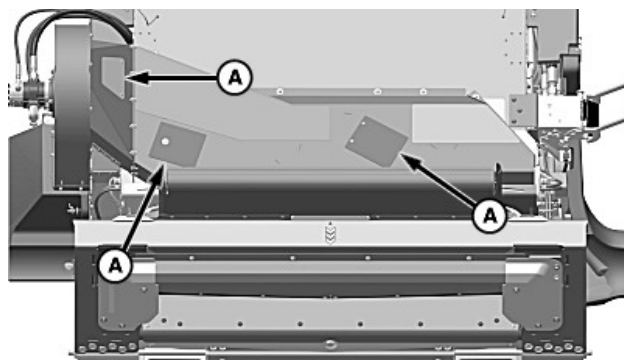
H130635—UN—25JUN20

**IMPORTANT:** It is not recommended to run the dust fan when harvesting small or lightweight grain. The dust fan may pull lightweight grains into the fan and generate loss.

The feeder house is equipped with a dust fan to remove excess dust and debris from the feeder house.

MH69740.0000A0C-19-17AUG20

## Feeder House Dust Fan (If Equipped) Inspection Doors



H130617—UN—17AUG20

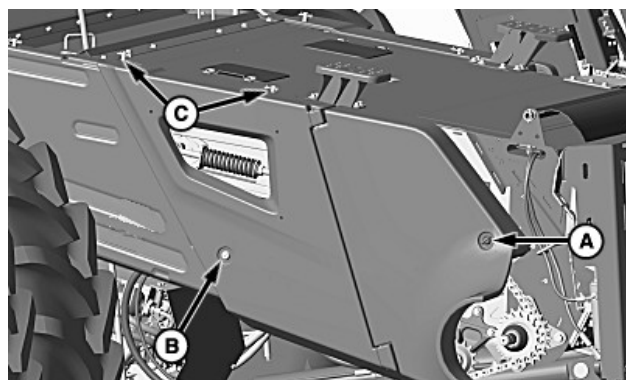
A—Inspection Door (3 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Clean the dust fan system after 50 hours of the system being turned off.

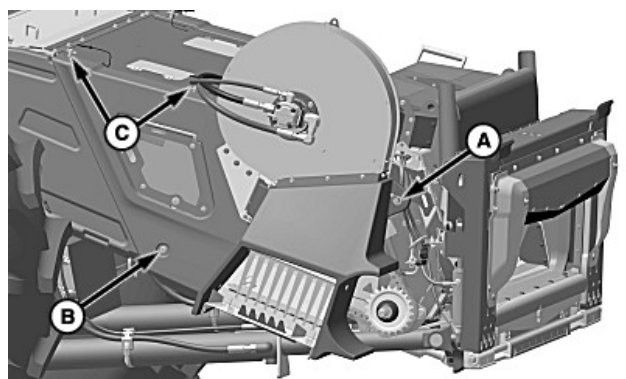
1. Open the inspection doors (A).
2. Remove dust and debris buildup as needed.
3. Close the inspection doors.

MH69740,0000A0E-19-17AUG20



H126645—UN—18NOV20

Right-Hand Side (Without Dust Fan)

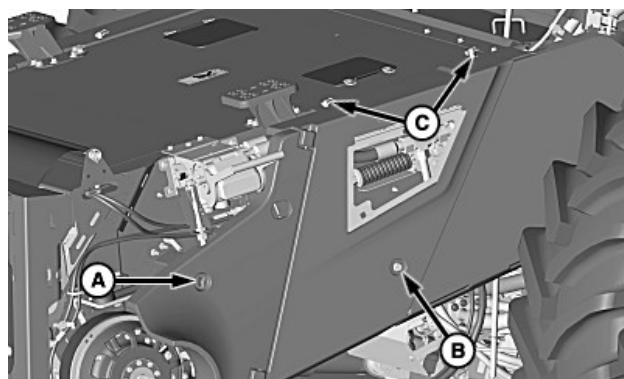


H130638—UN—26JUN20

Right-Hand Side (With Dust Fan)

A—Latch  
B—Latch  
C—Quick-Lock Pin (2 used)

## Feeder House Side Shields



H126644—UN—10JUL19

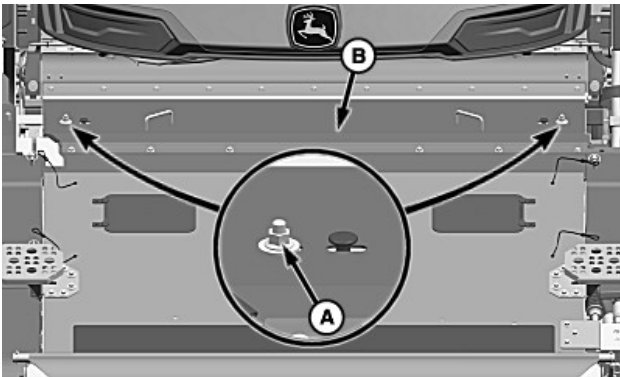
**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

Feeder house shields have a front and rear shield.

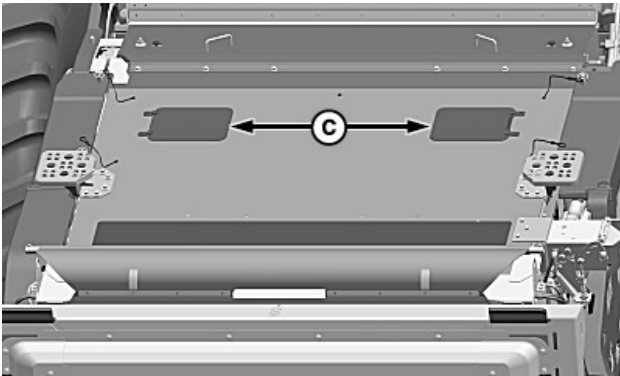
1. Turn latch (A) and swing the front shield open for service.
2. Turn latch (B) and remove quick-lock pins (C) to remove the rear shield.
3. Install and close the shields before operating the machine.

MH69740,0000853-19-01JUL20

## Feeder House Doors



H128026—UN—14NOV19



H128027—UN—14NOV19

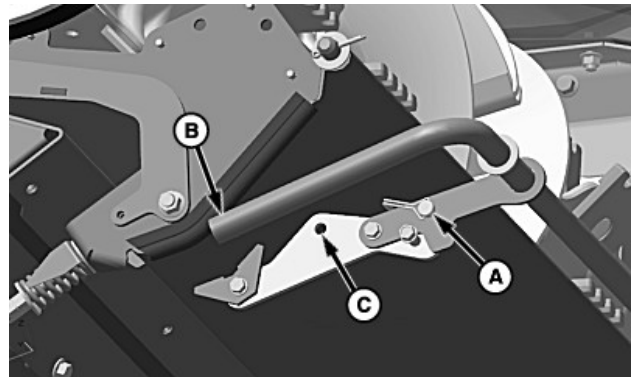
A—Nuts (2 used)  
B—Door  
C—Doors (2 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) on each side of the door and push nuts towards center of the feeder house.
2. Push the door (B) rearward to remove.
3. Lift doors (C) to access the inside of the feeder house.
4. Close the doors before operating the machine.

MH69740,0000854-19-01JUL20

## Stone Trap



H129023—UN—17FEB20

A—Quick-Lock Pin  
B—Lever  
C—Hole

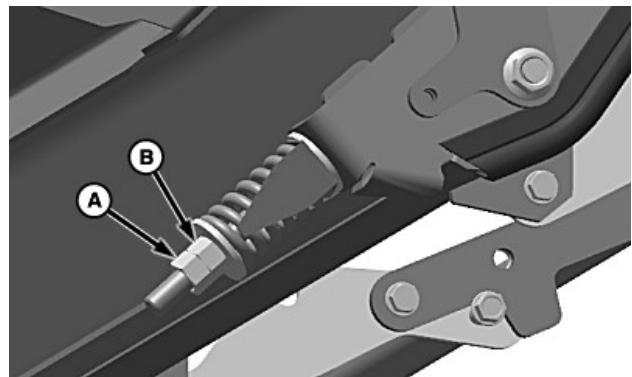
**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

*NOTE:* The stone trap protects the cylinder and concave from rock or stone damage.

1. Remove quick-lock pin (A) and move lever (B) down to open the stone trap.
2. Install the quick-lock pin into hole (C) to lock the stone trap in the open position.
3. Move the lever up to close the stone trap and retain with the quick-lock pin.

MH69740,0000856-19-17FEB20

## Stone Trap Door—Adjusting



H129053—UN—18FEB20

A—Lock Nut  
B—Nut

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

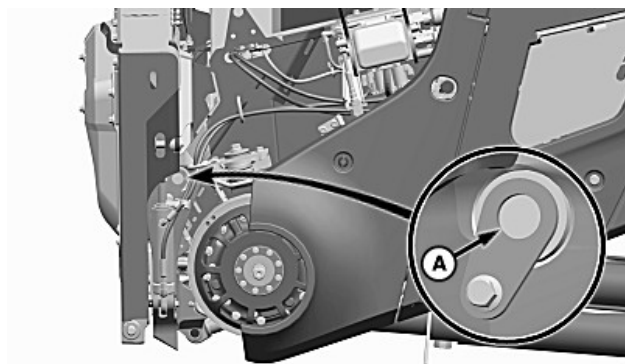
1. Loosen lock nut (A).
2. Tighten or loosen nut (B) as desired.



## 3. Tighten lock nut.

MH69740,000097E-19-11NOV20

## Set Feeder House Fore/Aft Tilt Frame Zero Point



H128028—UN—14NOV19

A—Pivot Pin

**CAUTION:** Alert others around the machine to stay clear while calibration is being performed.

Fore/aft tilt frame is used to set the correct relationship between platform skid plates and the ground. It compensates for the different tire sizes, rear axle settings, and other variables.

Tilt frame is set to an approximate position at factory, but if tires or axle positions are changed or ground conditions change (soft ground), it may be necessary to readjust zero point.

*NOTE: If field conditions are normal, calibration can be done on level concrete.*

*If field conditions are soft (leaving ruts), calibration MUST be done in a level location in the field.*

An approximate setting can be obtained without a header attached. See Calibrations Application Help or Operator's Station Help to calibrate feeder house tilt fore/aft range. During calibration, set the zero point as follows:

- **Tilt fore/aft frame fully forward.** Lower or raise feeder house until pivot pin (A) to ground distance is set to **1016 mm (40 in)**.
- Using a level as a reference, adjust fore/aft tilt frame until front face is vertical.

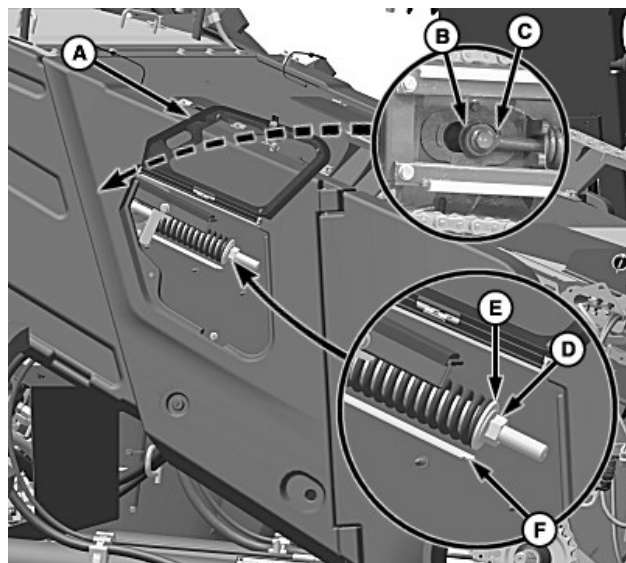
*NOTE: This fore/aft frame adjustment changes the pivot pin to ground distance from 1016 mm (40 in) to the desired specification distance.*

## Specification

Pivot Pin To Ground—Distance. . . . . 903 mm  
(35-1/2 in)

MH69740,0000857-19-10AUG20

## Feeder House Conveyor Chain—Adjusting



H128973—UN—12FEB20

A—Access Door  
B—Bushing  
C—Embossment  
D—Nut  
E—Washer  
F—Gauge

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

1. Open the access door (A) on both sides of the feeder house shield.
2. One offset link on each chain strand must be removed when bushing (B) aligns with the inner edge of the front embossment (C) as shown.
3. Tighten nut (D) on both sides of the feeder house until washer (E) is between the end of the gauge (F) and the bottom of the step.

*NOTE: Check tension on both sides every 25 hours for the first 100 hours.*

- Check the tension on both sides of the machine every 100 hours. Adjust when bushing reaches the front embossment.
- Out-of-round sprockets, drums, and bent shafts can cause the chain tension to be uneven, too tight, or too loose.
- Excessive chain tension causes shaft, bearing, and chain failures.

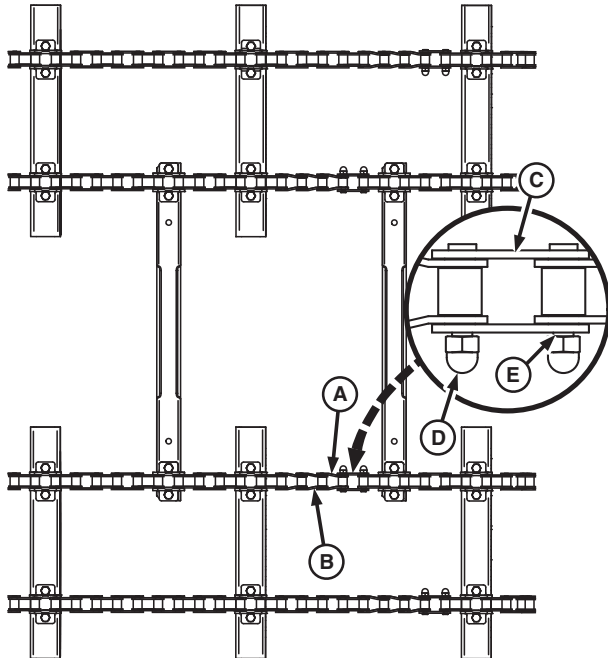
- Close the access door on both sides of the feeder house shield.

MH69740,0000858-19-28OCT20

Chain Link M8 Cap  
Nuts—Torque. . . . . 25 N·m  
(18 lb·ft)

MH69740,0000859-19-12FEB20

## Feeder House Conveyor Chain Links—Removing



H109687—UN—30JAN14

A—Offset Link  
B—Offset Link  
C—Sidebar  
D—Cap Nut  
E—Gap, 1—2 mm (3/64—5/64 in)

**NOTE:** When replacing chain links, always check sprockets for wear.

- Remove offset links (A) for the initial chain adjustment.
- Remove offset links (B) for the second adjustment.
- Remove offset links (B) for the third adjustment. After the third adjustment, the chain is worn out and must be replaced.

**IMPORTANT:** When installing the connector links, the hardware should be installed in the same orientation as previously removed.

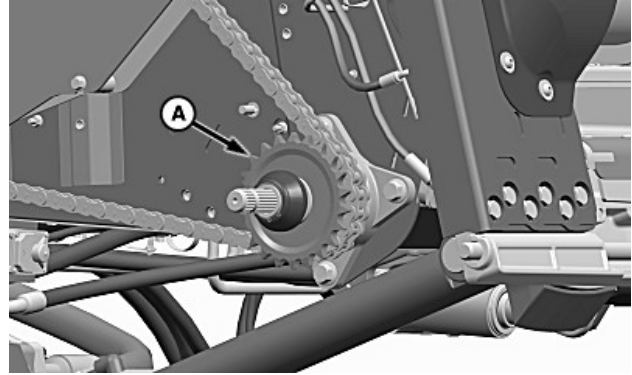
When chain link cap nuts (D) are torqued to specification, gap (E) should exist between the connector link sidebar (C) and the cap nut.

- Tighten the hardware to specification.

### Specification

Slat M10 Hardware—Torque. . . . . 73 N·m  
(54 lb·ft)

## Feeder House Conveyor Speed—Changing



H128135—UN—21NOV19

A—Sprocket

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

**NOTE:** See the Crop Settings section for recommended feeder house conveyor sprocket settings.

### Important notes about 22-tooth sprocket:

- Sprocket is not recommended for corn use.

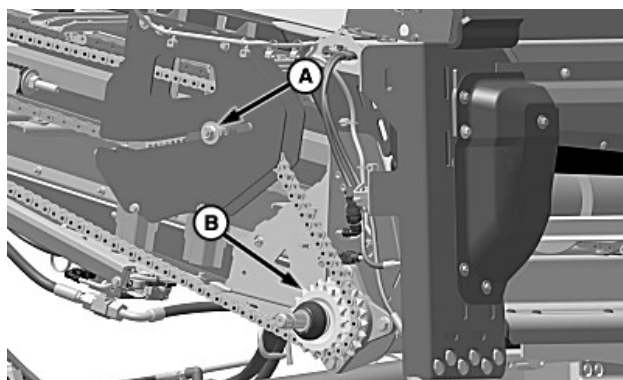
**Recommended when poor feeding occurs in the following crops and conditions:**

- Crops:** Barley, Canola, Oats, Rye, and Wheat
- Conditions:** High Volume, Green, Wet, Windrowed, and Poor Feeding

As crop conditions change or feeding improves (drier, more even windrows, lighter straw), it is recommended to use the 18-tooth sprocket. Chain speed slows and reduces potential for straw damage or pre-threshing and extends chain life.

Feeder conveyor chain can be set to two different speeds by selecting sprocket (A) on the right-hand side of the lower shaft.

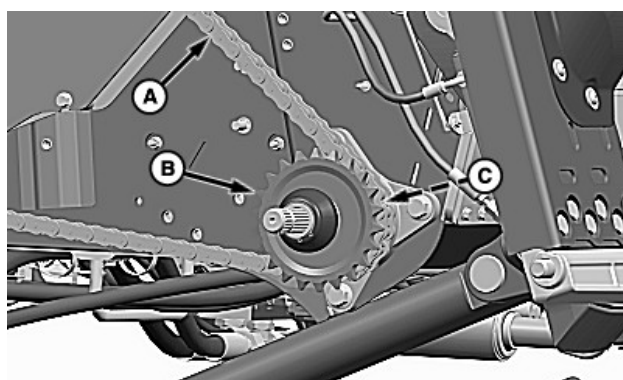
Use small sprocket for slow speed and large sprocket for high speed.



H130880—UN—21JUL20

A—Nut  
B—Sprocket

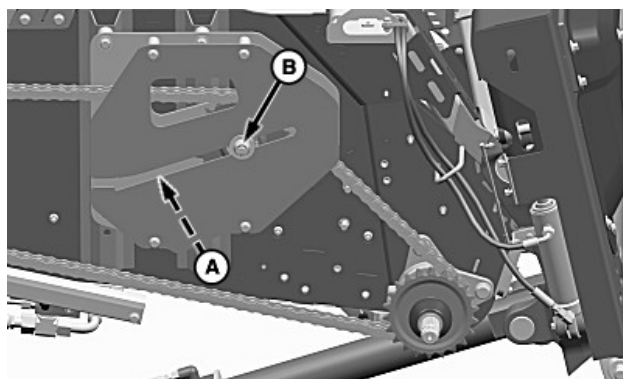
1. To move drive chain to smaller sprocket: Open the right-hand front shield.
2. Loosen nut (A) and push the sprocket rearward.
3. Push in on coupler and remove sprocket (B).
4. Flip sprocket over and reinstall.



H128137—UN—21NOV19

A—Chain  
B—Large Sprocket  
C—Small Sprocket

5. Move chain (A) from the large sprocket (B) to the small sprocket (C).



H128138—UN—21NOV19

A—Holes  
B—Nut

**NOTE:** Do not overtighten the feeder conveyor drive chain.

6. Use a pry bar in the holes (A) on the inside plate to move the sprocket forward and tighten nut (B) to specification.

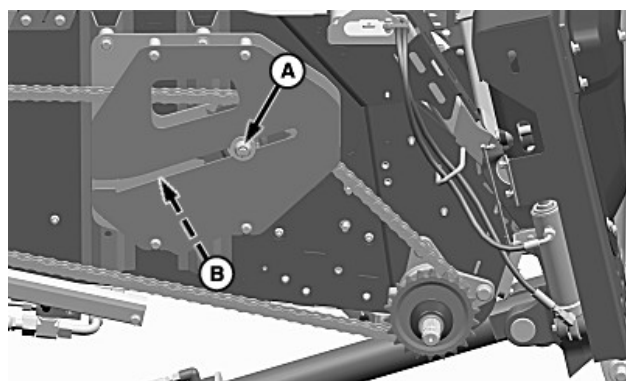
#### Specification

Nut—Torque. . . . . 303 N·m  
(224 lb·ft)

7. Close the right-hand front shield.

MH69740,000085B-19-19NOV20

## Feeder House Conveyor Drive Chain—Adjusting



H128139—UN—21NOV19

A—Nut  
B—Holes

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

1. Open the right-hand front shield.
2. Loosen nut (A) and push the sprocket rearward.

**NOTE:** Do not overtighten the feeder conveyor drive chain.

3. Use a pry bar in the holes (B) on the inside plate to move the sprocket forward and tighten nut to specification.

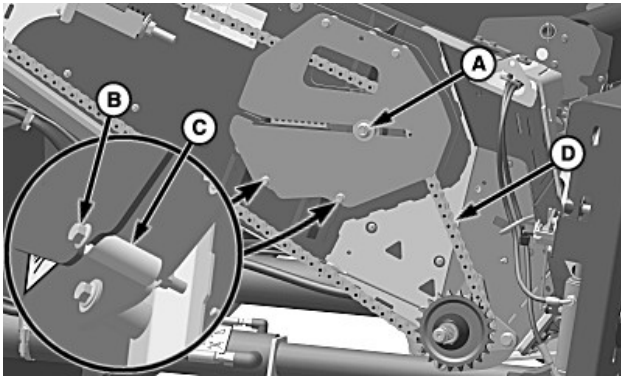
#### Specification

Nut—Torque. . . . . 303 N·m  
(224 lb·ft)

4. Close the right-hand front shield.

MH69740,000085C-19-19NOV20

## Feeder House Conveyor Drive Chain—Replacing



- A—Nut  
B—Cap Screw (2 used)  
C—Spacer (2 used)  
D—Chain

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake and remove key.

1. Open the right-hand front shield.
2. Loosen nut (A) and move the sprocket rearward.
3. Loosen cap screws (B) and remove spacers (C) from between the plates.
4. Remove and replace chain (D).
5. Align the previously removed spacers and cap screws in the slots on the plates.
6. Tighten nut on the sprocket to specification.

### Specification

Nut—Torque. . . . . 303 N·m  
(224 lb·ft)

7. Close the right-hand front shield.

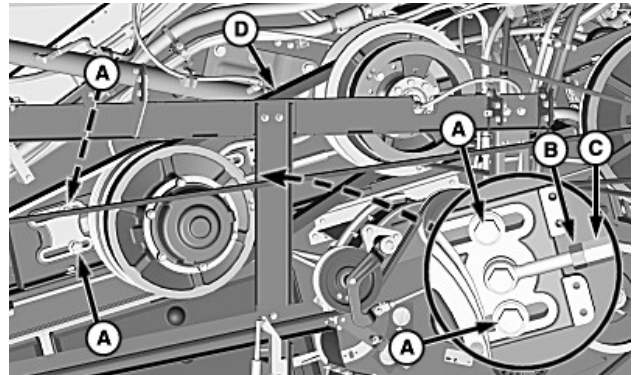
MH69740,0000938-19-19NOV20

Depending on the crops being harvested, the top shaft sprockets should be checked for wear after 1000 hours.

If the top shaft sprockets are worn past 12 mm (1/2 in) (A), the top shaft assembly must be replaced.

MH69740,000085D-19-13FEB20

## Feeder House Variable Speed Drive Belt—Replacing



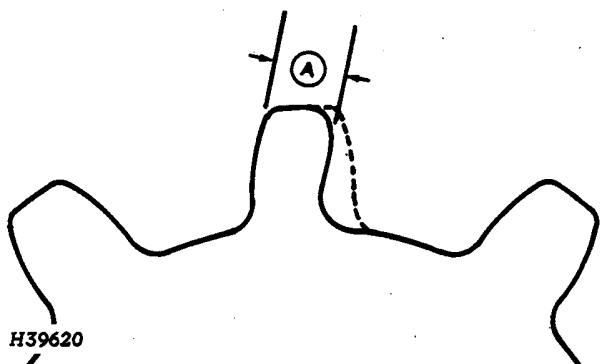
- A—Cap Screw (4 used)  
B—Nut  
C—Turnbuckle  
D—Variable Speed Drive Belt

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

1. Loosen cap screws (A) around the variable drive sheave.
2. Loosen nut (B) and adjust the turnbuckle (C) to move the sheave to the right.
3. Remove variable speed drive belt (D) and install the replacement belt.
4. Adjust the variable speed drive belt. See Feeder House Variable Speed Drive Belt—Adjusting.

MH69740,000085E-19-11NOV20

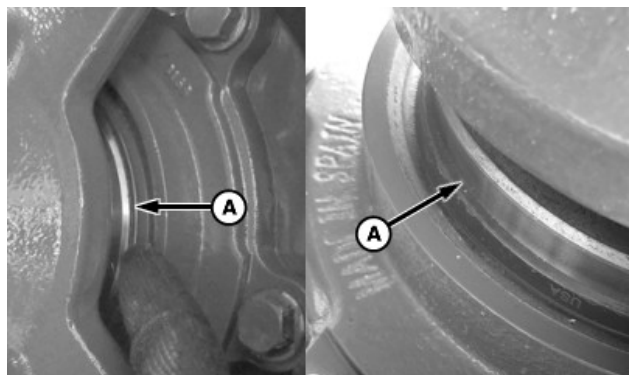
## Feeder House Top Shaft Sprockets



- A—Dimension 12 mm (1/2 in)

H39620—UN—11OCT88

## Feeder House Variable Speed Drive Sheave Gap—Adjusting



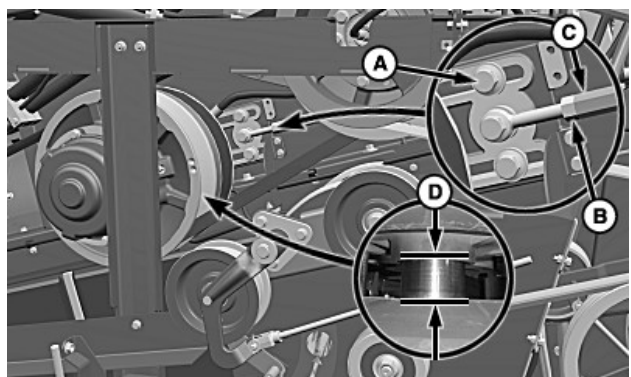
H131065—UN—19AUG20

Closed/Open

A—Driver Cylinder

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

**IMPORTANT:** Sheave gap should only be adjusted if the driver cylinder (A) is fully open.



H127713—UN—13FEB20

A—Cap Screw (4 used)  
B—Nut  
C—Turnbuckle  
D—Sheave Gap

1. Loosen cap screws (A) around the variable speed drive sheave.
2. Loosen nut (B) and adjust the turnbuckle (C).
3. Set the sheave gap (D) to specification.

### Specification

Variable Speed Drive  
Sheave—Gap. . . . . 10 mm  
(5/16 in)

4. Tighten the cap screws to specification.

### Specification

Cap Screws—Torque. . . . . 303 N·m  
(223 lb·ft)

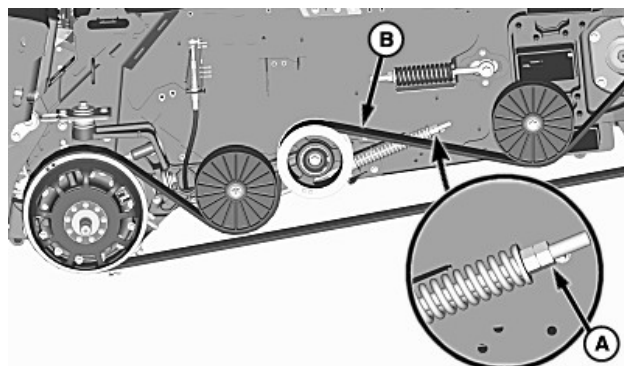
5. Tighten the nut to specification.

### Specification

Nut—Torque. . . . . 60 N·m  
(44 lb·ft)

MH69740,00008D7-19-11NOV20

## Feeder House Front Drive Belt—Replacing



H127531—UN—23SEP19

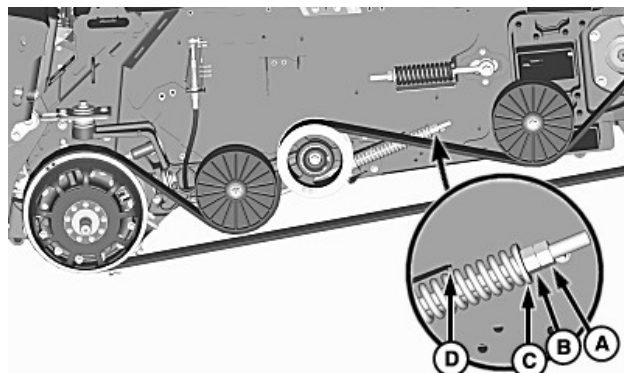
A—Nut (2 used)  
B—Front Drive Belt

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the front drive belt (B).
2. Remove the front drive belt and install the replacement belt.
3. Adjust the front drive belt. See Feeder House Front Drive Belt—Adjusting.

MH69740,00008CF-19-11NOV20

## Feeder House Front Drive Belt—Adjusting



H127530—UN—23SEP19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

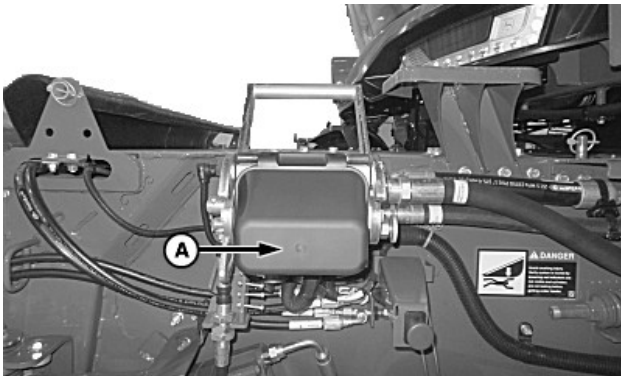
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

**Specification**

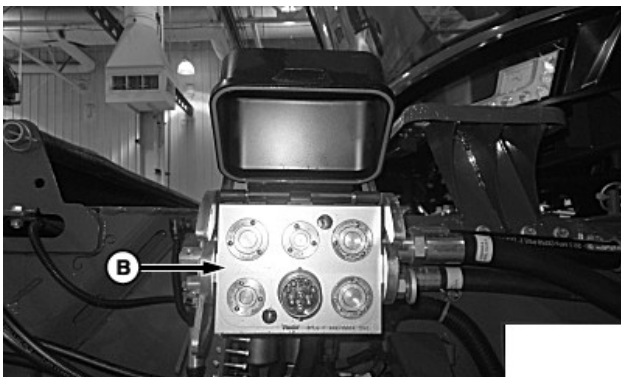
Lock Nut—Torque. . . . . 57 N·m  
(42 lb·ft)

MH69740,00008D0-19-11NOV20

## Attach Multicoupler and Single-Point Latching



H126671—UN—12JUL19



H128991—UN—12FEB20

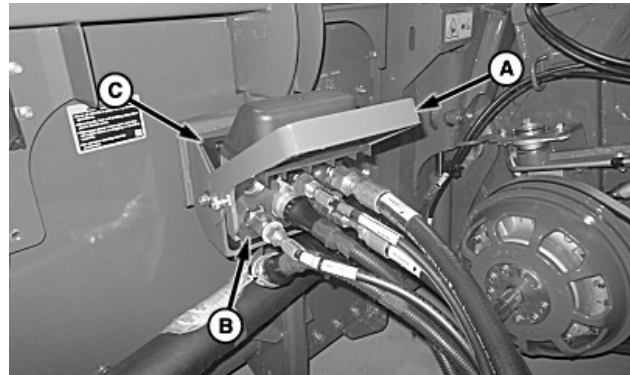
A—Cover  
B—Multicoupler Face

**IMPORTANT:** Do not actuate the latch pins with the header on the ground. If the multicoupler must be actuated with the header on the ground, unhook the cable from the handle.

To prevent hydraulic system contamination, clean the multicoupler surface with an electrical contact cleaner before connecting.

1. Open the multicoupler covers (A) (header and

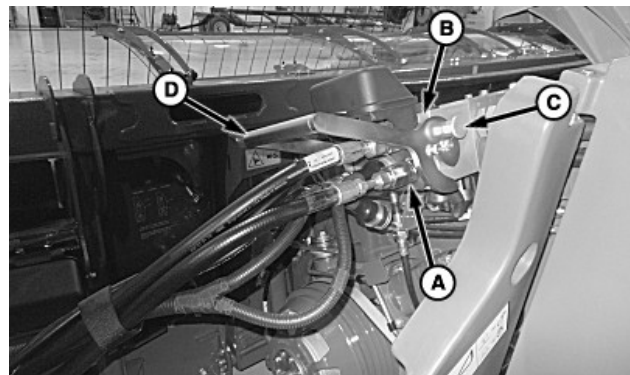
combine) and clean the multicoupler face (B) of any dirt and debris.



H126673—UN—12JUL19

A—Handle  
B—Multicoupler  
C—Storage Bracket

2. Open handle (A) and remove the multicoupler (B) from the storage bracket (C).



H126674—UN—12JUL19

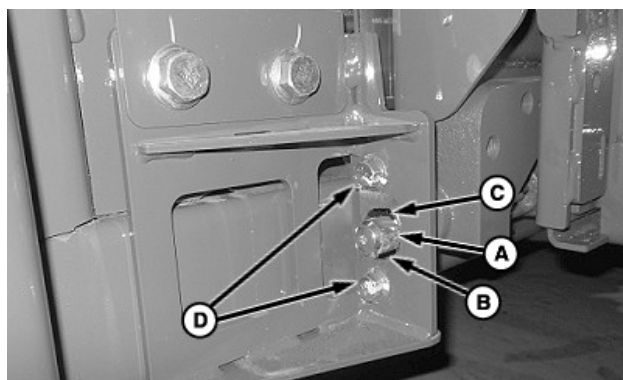
A—Multicoupler  
B—Receptacle  
C—Knob  
D—Handle

**IMPORTANT:** To prevent hydraulic system contamination, clean the multicoupler surfaces with an electrical contact cleaner before connecting.

**NOTE:** To prevent damage to the latching cable, a shear screw is attached to the handle. Attempts to actuate the latching pins with the header on the ground results in screw shearing. See Shear Screw Location later in this section.

3. Install the multicoupler (A) onto the receptacle (B).
4. Pull and hold knob (C) to close the handle (D).
5. When the multicoupler handle is fully closed, the knob automatically locks the couplers together.





H131811—UN—30SEP20

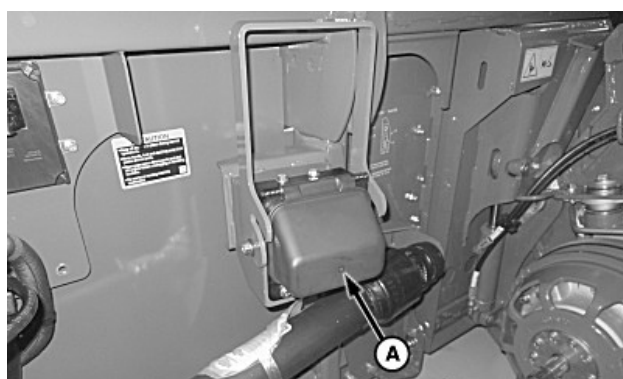
- A—Latch Pin  
B—Lower Gap  
C—Upper Gap  
D—Cap Screw (2 used)

**NOTE:** With the header attached, the latch pins must move freely through the latch plate holes. If the latch pins do not extend through the latch plates, make sure that the latching plates on the header are properly adjusted.

6. Latch pins (A) must move freely through the latch plate holes in the header when the multicoupler is latched. Latch plate must contact the frame. Less clearance must be maintained between the lower gap (B) of the plate and the latch pin rather than the upper gap (C) of the plate and latch pin. This may require the latch plate to be flipped.
7. **If adjustment is needed:** Remove cap screws (D), flip the plate end for end, and reinstall.
8. Tighten the cap screws to specification.

#### Specification

Latch Plate Cap  
Screws—Torque . . . . . 130 N·m  
(96 lb·ft)



H126675—UN—12JUL19

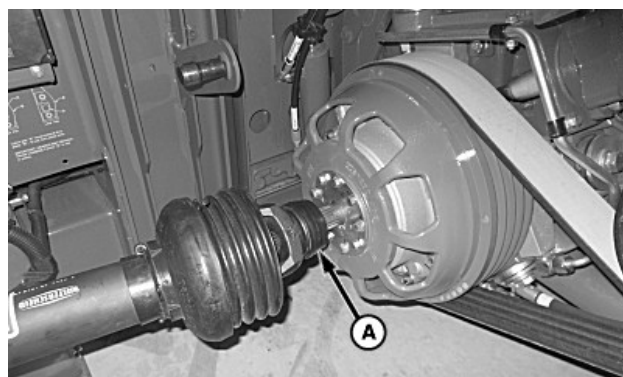
- A—Cover

9. Rotate cover (A) into the storage position.
10. Remove the telescopic shaft from the storage

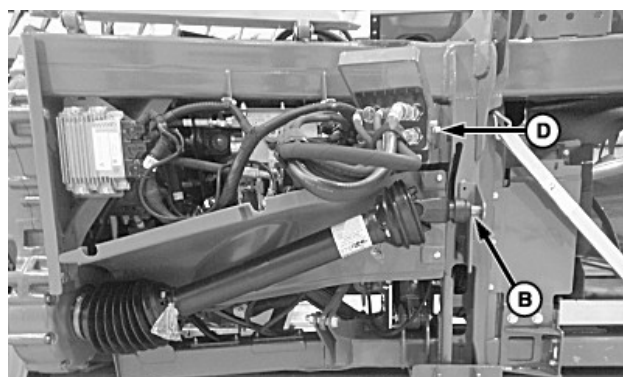
position and install onto the feeder house backshaft, making sure that the locking collar locks fully.

MH69740,0000860-19-30SEP20

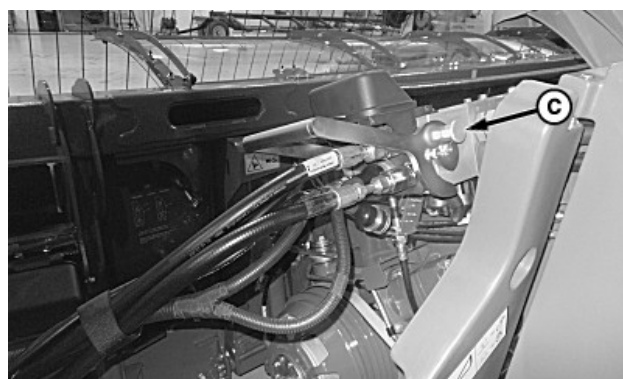
## Attaching and Detaching Header from Feeder House



H127423—UN—16SEP19



H127424—UN—16SEP19



H127425—UN—16SEP19

- A—Locking Collar  
B—Storage Position  
C—Knob  
D—Multicoupler Storage Position

**CAUTION:** Do not leave driveshafts on the machine. Personal injury or machine damage may occur if the feeder house is accidentally engaged.

**IMPORTANT:** Driveshafts with U-joints are used on the left-hand and right-hand sides of all approved headers.

*NOTE: For complete attaching and detaching procedures, refer to the header Operator's Manual.*

1. Disconnect telescoping driveshaft from the feeder house at locking collar (A) on both sides of the machine.
2. Place the telescoping driveshaft in storage position (B).

**IMPORTANT:** Latch pins are not to be actuated with the header on ground. If multicoupler must be actuated with the header on ground, unhook the cable from the handle.

*NOTE: Latch pins should be fully retracted when the handle is up all the way against the stop. Adjust cable mounting if the latch pins are not fully retracted. See Feeder House Latch—Adjusting.*

3. Pull and hold knob (C) to release the lock while raising handle to disconnect the multicoupler.
4. Place and lock the multicoupler in storage position (D).

MH69740,0000861-19-05AUG20

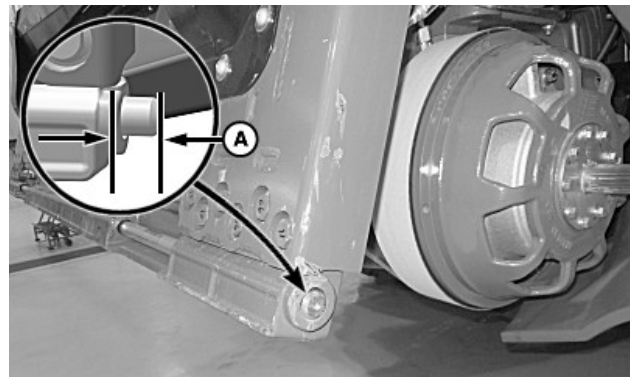
A—Shield  
B—Lock Nut (2 used)

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key.

1. Open the left-hand feeder house shield (A).
2. Loosen the cable lock nuts (B).

**IMPORTANT:** Verify that the handle is against the stop on the multicoupler. Failure to verify that the handle is against the stop results in inaccurate pin dimensions and could result in the header falling off while harvesting or transporting.

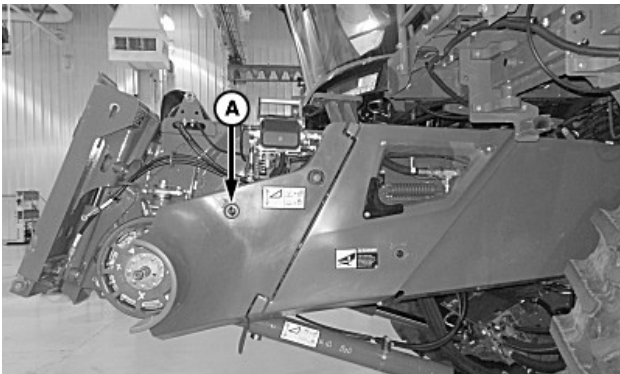
3. Rest the multicoupler handle against the stop.



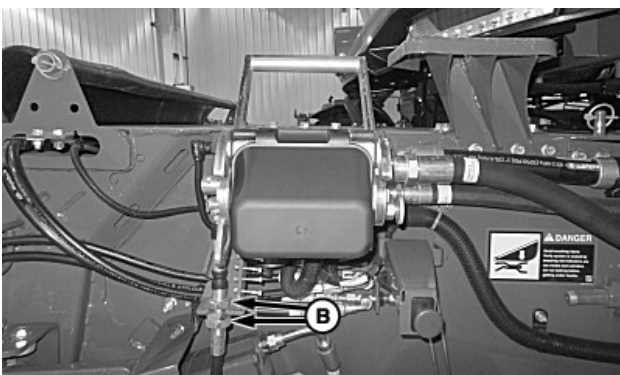
H128613—UN—23JAN20

Left-Hand Latching Pin

## Feeder House Latch—Adjusting



H128611—UN—23JAN20



H128612—UN—23JAN20

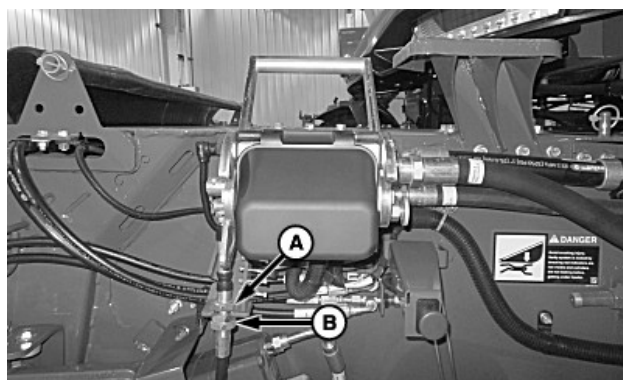
A—Dimension

*NOTE: Moving the cable "up" in the bracket pulls the pin farther in.*

*Moving the cable "down" in the bracket pushes the pin farther out.*

4. Adjust the cable in the bracket as needed for proper pin adjustment:
  - Left-hand latching pin must be flush to +/- 2 mm (0.08 in) (A).

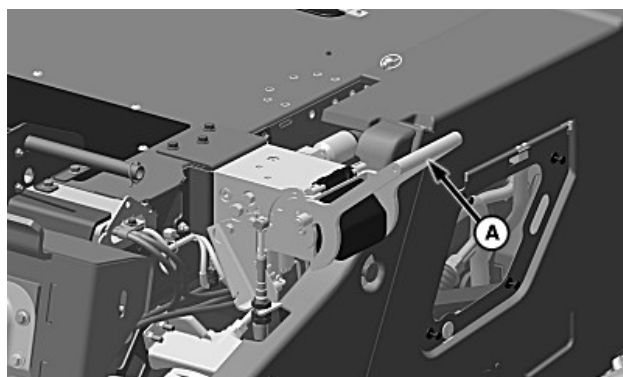




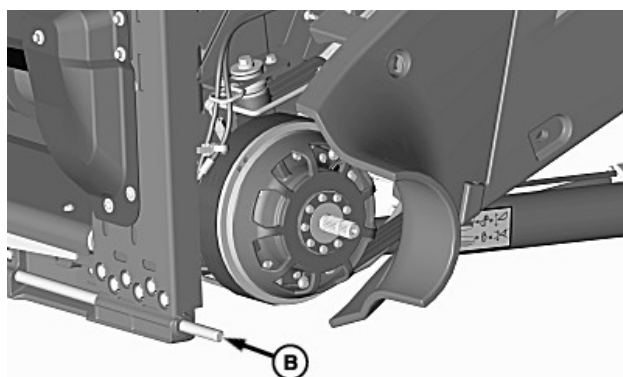
H128614—UN—23JAN20

A—Top Lock Nut  
B—Bottom Lock Nut

5. Hold the bottom lock nut (B) and tighten the top lock nut (A).



H128615—UN—24JAN20



H126679—UN—15JUL19

A—Multicoupler Handle  
B—Pin (2 used)

**IMPORTANT:** Failure to verify that the pins are set to the specified dimensions could result in the header falling off while harvesting or transporting.

6. Fully lower the multicoupler handle (A) and verify that the pins (B) (both sides) are set to specification. Readjust if not set to specification.

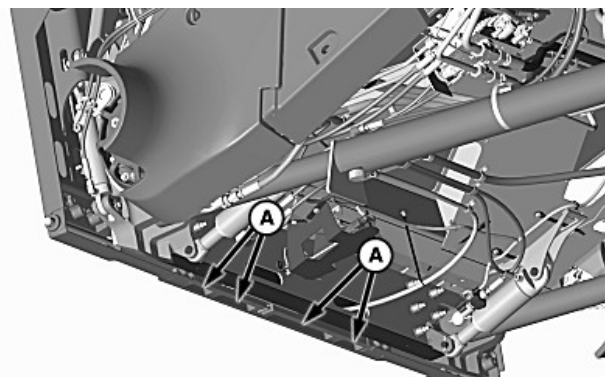
**Specification**

Feeder House Pins—Distance. . . . . 45—52 mm  
(1-3/4—2 in)

7. Close the left-hand feeder house shield.

MH69740,0000862-19-11NOV20

## Feeder House Latching Pins (Cleanout)



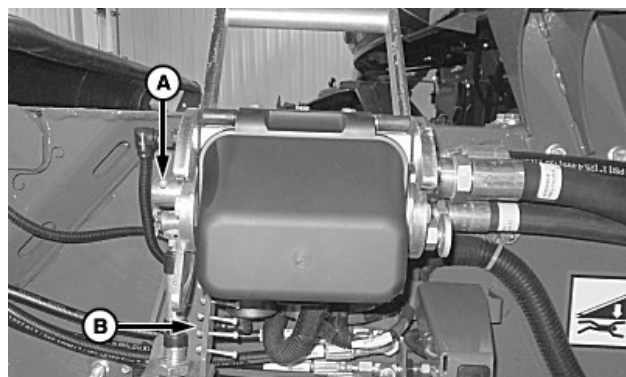
H126683—UN—16JUL19

A—Cleanout Location

If latch pins move hard on lateral tilt feeder houses, clean crop debris from locations (A).

MH69740,0000865-19-06FEB20

## Shear Screw Location



H126688—UN—16JUL19

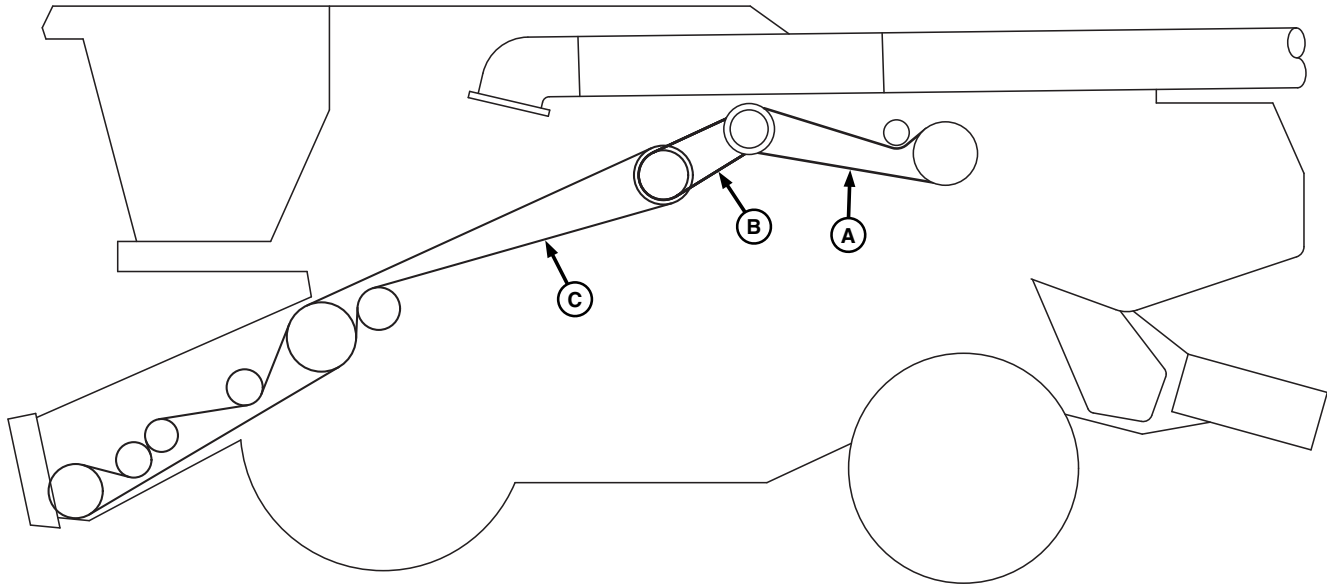
A—Shear Screw  
B—Extra Shear Screw (3 used)

**NOTE:** Three extra shear screws are provided.

If shear screw (A) breaks, remove and replace with an extra shear screw (B).

MH69740,0000867-19-12FEB20

## Drive Belts—Left-Hand



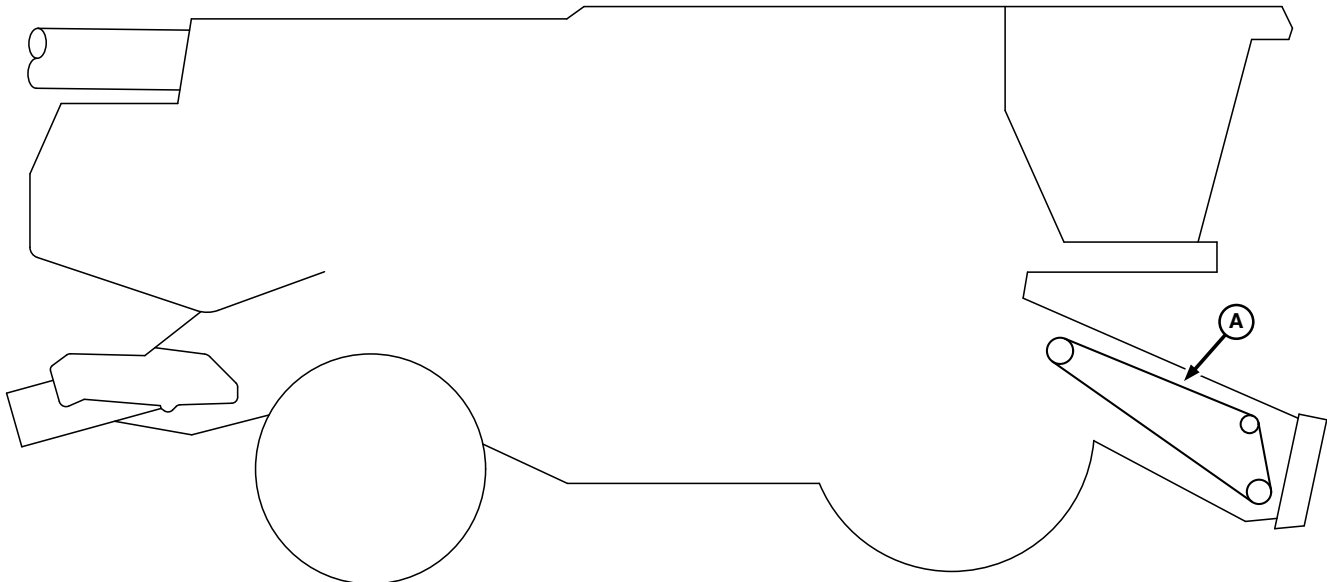
A—Rear Fixed Drive Belt  
B—Feeder House Variable Drive Belt

C—Feeder House Fixed Drive Belt

H127549—UN—30JAN20

MH69740,00008D9-19-19FEB20

## Drive Chain—Right-Hand



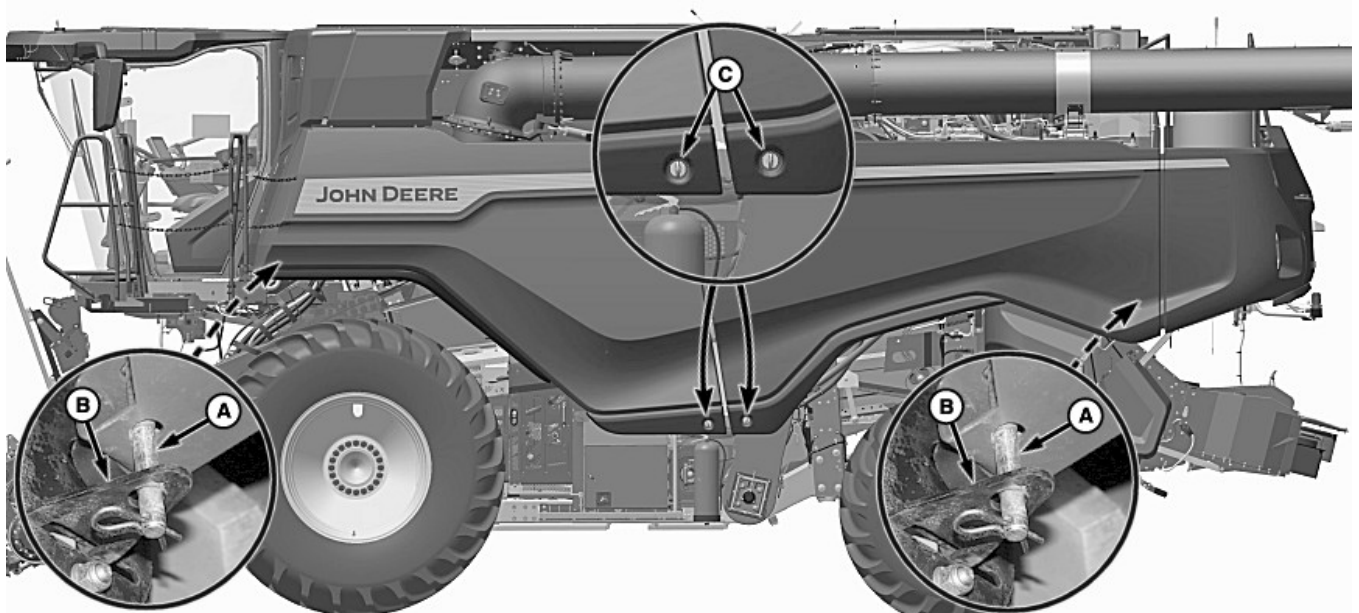
A—Feeder House Conveyor Drive Chain

H127550—UN—08OCT19

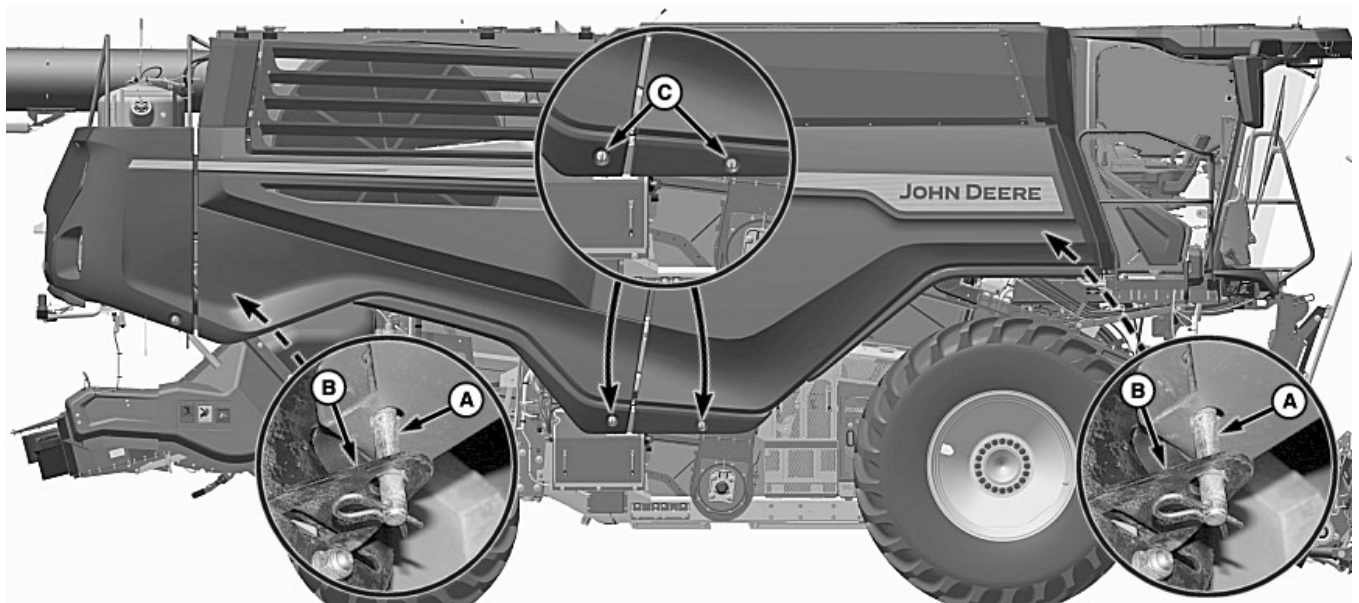
MH69740,00008DA-19-19FEB20

# Shields

## Gull Wing Doors



H126747—UN—02DEC19



H126748—UN—02DEC19

A—Pin  
B—Locking Plate

C—Latch

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Pinning and latch lever operation is the same on both sides of machine.

1. Remove spring clip and pin (A) from locking plate (B). Reinstall spring clip onto pin.
2. Turn latch (C) and pull out on the gull wing door to raise.

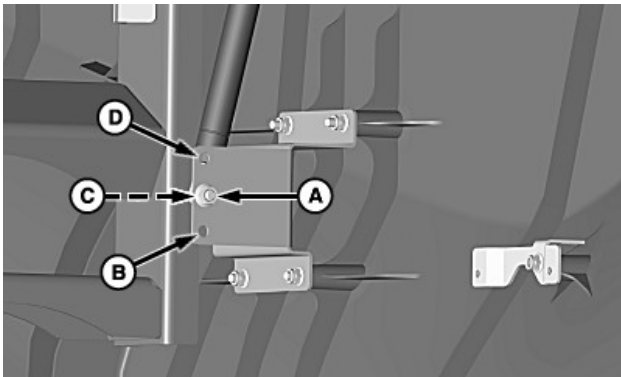
## Gull Wing Doors and Shields

Before operating the machine, verify that all the gull wing doors and shields are attached and closed.

OU06075.0004EB0-19-01JUL20

MH69740.0000868-19-06FEB20

## Gull Wing Door Cylinder Adjustment



H126763—UN—24JUL19

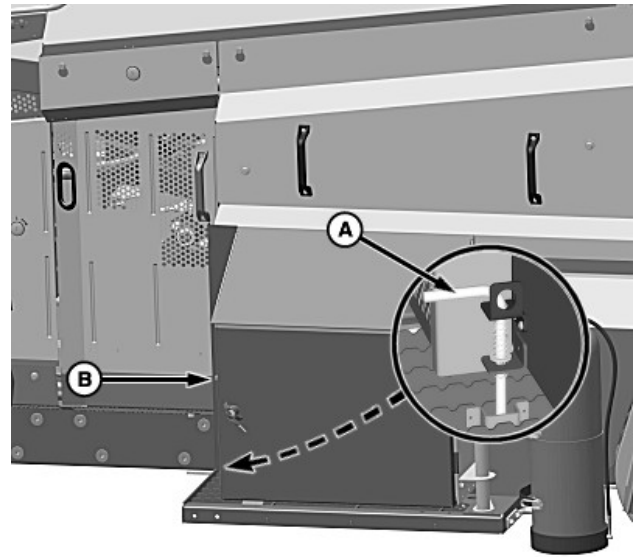
- A—Nut
- B—Bottom Hole
- C—Middle Hole
- D—Upper Hole

**NOTE:** Bottom hole is used to lower the overall height of the gull wing door when in the open position. Upper hole is used to raise the overall height of the gull wing door when in the open position.

Remove nut (A) from the cylinder and move to the desired hole (B—D).

MH69740,0000869-19-24JUL19

## Toolbox (Style B)



H132157—UN—30OCT20

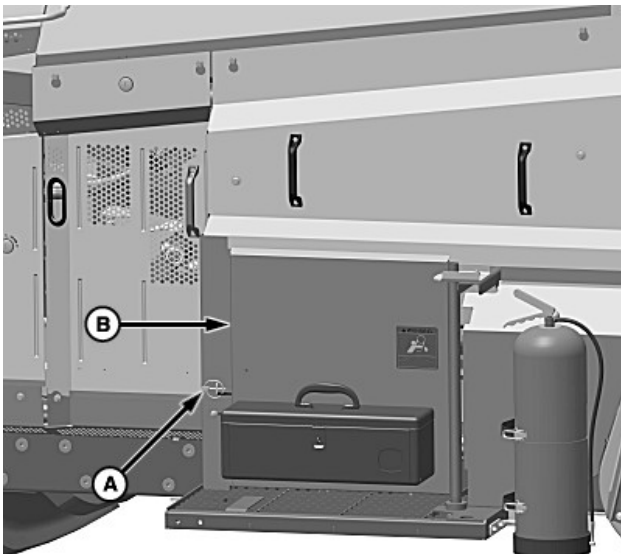
Toolbox (Style B)

- A—Latch
- B—Toolbox

1. Pull the pin in latch (A).
2. Lift and swing the toolbox (B) outward.

## Left-Hand Side Shields

### Toolbox (Style A)

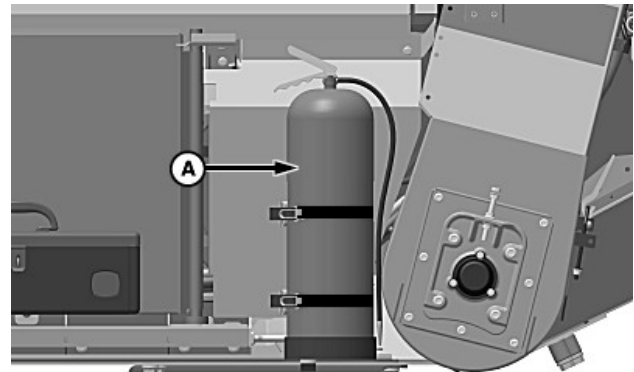


H132156—UN—30OCT20

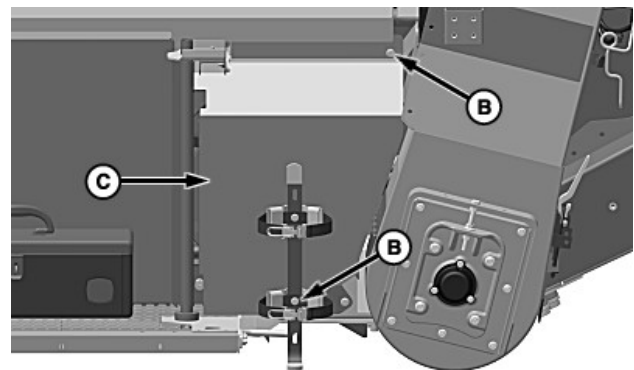
Shield (Style A)

1. Remove quick-lock pin (A).
2. Open the shield (B).

## Rear Shield



H132366—UN—12NOV20

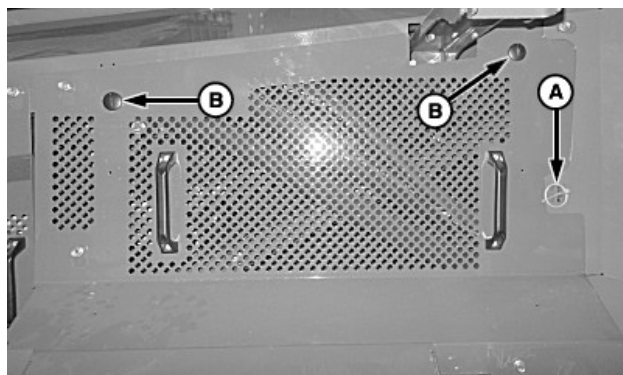


H132367—UN—12NOV20

- A—Fire Extinguisher
- B—Cap Screw and Nut (2 used)
- C—Rear Shield

1. Remove fire extinguisher (A).
2. Remove cap screws and nuts (B) and the shield (C).

### Middle Shield

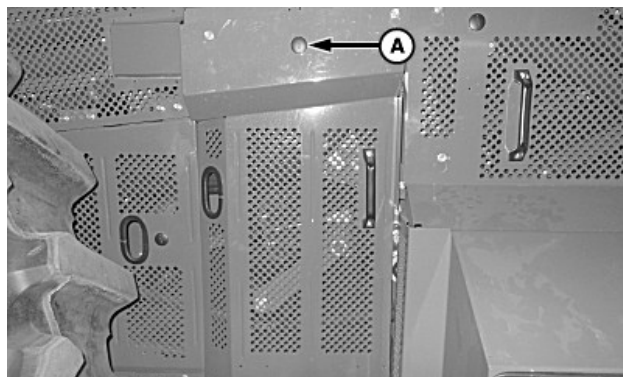


H126769—UN—25JUL19

A—Quick-Lock Pin  
B—Latch (2 used)

1. Remove quick-lock pin (A).
2. Turn latches (B) to unlock the shield.
3. Lift the shield upward and remove.

### Front Shield

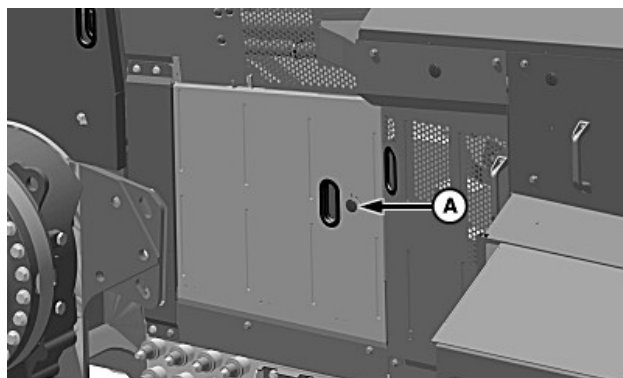


H126770—UN—25JUL19

A—Latch

1. Turn latch (A) to unlock the shield.
2. Lift the shield upward and remove.

### Fan Shield

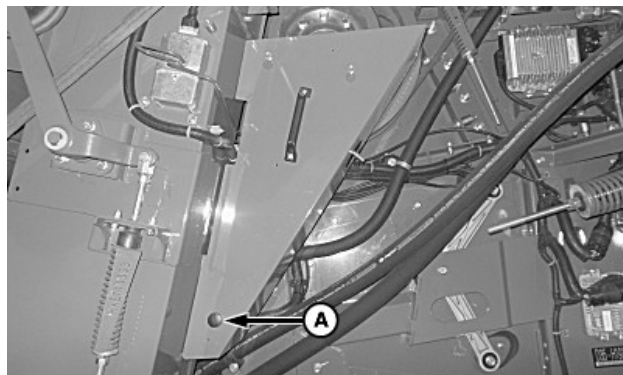


H126771—UN—27FEB20

### A—Latch

1. Turn latch (A) to unlock the shield.
2. Lift the shield upward and remove.

### Tailings Elevator Shield



H126772—UN—25JUL19

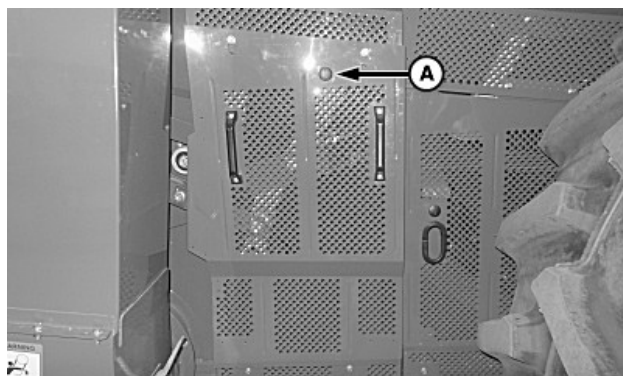
### A—Latch

1. Turn latch (A) to unlock the shield.
2. Lift the shield upward and remove.

MH69740,000086A-19-12NOV20

## Right-Hand Side Shields

### Front Shield

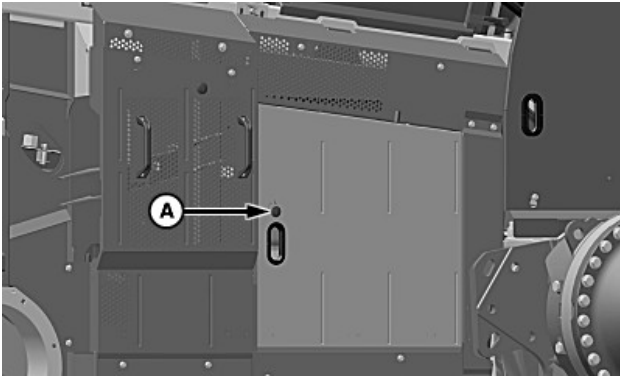


H126773—UN—25JUL19

### A—Latch

1. Turn latch (A) to unlock the shield.
2. Lift the shield upward and remove.

## Fan Shield



H126774—UN—27FEB20

A—Latch

1. Turn latch (A) to unlock the shield.
2. Lift shield upward and remove.

**CAUTION:** Shut OFF engine, set park brake, and remove key.

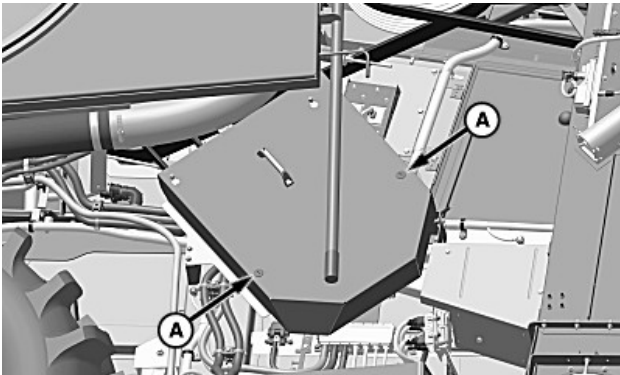
**IMPORTANT:** To prevent grain loss, verify that separator covers are flush against separator and underneath the edge of the separator. Covers are installed starting from the left-hand side (when facing the machine) and working to the right.

Do not lay covers in the hot sun or they become distorted.

1. Turn knob (A) counterclockwise.
2. Turn latches (B) to unlock shields (C).
3. Remove shields.

MH69740,000086C-19-02NOV20

## Chopper Pulley Shield



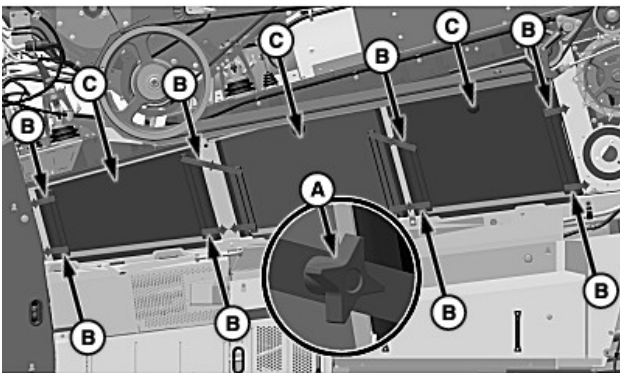
H126775—UN—25JUL19

A—Latch (2 used)

1. Turn latches (A) to unlock shield.
2. Lift shield upward and remove.

MH69740,000086B-19-06FEB20

## Separator Covers



H132198—UN—02NOV20

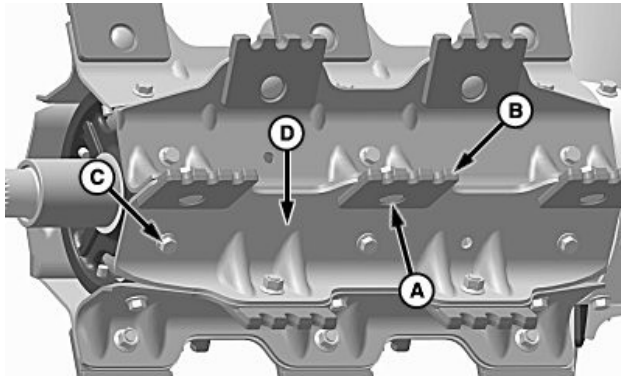
- A—Knob (8 used)  
 B—Latch (9 used)  
 C—Shield (3 used)

# Separator

## Feed Accelerator Wear Strips—Replacing



H129027—UN—17FEB20



H127161—UN—23AUG19

Feed Accelerator Wings and Wear Strips

- A—Round-Head Cap Screw  
B—Feed Accelerator Wear Strip  
C—Cap Screw  
D—Feed Accelerator Wing

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Feed accelerator wings and wear strips can be replaced without removing the feed accelerator. Replace feed accelerator wings and wear strips in sets of two and opposite of each other to maintain proper balance.

If the feed accelerator is removed from machine, or has been serviced, tighten clamp bolts before securing wings.

1. Remove round-head cap screws (A).
2. Replace the feed accelerator wear strips (B) as required.
3. Tighten round-head cap screws to specification.

### Specification

Feed Accelerator Wear Strip	
Round-Head Cap	
Screws—Torque. . . . .	107 N·m (79 lb·ft)

4. Remove cap screws (C).

5. Replace the feed accelerator wings (D) as required.
6. Tighten cap screws to specification.

### Specification

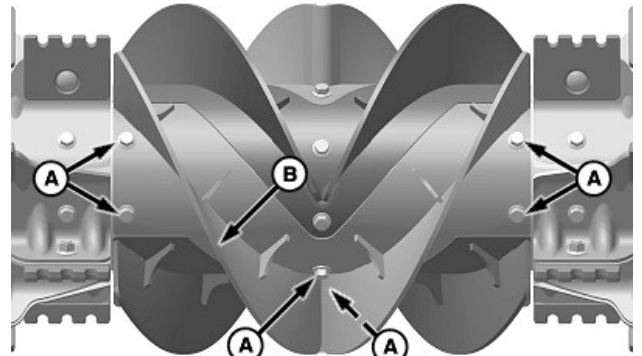
Feed Accelerator Wing Cap	
Screws—Torque. . . . .	69 N·m (51 lb·ft)

MH69740,00008A6-19-18FEB20

## Feed Accelerator Chevron Weldment—Replacing



H129027—UN—17FEB20



H129028—UN—17FEB20

Feed Accelerator Chevron Weldments

- A—Round-Head Cap Screw (6 used)  
B—Chevron Weldment (4 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Feed accelerator chevron weldments can be replaced without removing the feed accelerator. Replace chevron weldments in sets of two and opposite of each other to maintain proper balance.

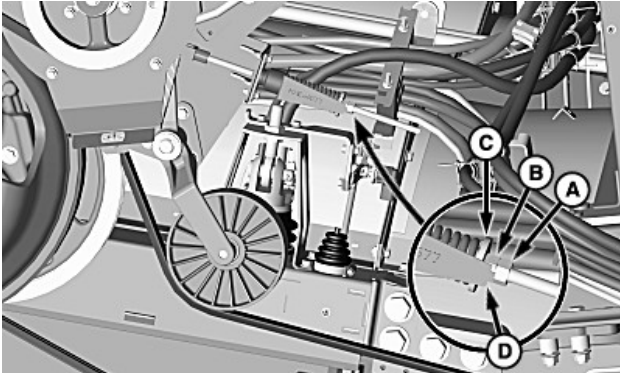
1. Remove round-head cap screws (A).
2. Replace the feed accelerator chevron weldment (B) as required.
3. Install round-head cap screws and tighten to specification.

### Specification

Cap Screws—Torque. . . . . 70 N·m  
(52 lb·ft)

OUO6075,0004DA8-19-17FEB20

## Feed Accelerator Drive Two-Speed Belt—Adjusting



H126813—UN—29JUL19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

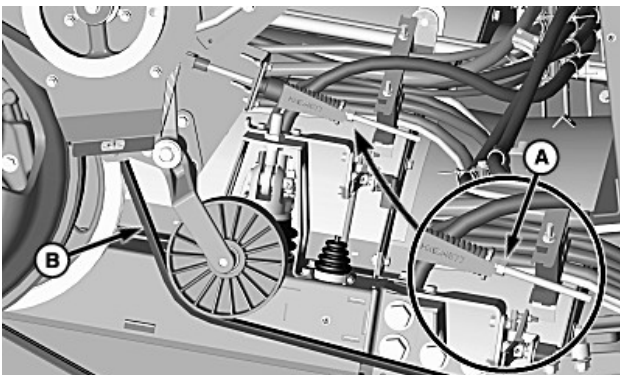
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000088A-19-12FEB20

## Feed Accelerator Drive Two-Speed Belt—Replacing



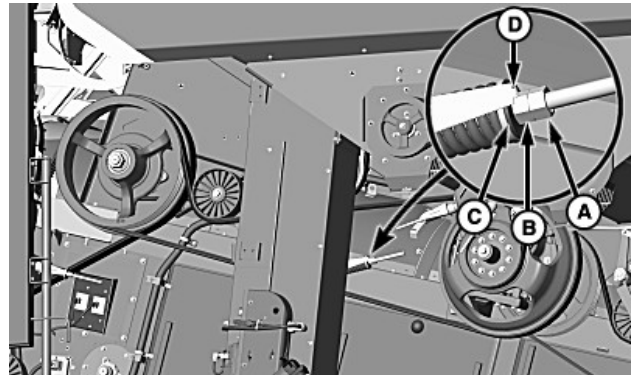
H126812—UN—29JUL19

A—Nut (2 used)  
B—Feed Accelerator Belt

1. Loosen nuts (A) to remove tension from the feed accelerator drive two-speed belt (B).
2. Remove feed accelerator drive two-speed belt and install replacement belt.
3. Adjust feed accelerator drive two-speed belt. See Feed Accelerator Drive Two-Speed Belt—Adjusting.

MH69740,000086D-19-06FEB20

## Feed Accelerator Drive Belt—Adjusting



H126933—UN—08AUG19

A—Lock Nut (2 used)  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

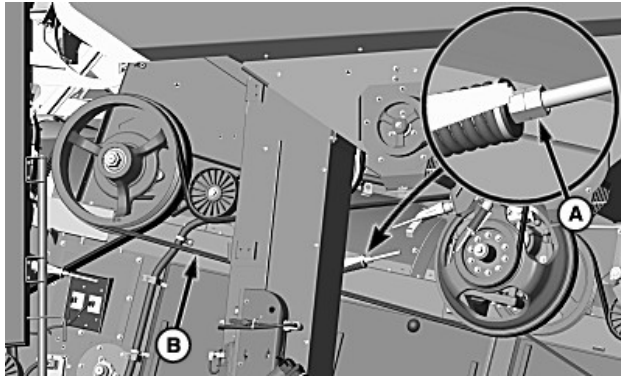
### Specification

Lock Nut—Torque. . . . . 57 N·m  
(42 lb·ft)

MH69740,0000888-19-19FEB20



## Feed Accelerator Drive Belt—Replacing



H126934—UN—08AUG19

A—Nut (2 used)

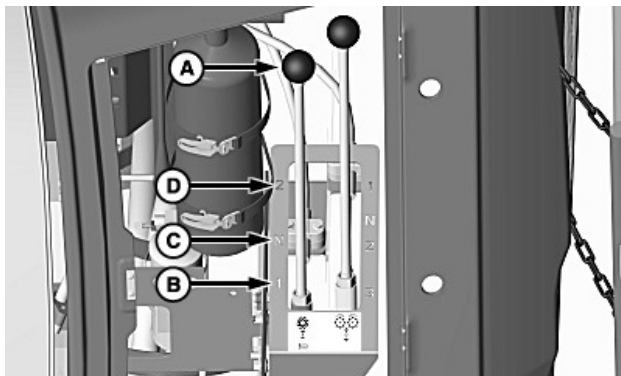
B—Feed Accelerator Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the feed accelerator drive belt (B).
2. Remove the loading auger drive belt. See Loading Auger Drive Belt—Replacing in the Grain Tank and Unloading System Section.
3. Remove feed accelerator drive belt and install replacement belt.
4. Install the loading auger drive belt. See Loading Auger Drive Belt—Replacing in the Grain Tank and Unloading System Section.
5. Adjust feed accelerator drive belt. See Feed Accelerator Drive Belt—Adjusting.

MH69740,0000889-19-23MAR20

## Feed Accelerator Drive—Changing Speed



H126829—UN—28OCT20

A—Handle

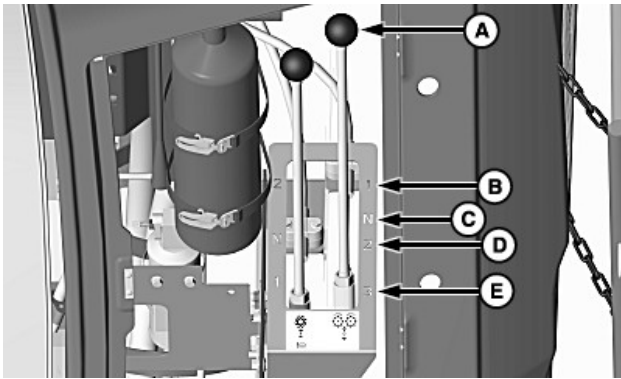
B—Low-Speed Position (1)

C—Neutral Position (N)

D—High-Speed Position (2)

*NOTE: See the Crop Settings section for recommended feed accelerator speed settings.*

## Rotor Gear Case—Changing Speed



H127413—UN—28OCT20

- A—Handle
- B—Position 1
- C—Neutral Position (N)
- D—Position 2
- E—Position 3

1. Turn off the separator.
2. Change the rotor gear case speed into desired position (B—E) using handle (A).

Gear	Factory Belt Speed Ranges	Optimal Belt Life Speed Ranges <sup>a</sup>
First (Low Range)	300—520 rpm	300—450 rpm
Second (Medium Range)	420—800 rpm	450—720 rpm
Third (High Range)	720—1300 rpm	720—1300 rpm

<sup>a</sup>Staying within the optimal belt life speed ranges will increase the rotor variable belt life because the variable sheaves operate closer to a 1:1 ratio.

MH69740,00008C2-19-27OCT20

## Concave Recommendations

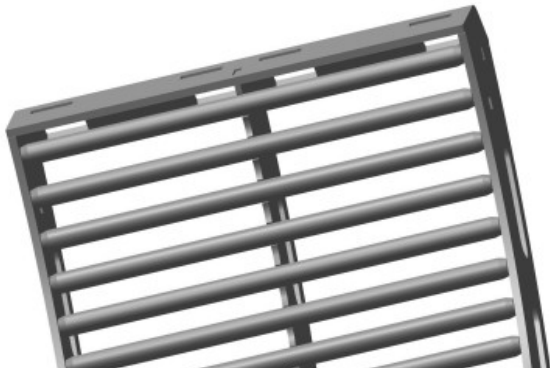
**NOTE:** For recommended machine settings for various crops, see the Crop Setting section for further information.

Concave Type	Corn	Soybeans	Wheat Barely Small Grains	Popcorn Food Corn	Sorghum (Milo) Sunflowers (Confection)	Sunflowers (Oil)	Canola
Small Wire	NR	NR	Best	NR	NR	Average	Best
Large Wire	Good	Good	Good	NR	Best	Best	Good
Round Bar	Best	Best	Average	Best	Average	Best	Average

Best = Provides best level of performance.  
 Good = Provides a good level of performance.  
 Average = Provides an average level of performance.  
 NR = Not recommended.

OOU6075,0004D9F-19-13FEB20

## Concave Types



Round Bar Multiple Crop Concave

H129024—UN—17FEB20



Large Wire Concave

H129025—UN—17FEB20



Small Wire Concave

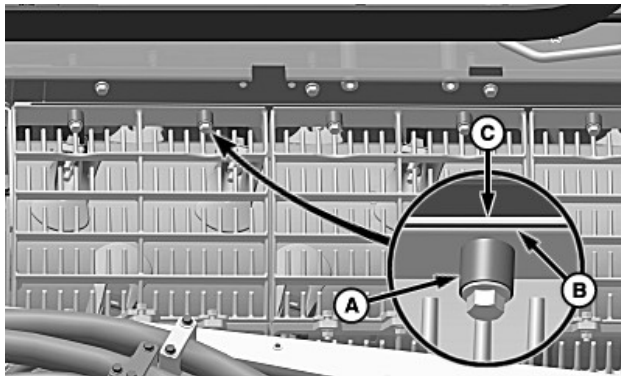
H129026—UN—17FEB20

Three different concaves are available for different crop and crop conditions.

- Round bar multiple crop concave is used for corn and soybeans.
- Large wire concave is used for soybeans and grain sorghum.
- Small wire concave is used for small grains.

OOU6075,0004DA7-19-17FEB20

## Separator Grate Spacers



H128621—UN—23JAN20

A—Spacer  
B—Separator Grate  
C—Separator Channel

Spacers are installed in storage position (as shown) from factory.

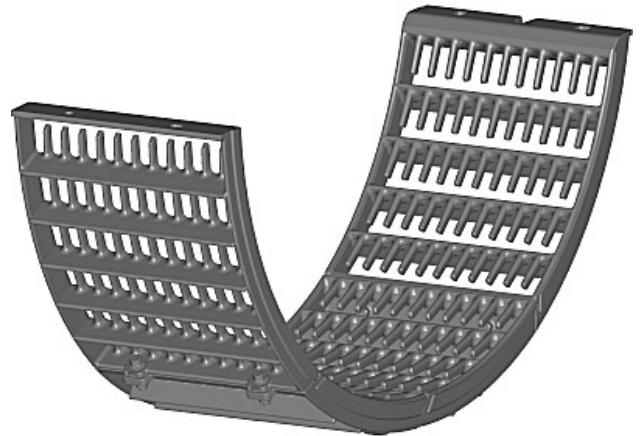
Spacers can be used in corn to reduce bits of cob in the grain tank sample.

**IMPORTANT: Spacers should be used in corn and soybeans only. Remove spacers for all other crops (place spacers in storage position as shown).**

Remove all separator grate spacers (A) from storage position (as shown) and install between separator grates (B) and separator channel (C).

MH69740,0000967-19-06FEB20

## Separator Grate Types



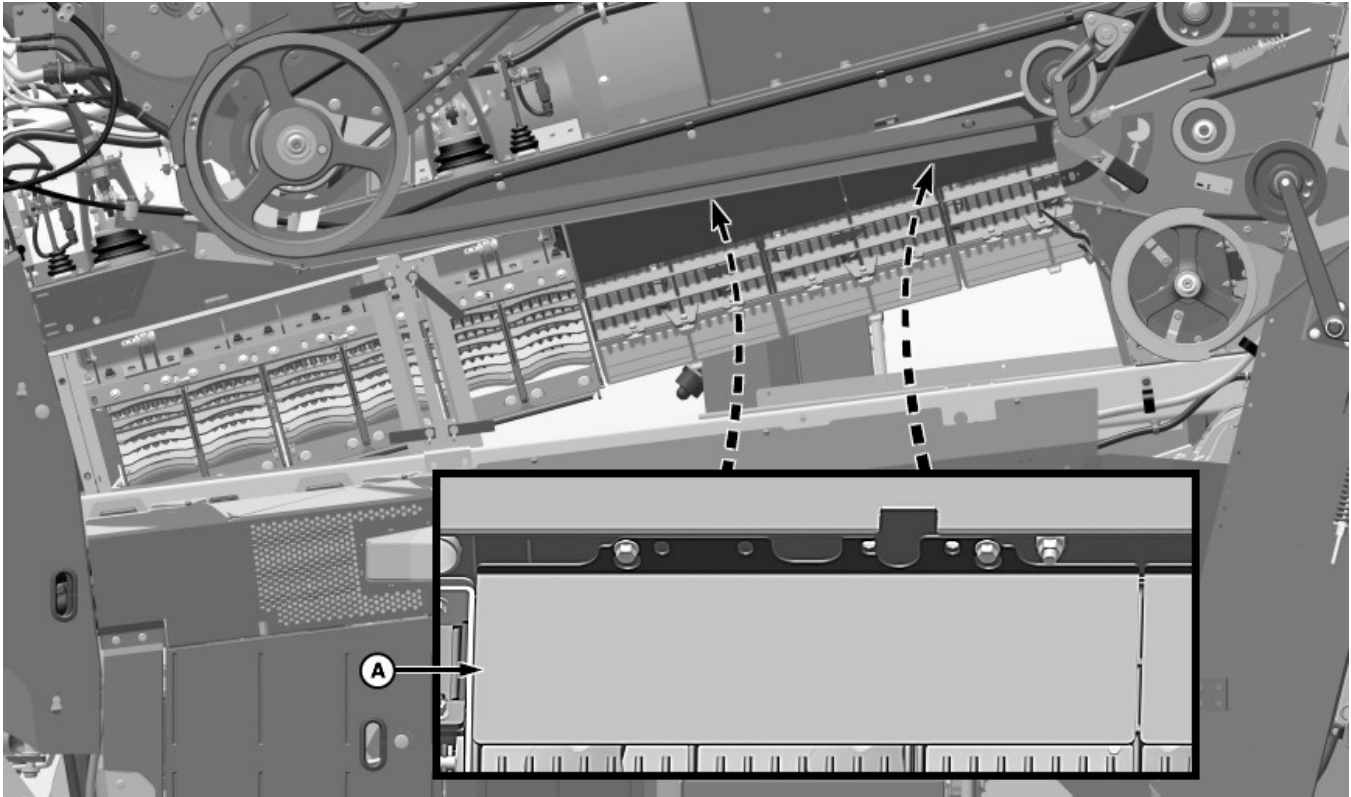
H107177—UN—06MAR13

Standard Cast Separator Grate

- Standard Cast Separator Grates - come standard on all machines.

MH69740,000096F-19-13FEB20

## Separator Grate Deflectors (If Equipped)



H128622—UN—23JAN20

### A—Separator Grate Deflectors

**NOTE:** Left-hand separator rail liners are shown. Right-hand separator rail liners are similar.

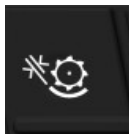
The separator grate deflectors (A) provide protection to the separator rail when harvesting abrasive crops.

Periodically inspect the left-hand and right-hand separator grate deflectors for wear.

Remove and replace separator grate deflectors as needed. See your John Deere dealer for further information.

MH69740,0000968-19-21FEB20

## Concave Sections (Active Concave Isolation)—Remove and Install

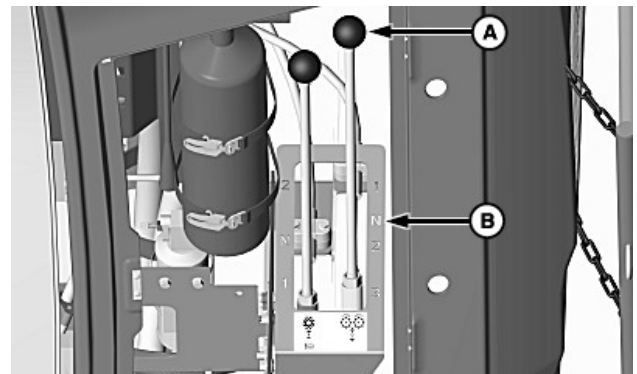


Threshing Clearance Adjust

H117012—UN—28MAR16

**CAUTION:** Concave sections are heavy and awkward to handle. Another person may be needed to remove and install concave sections.

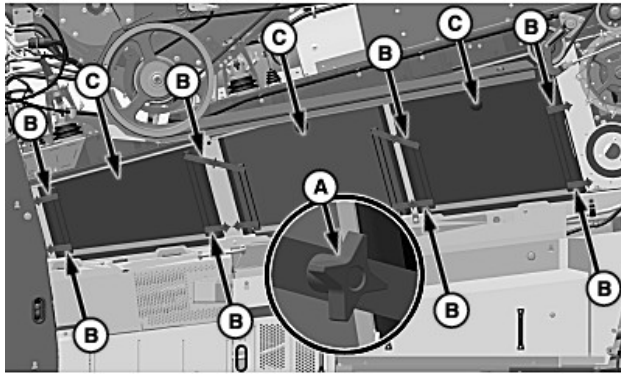
1. Start engine and press threshing clearance adjust switch.
2. To allow easier access to concaves, lower the threshing clearance to 0.
3. Shut OFF engine, set park brake, and remove key.



H128594—UN—28OCT20

**A—Handle**  
**B—Neutral Position**

4. Move handle (A) to shift the rotor gear case in neutral position (B).

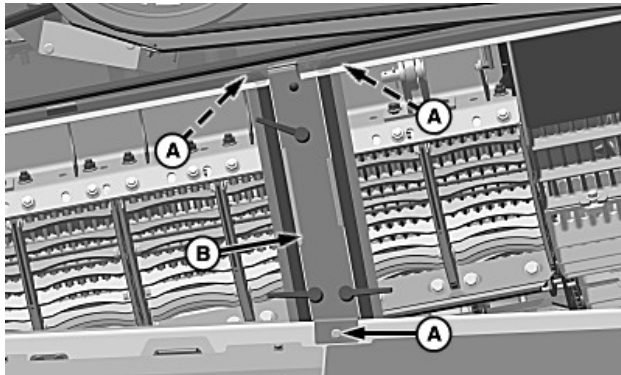


H132198—UN—02NOV20

- A—Knob (8 used)**  
**B—Latch (9 used)**  
**C—Separator Cover (3 used)**

*NOTE: Remove shielding as needed to access separator inspection covers.*

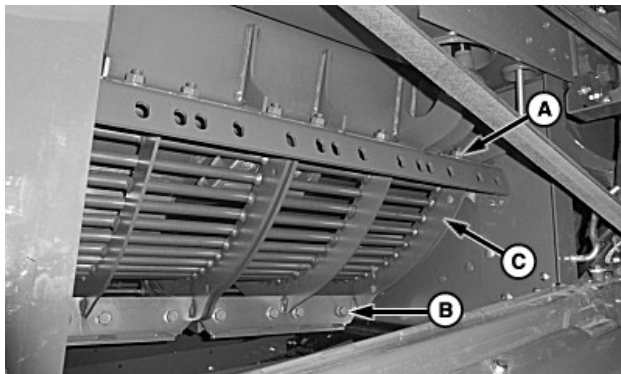
5. Turn knobs (A) counterclockwise.
6. Turn latches (B) and remove separator inspection covers (C).



H128717—UN—30JAN20

- A—Cap Screw (3 used)**  
**B—Brace**

7. Remove cap screws (A) and brace (B).

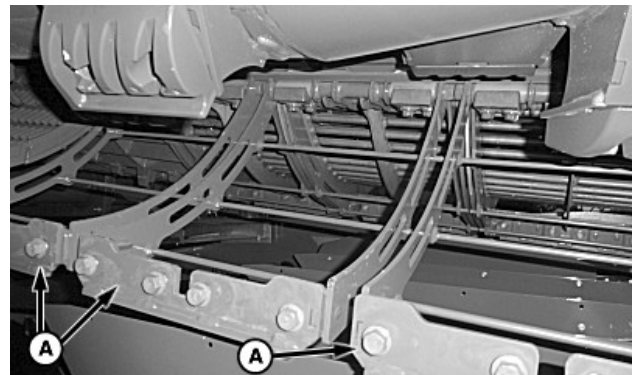


H128722—UN—30JAN20

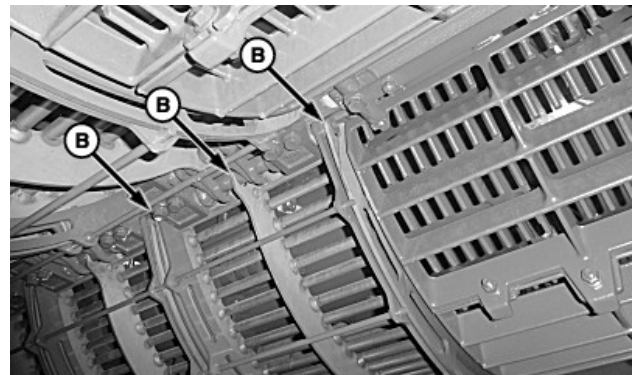
- A—Cap Screw and Nut (9 used)**  
**B—Cap Screw and Nut (12 used)**  
**C—Concave (3 used)**

8. Remove cap screw and nut (A).

9. Remove cap screw and nut (B) and the concave (C).
10. Remove the remaining concaves.



H128723—UN—30JAN20

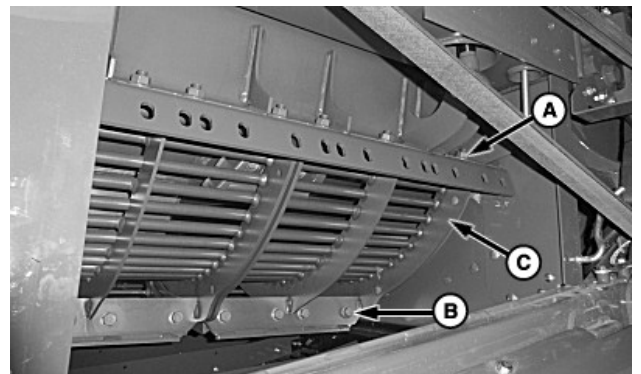


H128724—UN—30JAN20

- A—Concave Frame (3 used)**  
**B—Notch**

11. Install the concaves onto the concave frames (A).

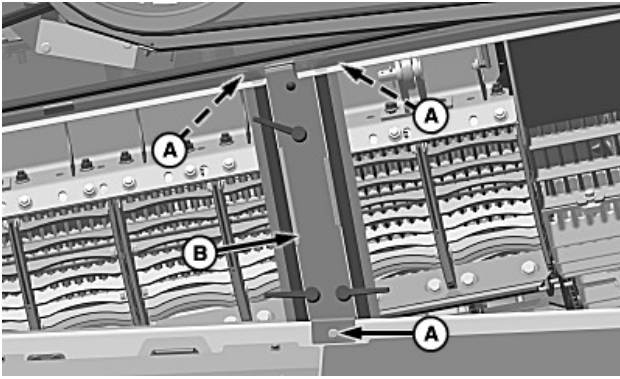
*NOTE: Verify that the notches (B) on the concaves are installed over the concave hinges as shown.*



H128722—UN—30JAN20

- A—Cap Screw and Nut (9 used)**  
**B—Cap Screw and Nut (12 used)**  
**C—Concave (3 used)**

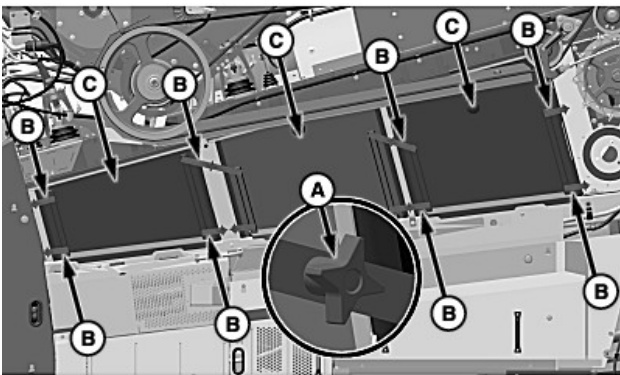
12. Install cap screws and nuts (B) through the concave and concave frame.
13. Lift concave (C) upward and install cap screws and nuts (A).



H128717—UN—30JAN20

A—Cap Screw (3 used)  
B—Brace

14. Install brace (B) using cap screws (A).



H132198—UN—02NOV20

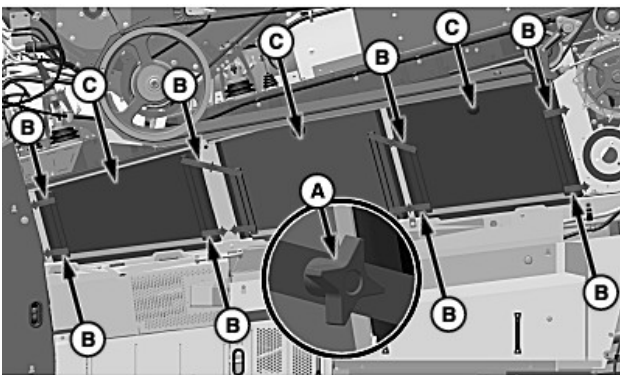
A—Knob (8 used)  
B—Latch (9 used)  
C—Separator Cover (3 used)

15. Install separator covers (C) and turn latches (B) to secure.

16. Turn knobs (A) clockwise to tighten.

MH69740,0000965-19-03NOV20

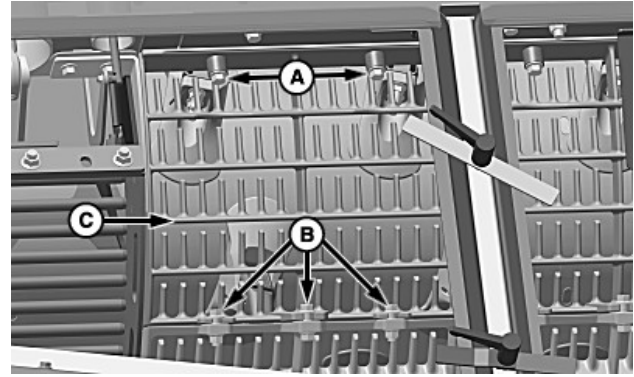
## Concave Leveling (Active Concave Isolation)



H132198—UN—02NOV20

A—Knob (8 used)  
B—Latch (9 used)  
C—Separator Cover (3 used)

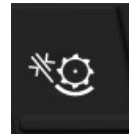
1. Open the front gull wing door, turn knobs (A) counterclockwise to loosen.
2. Turn latches (B) and remove separator covers (C).
3. Remove the front separator grate deflector. See Separator Grate Deflectors (If Equipped) for more information.



H129312—UN—02MAR20

A—Cap Screw (2 used)  
B—Cap Screw and Nut (3 used)  
C—Front Separator Grate

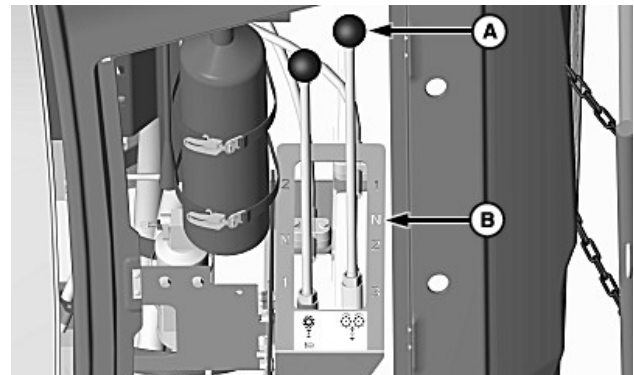
4. Remove cap screws (A), cap screws and nuts (B), and the front separator grate (C).



H117012—UN—28MAR16

*Threshing Clearance Adjust*

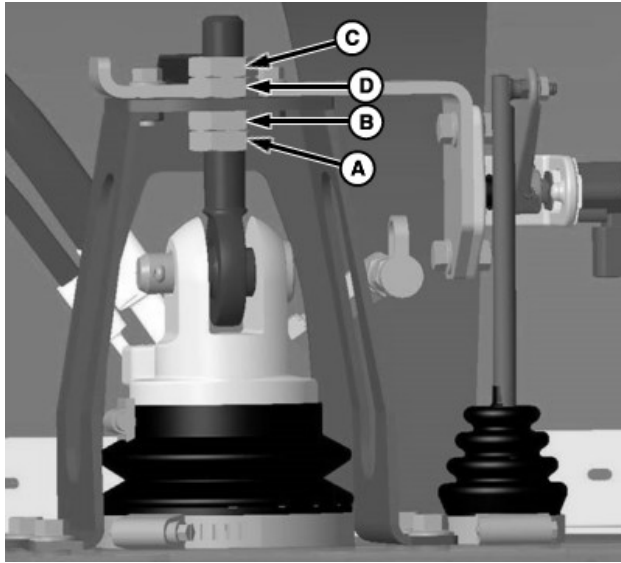
5. Start engine and press threshing clearance adjust switch.
6. Set threshing clearance to 0. See Calibrations Application Help or Operator's Station Help for further information.
7. Shut OFF engine, set park brake and remove key.



H128594—UN—28OCT20

A—Handle  
B—Neutral Position

8. Move handle (A) to shift the rotor gear case in neutral position (B).



H129454—UN—05MAR20

- A—Lower Lock Nut  
B—Lower Adjustment Nut  
C—Upper Lock Nut  
D—Upper Adjustment Nut

**NOTE:** Verify that the concave cylinders are fully retracted.

If the concave cylinders are not fully retracted see your John Deere Dealer for more information.

9. Loosen the lower lock nut (A), lower adjustment nut (B), and the upper lock nut (C) on the front and rear concave cylinders.
10. While turning the rotor counterclockwise by hand, tighten the upper adjustment nut (D) slowly on the front concave cylinder until the elements “tick” against the rotor. Back off the nut one full turn.
11. While turning the rotor counterclockwise by hand, tighten the upper adjustment nut (D) slowly on the rear concave cylinder until the elements “tick” against the rotor. Back off the nut one full turn.
12. While turning the rotor clockwise by hand, tighten the upper adjustment nut (D) slowly on the front concave cylinder until the elements “tick” against the rotor. Back off the nut one full turn.
13. While turning the rotor clockwise by hand, tighten the upper adjustment nut (D) slowly on the rear concave cylinder until the elements “tick” against the rotor. Back off the nut one full turn.
14. Tighten the lower adjustment nut on the front and rear concave cylinders to specification.

**Specification**

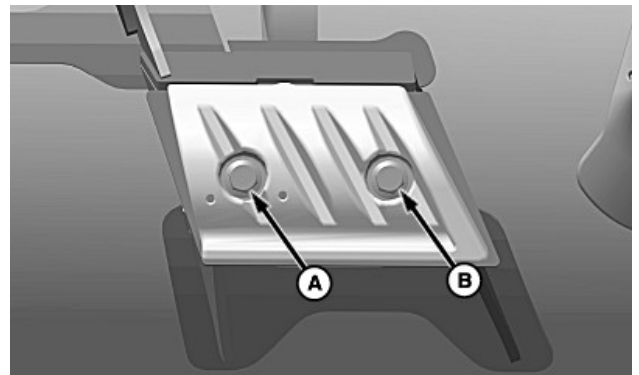
Lower Adjustment Nut—Torque. . . . . 69 N·m  
(51 lb·ft)

15. Tighten the upper and lower lock nuts.

16. Install previously removed separator grate and separator grate deflector.
17. Install previously removed separator covers.
18. Repeat on the opposite side of the machine.
19. Shift the rotor gear case back to the original gear setting.
20. Perform threshing clearance calibration. See Calibrations Application Help or Operator’s Station Help for further information.
21. Set the concave back to the desired position and resume harvesting.

MH69740,00008C3-19-03NOV20

## Threshing Elements and Tines—Remove and Install



H128623—UN—29JUN20



H128624—UN—23JAN20

- A—Cap Screw  
B—Cap Screw

**IMPORTANT:** Rotor is a balanced assembly. Elements and tines must be replaced in sets of three to maintain balance. Replacement kits are available through service parts and include new cap screws with pre-applied thread lock and sealer. Tines or elements that become loose may result in machine damage.

If tines or elements need to be removed for reasons other than replacement, mark location on tines/elements and rotor prior to removal. Install in same location as removed to maintain balance. Always use new cap screws.

Make sure to clean out tailings and front cross auger if tine replacement is due to broken or damaged tines. Failure to do so before initial start-up may allow broken tines to recirculate and cause tine damage to reoccur.

1. Shut OFF engine, set park brake, and remove key.
2. Remove separator grates or concave sections as needed to access rotor.
3. Inspect wear on threshing elements and separator tines.
4. Remove cap screws (A—B) and threshing element or tine.
5. If one element or tine needs replaced, replace all in the group. Example: If element 2 needs to be replaced, replace elements 1 and 3 also.
6. Use Threshing Elements and Separator Tine Location diagram for identifying elements and tines.
7. Install threshing element or tine using previously removed cap screws.
  - a. **Threshing Element:** Tighten cap screw (A) to specification. Tighten cap screw (B) to specification. Verify correct torque on cap screw (A).
  - b. **Separator Tine:** Tighten both cap screws to specification.

#### Specification

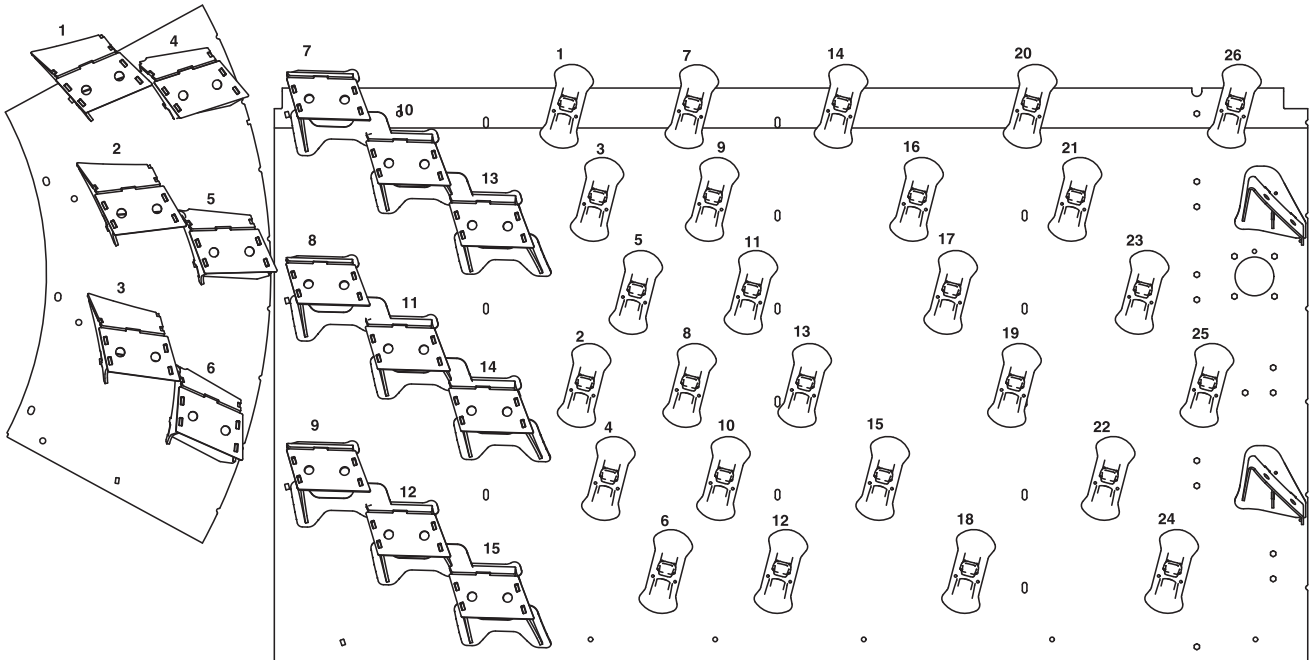
Threshing Element and  
Separator Tine Cap

Screws—Torque. . . . . 82 N·m  
(60 lb·ft)

MH69740,0000959-19-29JUN20



## Threshing Element and Separator Tine Location

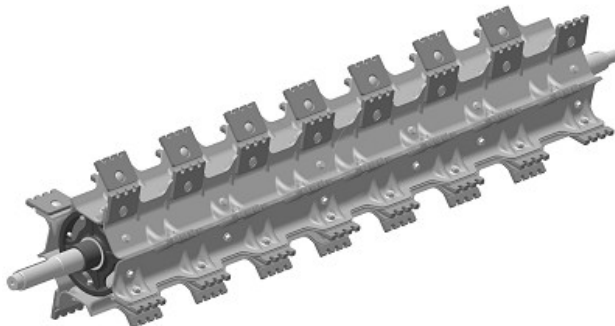


H128308—UN—06JAN20

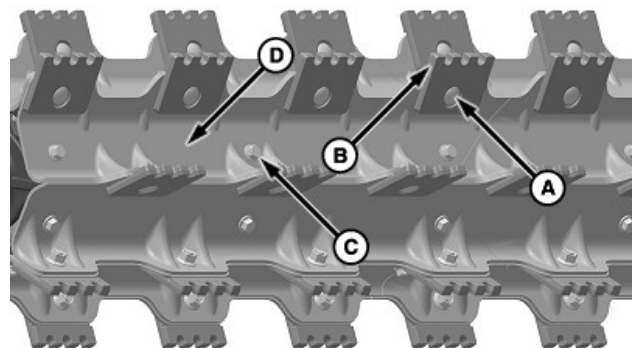
Threshing Element Groups	Separator Tine Groups	
Group 1 Elements = 1, 2, 3	Group 1 Tines = 1, 2	Group 8 Tines = 15, 16
Group 2 Elements = 4, 5, 6	Group 2 Tines = 3, 4	Group 9 Tines = 17, 18
Group 3 Elements = 7, 8, 9	Group 3 Tines = 5, 6	Group 10 Tines = 19, 20
Group 4 Elements = 10, 11, 12	Group 4 Tines = 7, 8	Group 11 Tines = 21, 22
Group 5 Elements = 13, 14, 15	Group 5 Tines = 9, 10	Group 12 Tines = 23, 24
	Group 6 Tines = 11, 12	Group 13 Tines = 25, 26
	Group 7 Tines = 13, 14	

MH69740,0000958-19-13FEB20

## Discharge Beater Wear Strip—Replacing



H129029—UN—17FEB20



H129031—UN—17FEB20

Discharge Beater Wings and Wear Strips

- A—Round-Head Cap Screw
- B—Discharge Beater Wear Strip
- C—Cap Screw
- D—Discharge Beater Wing

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Discharge beater wings and wear strips can be replaced without removing the discharge beater. Replace discharge beater wings in sets of two and opposite of each other to maintain proper balance.

If the discharge beater is removed from the machine, or has been serviced, tighten clamp bolts before securing wings.

Always replace hardware when replacing discharge beater wear strips.

1. Remove round-head cap screws (A) and replace discharge beater wear strips (B) as required. Tighten round-head cap screws to specification.

#### Specification

Discharge Beater Wear Strip	
Round-Head Cap	
Screws—Torque. . . . .	107 N·m (79 lb·ft)

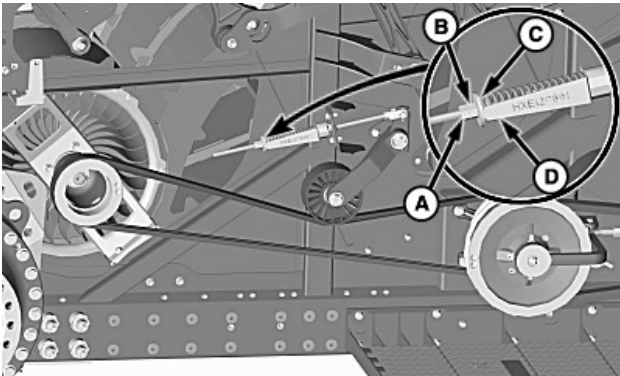
2. Remove cap screws (C) and replace discharge beater wings (D) as required. Tighten cap screws to specification.

#### Specification

Discharge Beater Wing Cap	
Screws—Torque. . . . .	69 N·m (51 lb·ft)

OUO6075,0004DA9-19-25JUN20

## Cleaning Fan Fixed Belt—Adjusting



H126833—UN—31JUL19

- A—Lock Nut
- B—Nut
- C—Washer
- D—Gauge

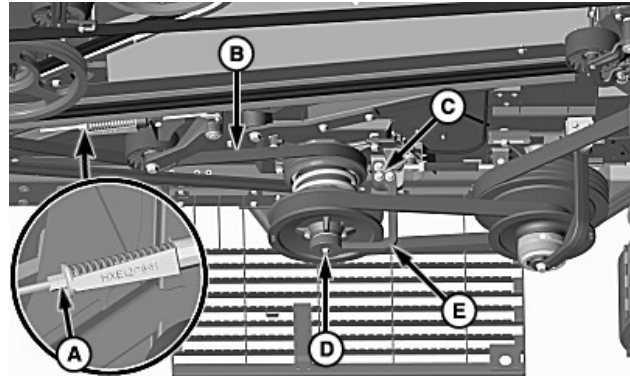
1. Remove the front left-hand shields to access cleaning fan belt.
2. Loosen lock nut (A) and tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

#### Specification

Lock Nut—Torque. . . . .	24 N·m (212 lb·in)
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MH69740,0000876-19-17FEB20

## Cleaning Fan Fixed Belt—Replacing



H126851—UN—01AUG19

- A—Nut (2 used)
- B—Cleaning Fan Belt
- C—Cap Screw (3 used)
- D—Cap Screw
- E—Bracket

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove the front left-hand shields to access the cleaning fan belt. See Left-Hand Side Shields.
2. Remove the cleaning fan fixed drive belt. See Cleaning Fan Fixed Drive Belt—Replacing.
3. Loosen nuts (A) to remove tension from cleaning fan belt (B).
4. Remove cap screws (C and D) and bracket (E).
5. Remove cleaning fan belt and install replacement belt.
6. Reinstall bracket and cap screws. Tighten cap screws to specification.

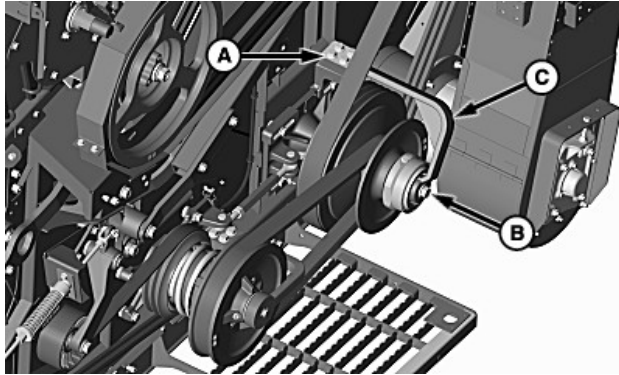
#### Specification

Cap Screw (C—D)—Torque. . . . .	128 N·m (94 lb·ft)
---------------------------------	-----------------------

7. Adjust cleaning fan fixed belt. See Cleaning Fan Fixed Belt—Adjusting.
8. Install previously removed cleaning fan fixed drive belt.
9. Install previously removed front left-hand shields.

MH69740,0000877-19-05MAY20

## Cleaning Fan Variable Drive Belt—Replacing



H126854—UN—02AUG19

A—Cap Screw (4 used)  
B—Cap Screw  
C—Bracket

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove front left-hand shields. See Left-Hand Side Shields.
2. Remove tension from cleaning fan variable drive belt. See Cleaning Fan Variable Drive Sheave Gap—Adjusting.
3. Remove cap screws (A and B) and bracket (C).
4. Remove cleaning fan variable drive belt and install replacement belt.

**IMPORTANT:** Tighten cap screw (B) before tightening cap screws (A).

5. Reinstall bracket and cap screws and tighten to specification.

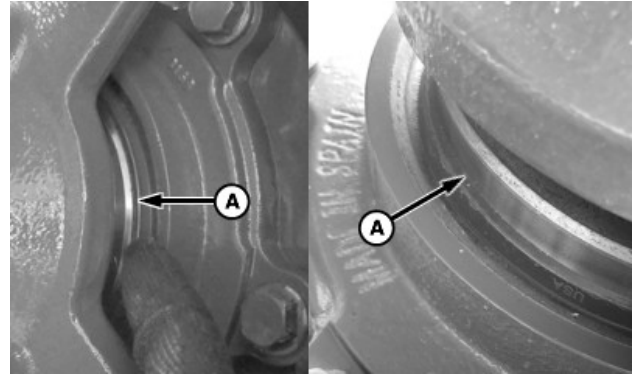
### Specification

Cap Screw (B)—Torque. . . . . 150 N·m  
(111 lb·ft)  
Cap Screw (A)—Torque. . . . . 128 N·m  
(94 lb·ft)

6. Adjust cleaning fan variable drive belt. See Cleaning Fan Variable Drive Sheave Gap—Adjusting.
7. Install previously removed front left-hand shields.

MH69740,0000879-19-21FEB20

## Cleaning Fan Variable Drive Sheave Gap—Adjusting

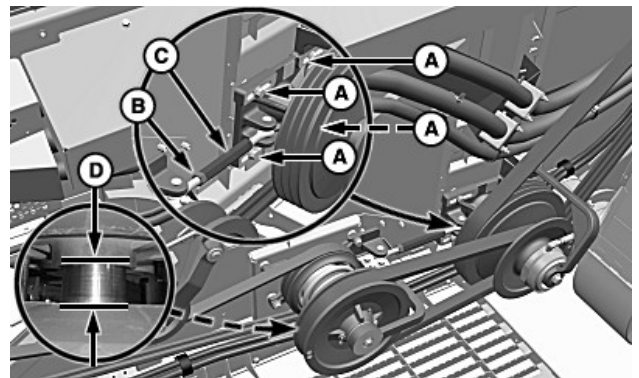


H131065—UN—19AUG20

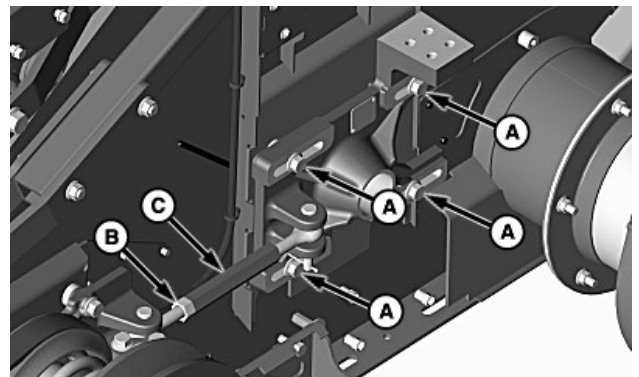
Closed/Open

A—Driver Cylinder

**IMPORTANT:** Sheave gap should only be adjusted if the driver cylinder (A) is fully open.



H127734—UN—13FEB20



H126853—UN—02AUG19

Driver Pulley Removed for Clarity

A—Cap Screw (4 used)  
B—Nut  
C—Turnbuckle  
D—Sheave Gap

1. Remove front left-hand shields. See Left-Hand Side Shields.
2. Loosen the tailings and cleaning fan drive belt. See Tailings and Cleaning Fan Drive Belt—Adjusting.

3. Loosen cap screws (A).
4. Loosen nut (B) and adjust the turnbuckle (C).

**IMPORTANT: Rotate the sheave when adjusting the gap to ensure that the belt is seated.**

5. Set the sheave gap (D) to specification.

**Specification**

Variable Speed Drive  
Sheave—Gap. . . . . 10 mm  
(25/64 in)

6. Tighten the nut and cap screws to specification.

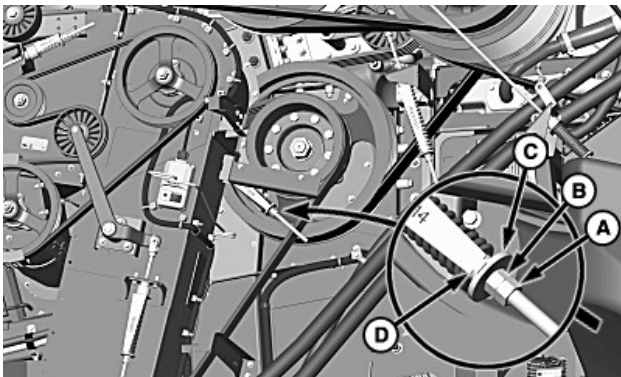
**Specification**

Nut (B)—Torque. . . . . 60 N·m  
(44 lb·ft)  
Cap Screw (A)—Torque. . . . . 83 N·m  
(61 lb·ft)

7. Tighten the tailings and cleaning fan drive belt. See Tailings and Cleaning Fan Drive Belt—Adjusting.

MH69740,00008D8-19-07AUG20

## Tailings and Cleaning Fan Drive Belt—Adjusting



H126855—UN—02AUG19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION: Shut OFF engine, set park brake, and remove key.**

1. Remove tailings elevator shield. See Left-Hand Side Shields.
2. Loosen lock nut (A).
3. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
4. Tighten lock nut.

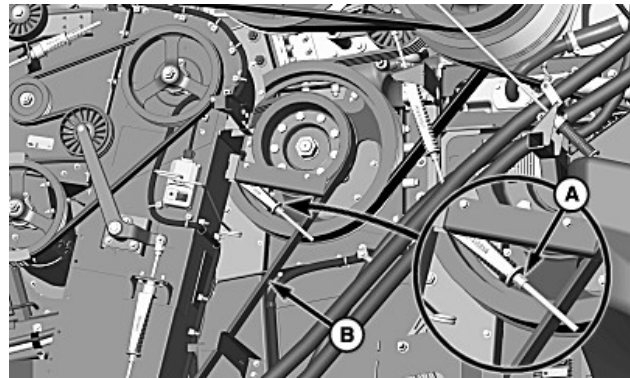
**Specification**

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

5. Install previously removed tailings elevator shield.

MH69740,000087A-19-19FEB20

## Tailings and Cleaning Fan Drive Belt—Replacing



H126852—UN—01AUG19

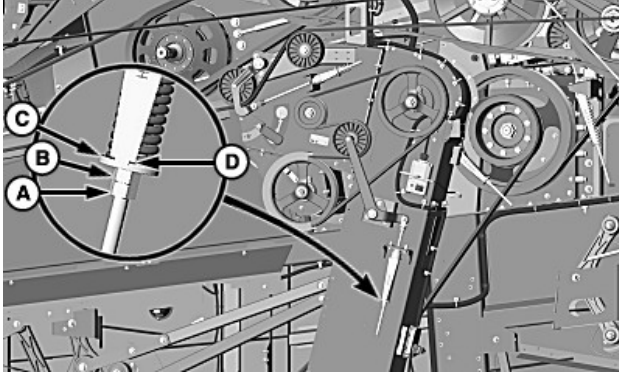
A—Nut (2 used)  
B—Tailings and Cleaning Fan Drive Belt

**CAUTION: Shut OFF engine, set park brake, and remove key.**

1. Remove the tailings elevator shield. See Left-Hand Side Shields.
2. Remove the cleaning fan variable drive belt. See Cleaning Fan Variable Drive Belt—Replacing.
3. Loosen nuts (A) to remove tension from the tailings and cleaning fan drive belt (B).
4. Remove tailings and cleaning fan drive belt and install replacement belt.
5. Adjust tailings and cleaning fan drive belt. See Tailings and Cleaning Fan Drive Belt—Adjusting.
6. Install previously removed cleaning fan variable drive belt.
7. Install previously removed tailings elevator shield.

MH69740,000087B-19-26MAY20

## Tailings System Elevator and Auger Belt—Adjusting



H126866—UN—05AUG19

- A—Lock Nut
- B—Nut
- C—Washer
- D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

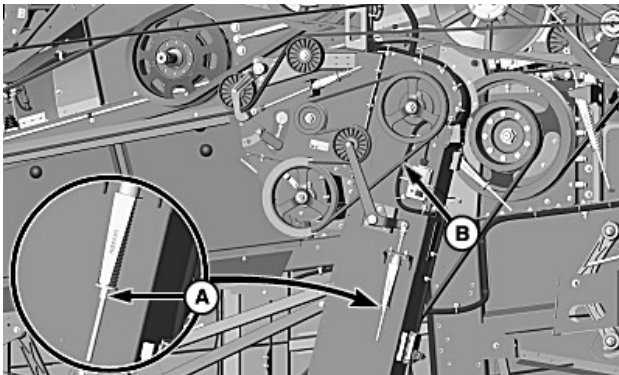
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000087C-19-25FEB20

## Tailings System Elevator and Auger Belt—Replacing



H126857—UN—02AUG19

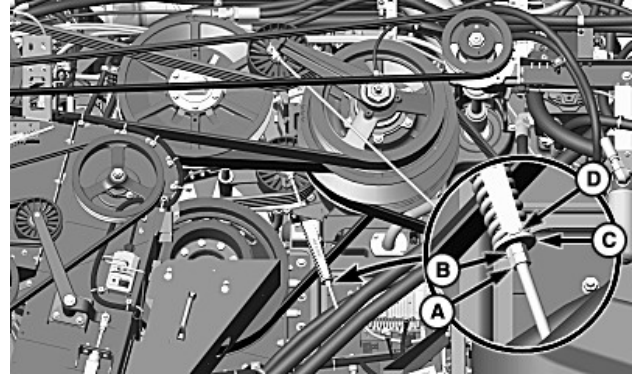
- A—Nut (2 used)
- B—Tailings System Elevator and Auger Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the tailings system elevator and auger belt (B).
2. Remove the belt and install replacement belt.

MH69740,000087D-19-19FEB20

## Discharge Beater Belt—Adjusting



H126869—UN—05AUG19

- A—Lock Nut
- B—Nut
- C—Washer
- D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

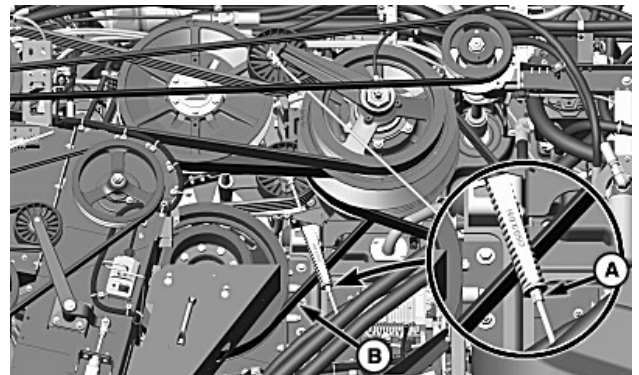
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000087E-19-19FEB20

## Discharge Beater Belt—Replacing



H126868—UN—05AUG19

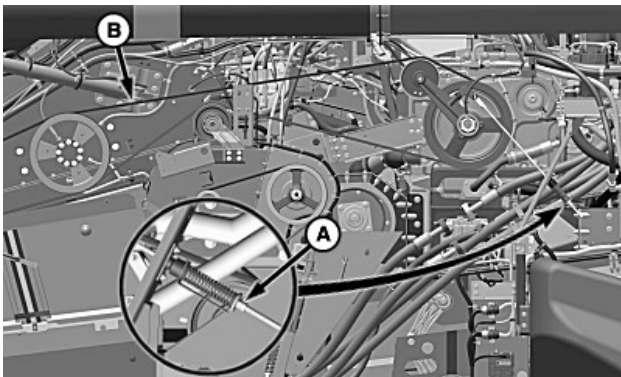
- A—Nut (2 used)
- B—Discharge Beater Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove feeder house primary drive belt. See Feeder House Primary Drive Belt—Replacing.
2. Remove rotor drive belt. See Rotor Drive Belt—Replacing.
3. Remove chopper drive belt. See Chopper Drive Belt—Replacing.
4. Remove tailings and cleaning fan drive belt. See Tailings and Cleaning Fan Drive Belt—Replacing.
5. Loosen nuts (A) to remove tension from the discharge beater belt (B).
6. Remove discharge beater belt and install replacement belt.
7. Adjust discharge beater belt. See Discharge Beater Belt—Adjusting.
8. Install previously removed belts.

MH69740.000087F-19-19FEB20

## Feeder House Rear Fixed Drive Belt—Replacing



H128992—UN—12FEB20

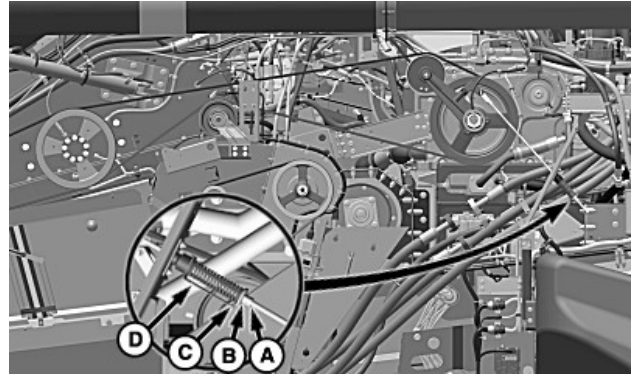
A—Nut (2 used)  
B—Feeder House Rear Fixed Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the feeder house rear fixed drive belt (B).
2. Remove the belt and install replacement belt.

MH69740.0000883-19-19FEB20

## Feeder House Rear Fixed Drive Belt—Adjusting



H128993—UN—12FEB20

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

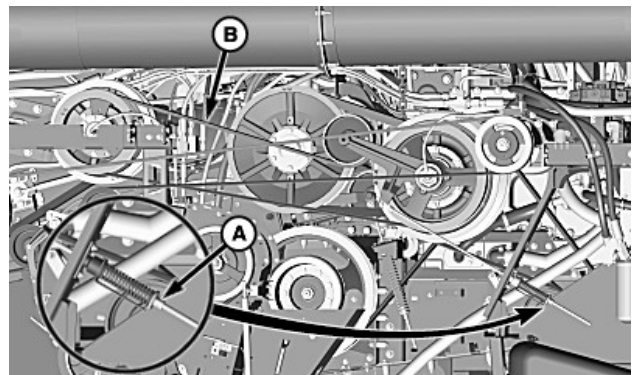
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740.0000882-19-19FEB20

## Feeder House Rear Variable Drive Belt—Replacing



H127504—UN—20SEP19

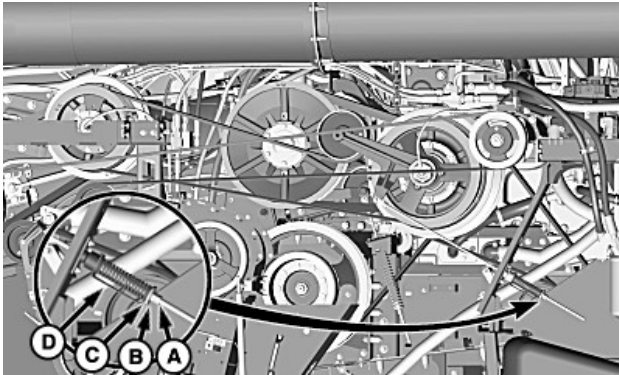
A—Nut (2 used)  
B—Feeder House Rear Fixed Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the feeder house rear fixed drive belt (B).
2. Remove the belt and install replacement belt.

MH69740,000097C-19-19FEB20

## Feeder House Rear Variable Drive Belt—Adjusting



H127505—UN—20SEP19

- A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen lock nut (A).

**IMPORTANT:** Rotate the sheave when adjusting the gap to ensure that the belt is seated.

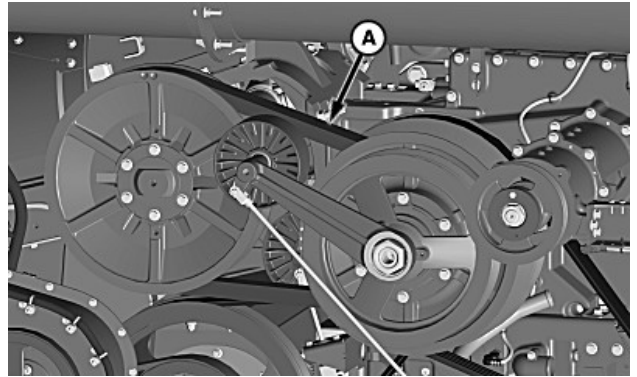
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000097D-19-03AUG20

## Rotor Variable Drive Belt—Replacing



H126929—UN—07AUG19

A—Rotor Drive Belt

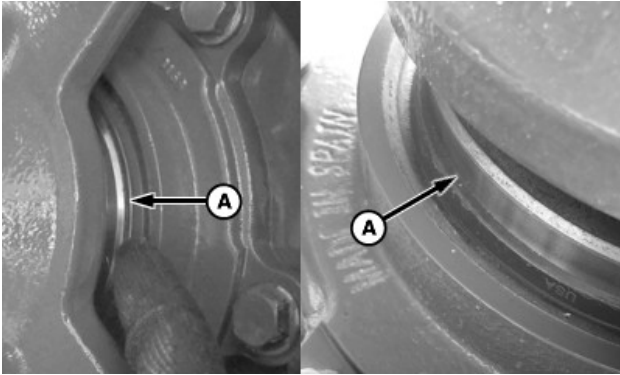
**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove the unloading auger drive belt. See Unloading Auger Drive Belt—Replacing.
2. Remove the feeder house fixed or variable speed drive belt. See Feeder House Rear Fixed Drive Belt—Replacing or Feeder House Rear Variable Drive Belt—Replacing.
3. Loosen rotor variable drive belt (A). See Rotor Variable Drive Sheave Gap—Adjusting.
4. Remove the rotor drive belt and install replacement belt.
5. Adjust the rotor drive belt. See Rotor Drive Belt—Adjusting.
6. Install the previously removed feeder house fixed or variable speed drive belt. See Feeder House Rear Fixed Drive Belt—Replacing or Feeder House Rear Variable Drive Belt—Replacing.
7. Install the previously removed unloading auger drive belt. See Unloading Auger Drive Belt—Replacing.

MH69740,0000885-19-21FEB20



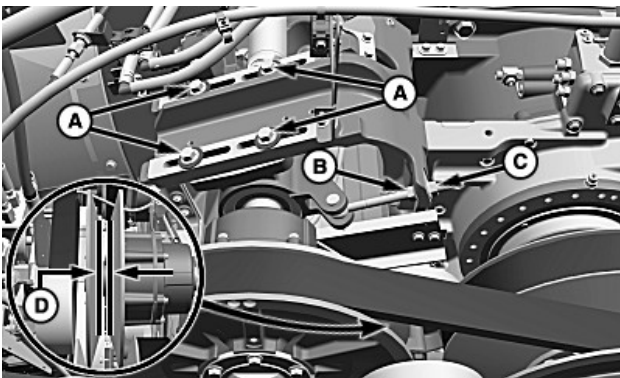
## Rotor Variable Drive Sheave Gap—Adjusting



Open/Closed

A—Driver Cylinder

**IMPORTANT:** Sheave gap should only be adjusted if the driver cylinder (A) is fully open.



A—Cap Screw (4 used)  
B—Nut  
C—Nut  
D—Sheave Gap

1. Loosen cap screws (A).
2. Tighten or loosen nuts (B and C) to adjust sheave gap as needed.

**IMPORTANT:** Rotate the sheave when adjusting the gap to ensure that the belt is seated.

3. Adjust the sheave to obtain the specified gap (D) between the driven sheaves.

### Specification

Rotor Variable Drive  
Sheave—Gap. . . . . 10 mm  
(25/64 in)

4. Tighten nuts to specification.

### Specification

Nut (B—C)—Torque. . . . . 60 N·m  
(44 lb·ft)

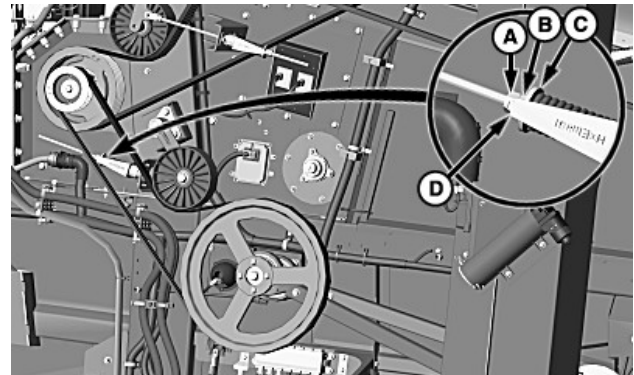
5. Tighten cap screws to specification.

### Specification

Cap Screw—Torque. . . . . 303 N·m  
(223 lb·ft)

MH69740,00008D6-19-13AUG20

## Shoe Drive Belt—Adjusting



A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

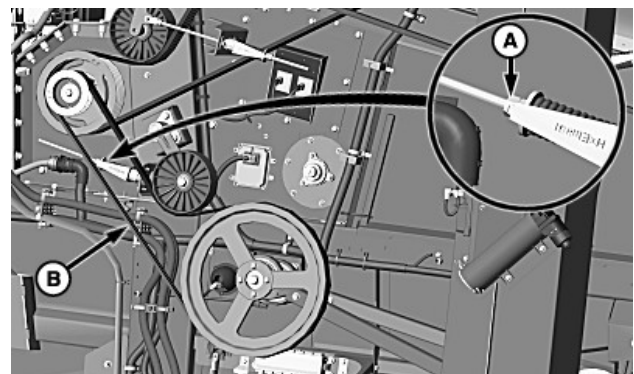
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000089E-19-19FEB20

## Shoe Drive Belt—Replacing



A—Nut (2 used)



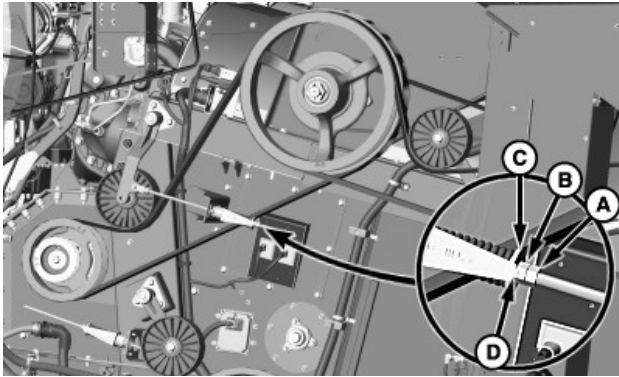
## B—Shoe Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the shoe drive belt (B).
2. Remove the belt and install replacement belt.
3. Adjust shoe drive belt. See Shoe drive belt—Adjusting for further information.

MH69740,000089F-19-19FEB20

## Right-Hand Jackshaft Drive Belt—Adjusting



H127019—UN—14AUG19

- A—Lock Nut
- B—Nut
- C—Washer
- D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned

between the end of the gauge (D) and the bottom of the step.

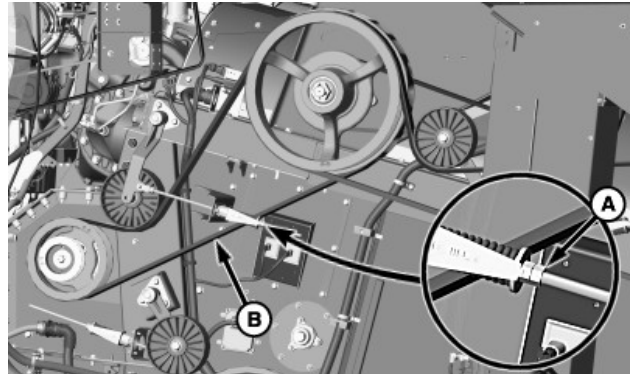
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,00008A0-19-19FEB20

## Right-Hand Jackshaft Drive Belt—Replacing



H127020—UN—14AUG19

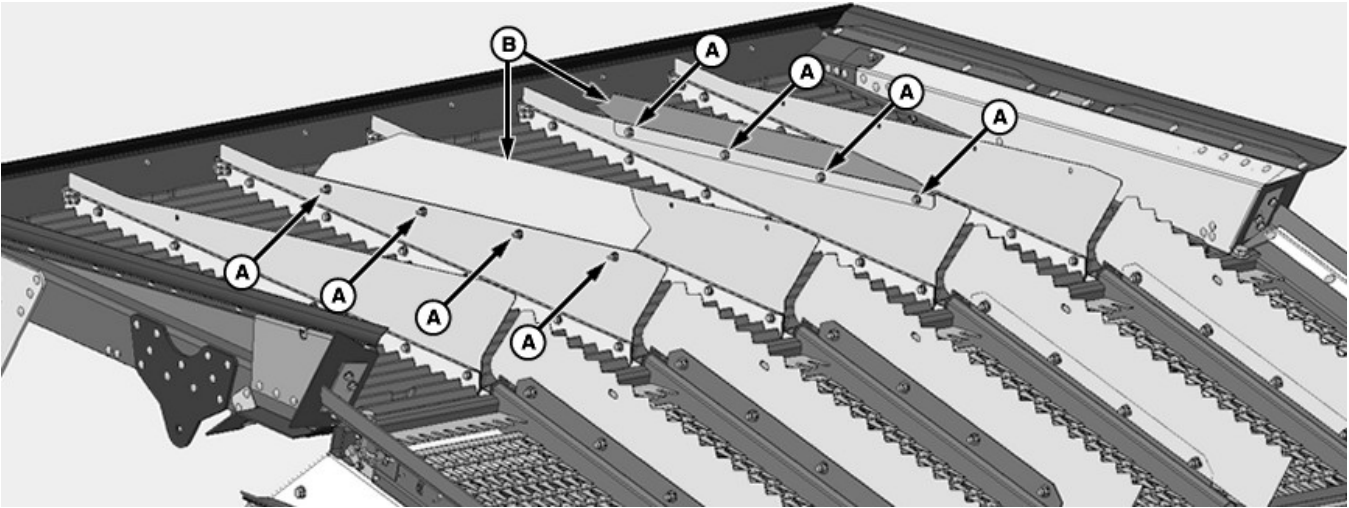
- A—Nut (2 used)
- B—Right-Hand Jackshaft Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

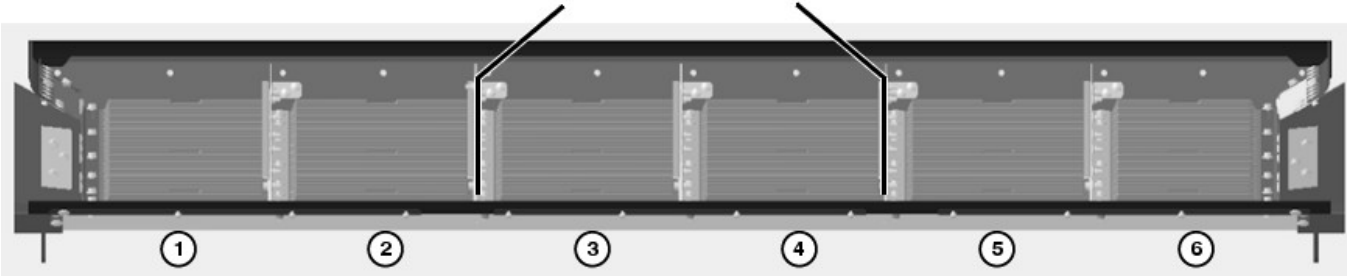
1. Loosen nuts (A) to remove tension from the right-hand jackshaft drive belt (B).
2. Remove the right-hand jackshaft drive belt and install replacement belt.
3. Adjust right-hand jackshaft drive belt. See Right-Hand Jackshaft Drive Belt—Adjusting.

MH69740,00008A1-19-19FEB20

## Adjustable Front Step Pan Deflectors

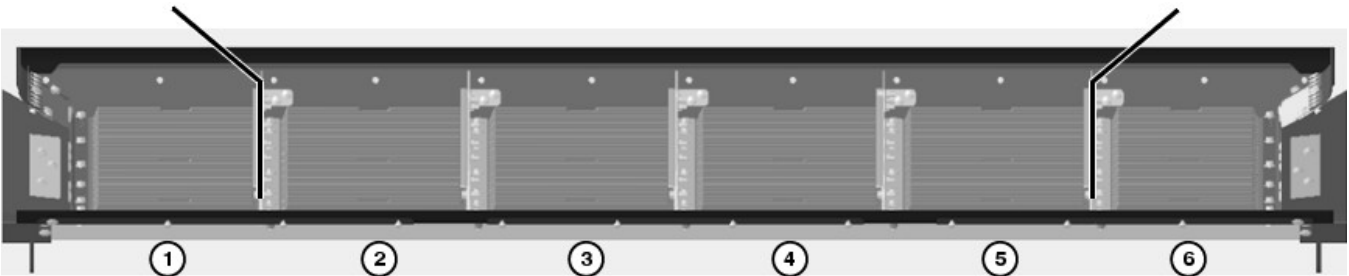


H132498—UN—30NOV20



H132499—UN—30NOV20

*Deflectors Diverting Away from Bays 3 and 4*



H132500—UN—30NOV20

*Deflectors Diverting Away from Bays 1 and 6*

A—Cap Screw and Nut (8 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove the separator covers to access the front step pan.
2. Remove cap screws and nuts (A) from both deflectors (B).

**IMPORTANT:** Orient the deflectors in either position shown. Installing the deflectors in any other position will result in machine damage.

B—Deflector (2 used)

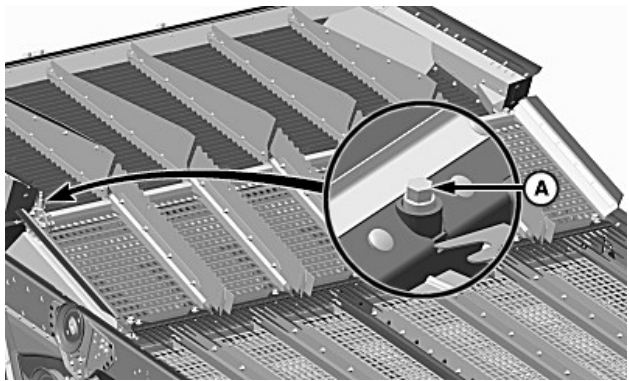
3. Remove deflectors and reorient them to a position that pulls material from the bays with the highest volume of crop to the bays with the lowest volume.
4. Install the deflectors and retain with cap screws and nuts. Tighten to specification.

### Specification

Cap Screws and Nuts—Torque. . . . . 10 N·m  
(96 lb·in)

MH69740,0000A26-19-30NOV20

## Adjustable Front Chaffer



H126870—UN—13FEB20

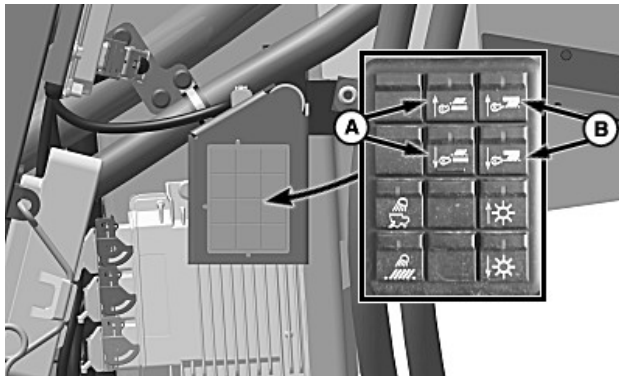
A—Adjustment Linkage

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove left-hand separator covers to access the front chaffer.
2. Turn adjustment linkage (A) clockwise to close the chaffer and counterclockwise to open the chaffer.
3. Close chaffer louvers past the desired set point and then open louvers to the desired set point to remove play.
4. Adjust front chaffer to desired position with adjustment linkage.

MH69740,0000880-19-30SEP20

## Chaffer/Sieve Adjusting Switch



H128626—UN—24JAN20

A—Chaffer Adjust Switch  
B—Sieve Adjust Switch

**IMPORTANT:** Close chaffer/sieve louvers completely to prevent louver damage while removing chaffer/sieve.

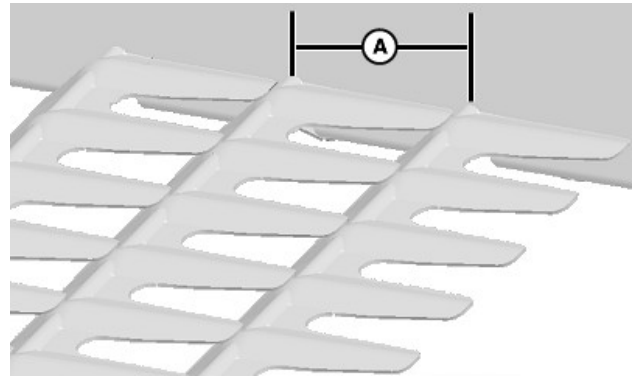
1. The chaffer adjust switch (A) and sieve adjust switch (B) are located on the left-hand side of the machine.
2. The chaffer adjust switch and sieve adjust switch

allow the operator to open or close the chaffer and sieve to various positions.

MH69740,00008C7-19-06FEB20

## Chaffer and Sieve—Measuring

### Louver Length



H89699—UN—21AUG07

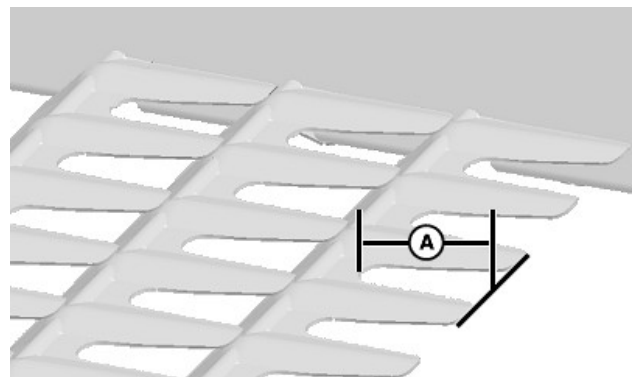
### A—Wire-to-Wire

Machines can be equipped with two different types of chaffer and sieves.

- **Deep-tooth** chaffer and sieve
  - **Chaffer** 41 mm (1-5/8 in)
  - **Sieve** 30 mm (1-3/16 in)
- **General-purpose** chaffer and sieve
  - **Chaffer** 30 mm (1-3/16 in)
  - **Sieve** 30 mm (1-3/16 in)

Proper way to measure chaffer and sieve louver length is from wire-to-wire (A) as shown. This can be used to determine if a deep-tooth or general-purpose chaffer or sieve is installed.

### Sieve Louver Depth



H120674—UN—02FEB17

### A—Louver Depth

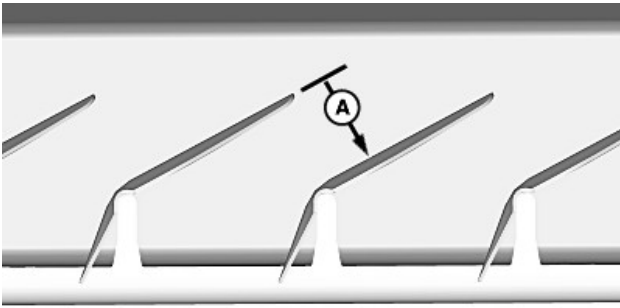
Machines can be equipped with two different types of sieves.

- **Deep-tooth** sieve

- Sieve 22 mm (7/8 in)
- **General-purpose sieve.**
- Sieve 10 mm (3/8 in)

Proper way to measure sieve louver depth (A) is from bottom of louver to tip of louver as shown. This can be used to determine if a deep-tooth or general-purpose sieve is installed.

#### Louver Clearance



#### A—Louver-to-Louver

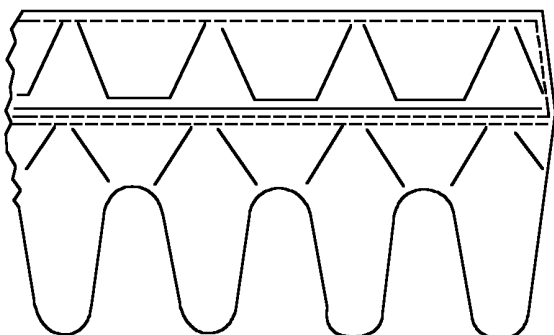
H92974—UN—03OCT08

**NOTE:** Always close the chaffer/sieve louvers past the desired set point and then open the louvers to the desired set point to remove play.

Proper way to measure chaffer and sieve clearance is from louver-to-louver (A) as shown. This can be used to determine if clearance on chaffer and sieve matches with setting shown on armrest display.

MH69740,0000973-19-06FEB20

#### General-Purpose Chaffer 30 mm (1-3/16 in)



H54526—UN—01APR99

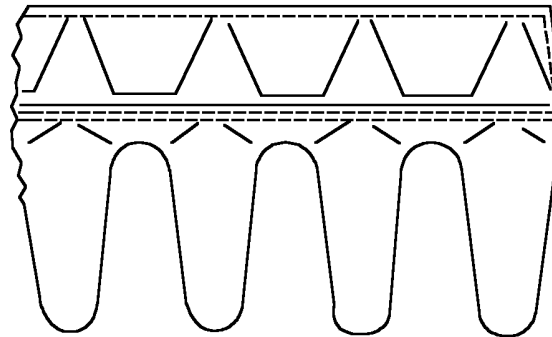
**NOTE:** Dimension shown is wire-to-wire spacing.

General-purpose chaffer is suitable for corn, soybeans, sorghum, small grains, oil seed crops, grass seed, and many specialty crops. It is recommended for dry

conditions and is resistant to “stabbing” of corn tassels and soybean, sunflower, and sorghum stems.

OUC6075,00045B1-19-02FEB17

#### Deep-Tooth Chaffer 41 mm (1-5/8 in)



H58751—UN—13JUL99

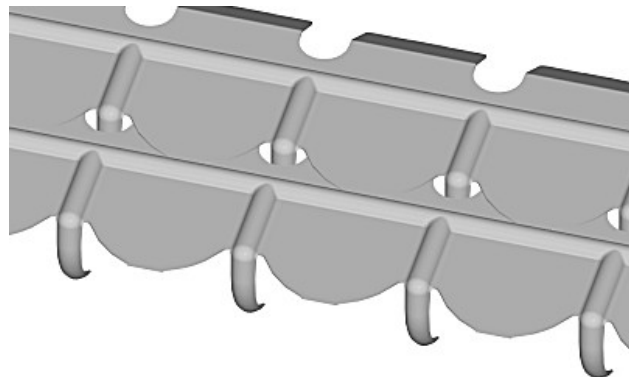
**NOTE:** Dimension shown is wire-to-wire spacing.

Not recommended for use in small grains, food corn, or popcorn.

Deep-tooth chaffer and deep-tooth sieve provide additional grain separation capacity in high moisture and high yield corn and high-capacity and clean grain sample in corn and soybeans.

MH69740,0000974-19-06FEB20

#### High-Performance Chaffer 30 mm (1-3/16 in)



H125454—UN—06DEC18

**NOTE:** Dimension shown is wire-to-wire spacing.

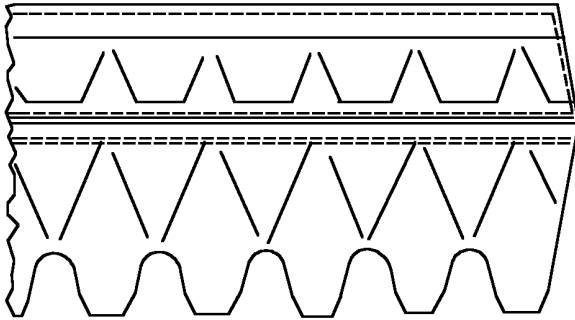
The High-Performance chaffer requires a 2 mm (5/64 in) wider chaffer clearance opening and 100 rpm higher fan speed compared to the General-Purpose chaffer.

The High-Performance chaffer can improve tailings volume and grain tank sample, especially in challenging conditions (weedy conditions and heavily bearded crops), such as Canola, Oil Seed (Rape), Lentils. The

curled chaffer finger reduces the amount of longer sticks passing through the chaffer.

MH69740,0000975-19-12FEB20

### General Purpose Sieve 30 mm (1-3/16 in)



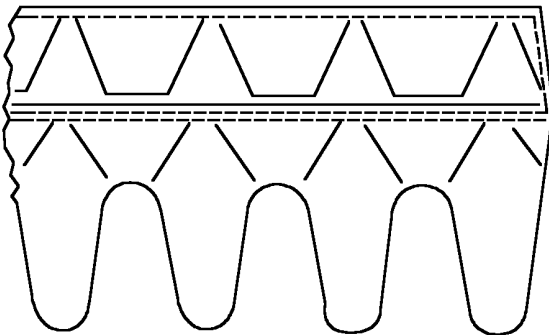
H54527—UN—01APR99

**NOTE:** Dimension shown is wire-to-wire spacing.

This sieve is suitable for all major crops and many specialty crops.

MH69740,0000976-19-06FEB20

### Deep-Tooth Sieve 30 mm (1-3/16 in)



H54526—UN—01APR99

**NOTE:** Dimension shown is wire-to-wire spacing.

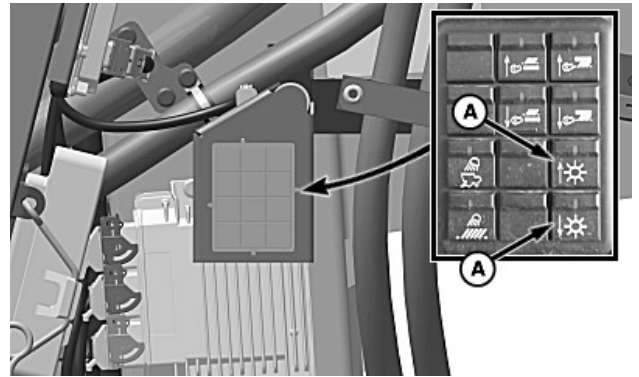
*Not recommended for use in small grains, food corn, or popcorn.*

Deep-tooth sieve provides additional grain separation in high-moisture and high-yield corn.

This sieve together with the deep-tooth chaffer provides high-capacity and clean grain samples in corn and soybeans.

MH69740,0000977-19-06FEB20

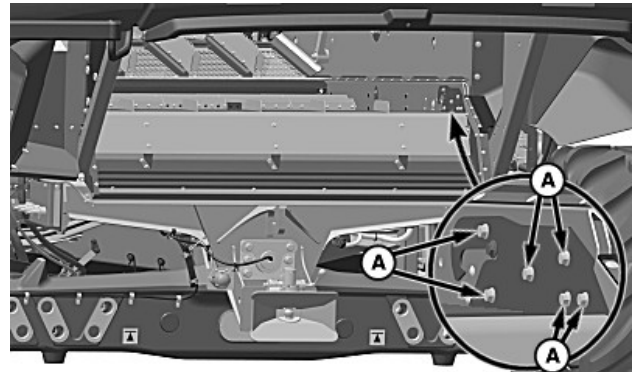
## Chaffer/Sieve Elements—Remove and Install



H128363—UN—12DEC19

### A—Chopper Adjusting Switch

1. Raise the chopper using the chopper adjusting switch (A).



H128633—UN—24JAN20

### A—Cap Screw (12 used)

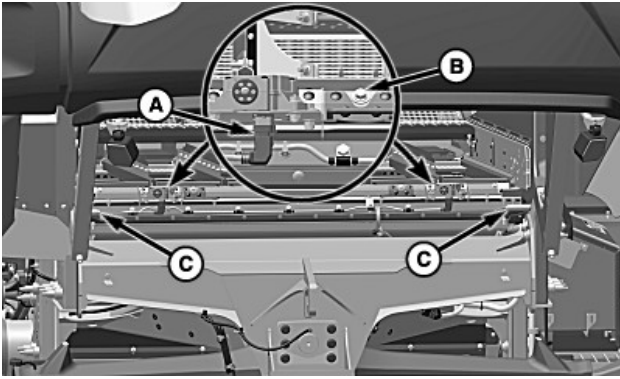
**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** To avoid damage to chaffer/sieve elements, completely close the louvers before removing the elements from the machine.

**NOTE:** It is not necessary to remove the chopper to remove the chaffer/sieve elements. The chopper must be fully raised.

*The sieve removal is similar to the chaffer removal.*

2. Remove cap screws (A) on both sides of the machine and remove the tailboard.
3. **Chaffer Removal:**



H132430—UN—17NOV20

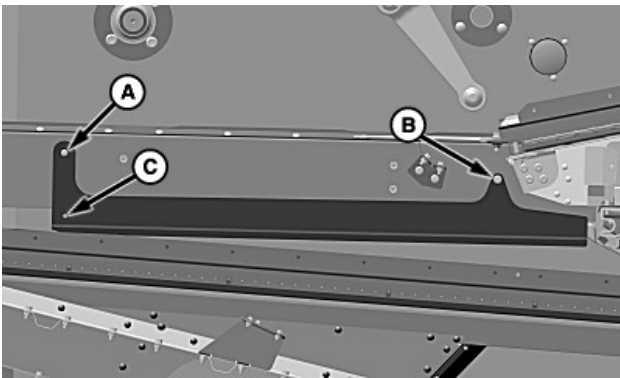
**A—Electrical Connector (2 used)**  
**B—Cap Screw (6 used)**  
**C—Bushing (2 used)**

- a. Remove electrical connector (A) from both sides of the chaffer element.

*NOTE: Bushing (C) can be used to assist in removing and installing the chaffer element.*

- b. Remove cap screws (B) and slide the chaffer element out of the rear of the machine.
- c. Inspect the grain seals on the chaffer element and repair or replace as needed.

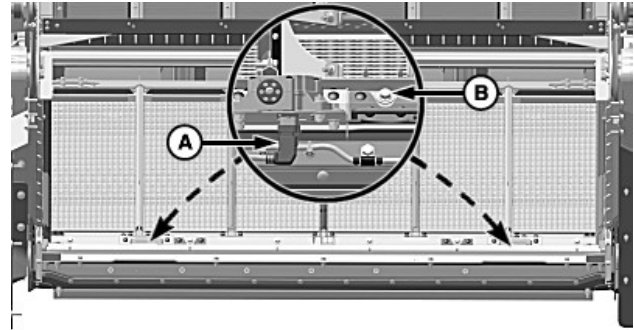
#### 4. Sieve Removal:



H128635—UN—24JAN20

**A—Upper Hole**  
**B—Cap Screw**  
**C—Lower Hole**

- a. Remove the cap screw from hole (A), loosen cap screw (B), and tilt the chaffer element rail up until hole (C) aligns with the hole in the side sheet and reinstall the cap screw. Repeat of the opposite side of the machine.

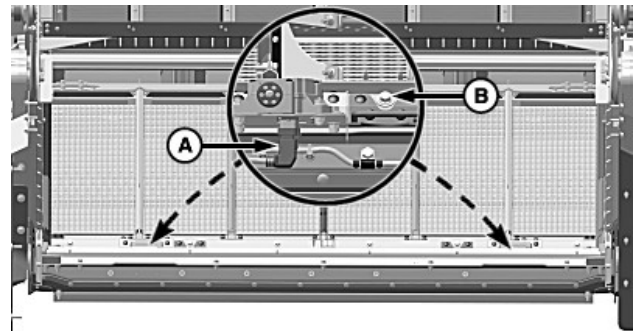


H128646—UN—27JAN20

**A—Electrical Connector (2 used)**  
**B—Cap Screws (6 used)**

- b. Remove electrical connector (A) from both sides of the sieve element.
- c. Remove cap screws (B), tilt the sieve element and slide it out of the rear of the machine.
- d. Inspect the grain seals on the sieve element and repair or replace as needed.

#### 5. Sieve Installation:



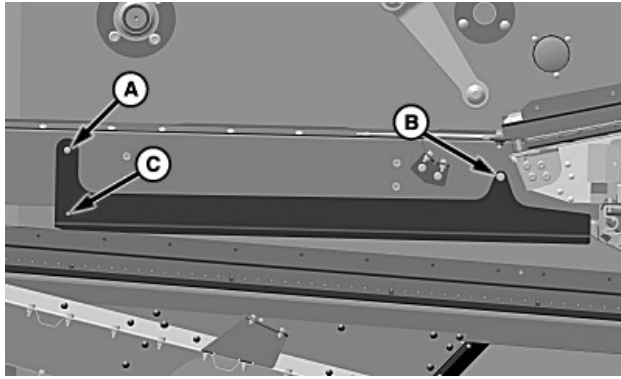
H128646—UN—27JAN20

**A—Electrical Connector (2 used)**  
**B—Cap Screws (6 used)**

- a. Install the sieve element through the rear of the machine.
- b. Connect electrical connector (A) to both sides of the machine and install cap screws (B).
- c. Tighten cap screws to specification.

#### Specification

Sieve Cap Screws—Torque. . . . . 37 N·m  
 (27 lb·ft)

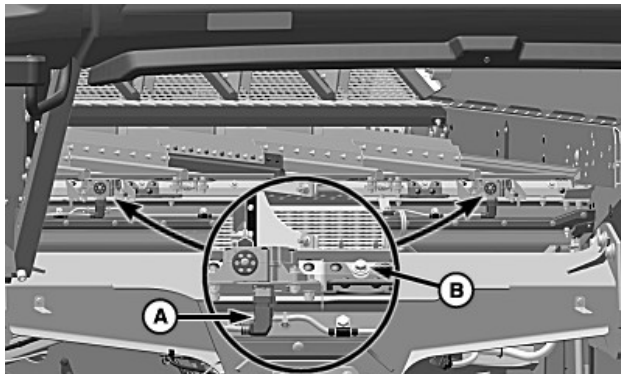


H128635—UN—24JAN20

A—Upper Hole  
B—Cap Screw  
C—Lower Hole

- d. Remove cap screw from hole (C), tilt the chaffer element down until the hole (A) aligns with the hole in the side sheet and reinstall the cap screw.
- e. Tighten cap screw (B) and repeat steps (C and D) on the opposite side of the machine.

#### 6. Chaffer Installation:



H128634—UN—24JAN20

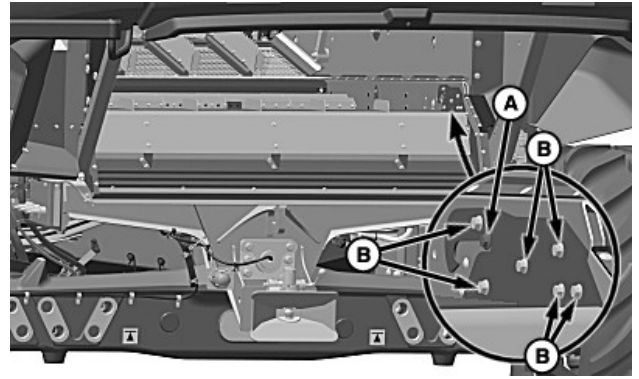
A—Electrical Connector (2 used)  
B—Cap Screw (6 used)

- a. Install the chaffer element through the rear of the machine.
- b. Connect electrical connector (A) to both sides of the machine and install cap screws (B).
- c. Tighten cap screws to specification.

#### Specification

Chaffer Cap Screws—Torque. . . . . 37N·m  
(27 lb·ft)

#### 7. Tailboard Installation:



H128996—UN—12FEB20

A—Cap Screws (2 used)  
B—Cap Screw (12 used)

- To help support the tailboard during the installation, install cap screw (A) into the side sheet on both sides of the machine.
8. Hook the tailboard onto the previously installed cap screws on both sides of the machine.
  9. Align holes on the tailboard with the side sheet holes and install cap screws (B) on both sides of the machine.
  10. Tighten cap screws to specification.

#### Specification

Sidesheet Cap Screws—Torque. . . . . 26 N·m  
(20 lb·ft)

MH69740,0000881-19-17NOV20

### Chaffer/Sieve/Return Pan Assemblies

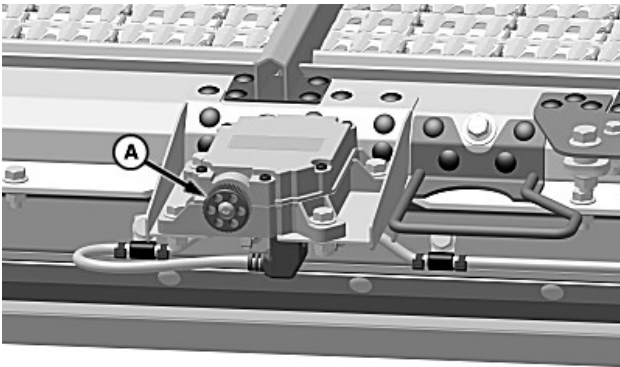
The following assemblies contain non-serviceable structural fasteners and are not repairable:

- Left and Right Chaffer Frame Sides
- Left and Right Sieve Frame Sides
- Return Pan Frame
- Front Step Pan Frame
- Chaffer Element
- Sieve Element

**NOTE:** The listed assemblies can be replaced through service parts. See your John Deere dealer for more information.

MH69740,0000A25-19-13NOV20

## Chaffer/Sieve Motor—Manual Adjust



H128671—UN—27JAN20

A—Knob

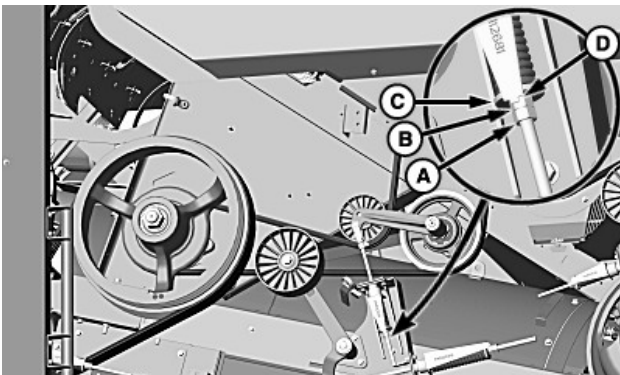
1. Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** To prevent motor damage, do not use a wrench on knob.

2. Use knob (A) to adjust motor. Turn the knob clockwise to close and counterclockwise to open the chaffer/sieve.
3. Close the chaffer/sieve louvers past the desired set point and then open the louvers to the desired set point to remove play.

MH69740,00008C9-19-12FEB20

## Clean Grain Elevator Belt—Adjusting



H126939—UN—12AUG19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

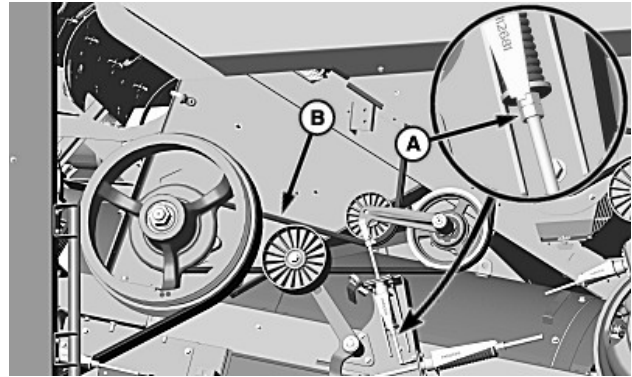
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

## Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000088D-19-12FEB20

## Clean Grain Elevator Belt—Replacing



H126940—UN—08AUG19

A—Nut (2 used)  
B—Clean Grain Elevator Belt

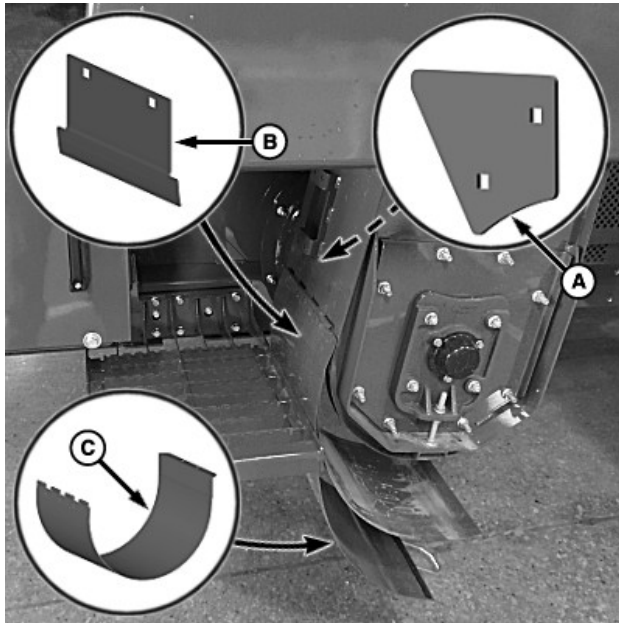
**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the clean grain elevator belt (B).
2. Remove clean grain elevator belt and install replacement belt.
3. Adjust clean grain elevator belt. See Clean Grain Elevator Belt—Adjusting.

MH69740,000088E-19-09AUG19



## Clean Grain Elevator Wear Plates and Door (If Equipped)



H128727—UN—30JAN20

The following parts provide protection to the clean grain elevator when harvesting abrasive crops:

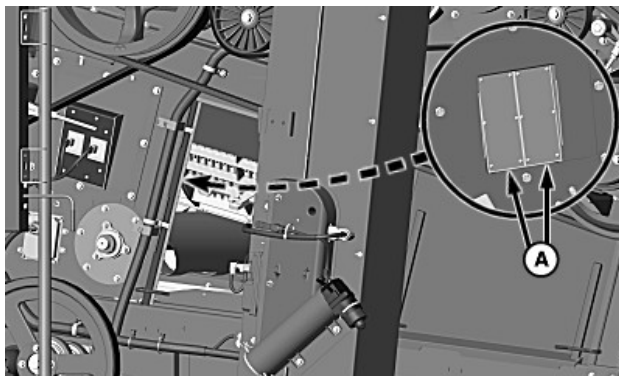
- Rear Wear Plate (A)
- Wear Plate (B)
- Door (C)

Periodically inspect these clean grain elevator parts for wear.

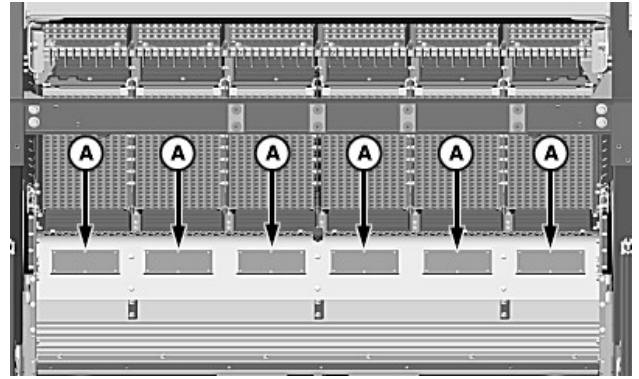
Remove and replace these clean grain elevator parts as needed. See your John Deere dealer for further information.

MH69740,0000969-19-30JAN20

## VisionTrak™ Operational Checks



H126983—UN—13AUG19



H126990—UN—13AUG19

Shoe Sensors

### A—Sensor

**NOTE:** Two people are required to perform this operational check. One person must remain seated in the operator's seat, while another person taps on the sensors.

Separator sensors are on the left-hand side of the machine underneath the separator covers.

Shoe sensors are at the rear of the machine on the tailboard.

1. Turn key switch to RUN position, but do not start machine.
2. Engage header switch.

**NOTE:** The VisionTrak™ system **MUST** be in a crop that was previously calibrated. Grain loss calibration value **MUST** be less than 50.

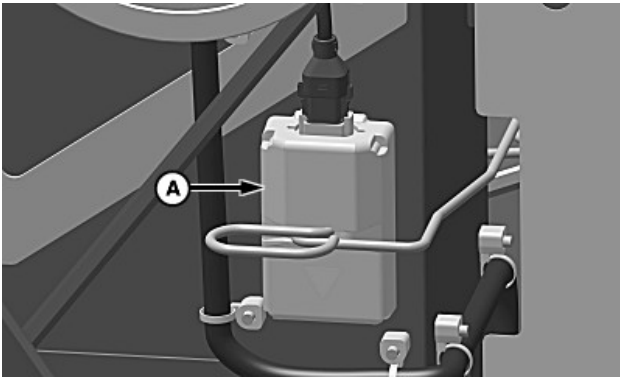
3. Tap on sensors (A) several times. Person watching VisionTrak™ display should see movement on the shoe loss and separator loss indicators.

**NOTE:** Return grain loss calibration value to original value or perform another crop calibration.

4. Disengage header switch and turn key switch OFF.
5. If VisionTrak™ does not work after these checks, see your John Deere dealer for further information.

MH69740,000089B-19-06FEB20

## Tailings System Elevator Sensors



H128374—UN—13DEC19

A—Tailings Sensor

If tailings sensor display consistently reads full (all bars lit) when not harvesting or empty (no bars lit) when harvesting, it may indicate that the sensor lens is coated with material or seal under lens has allowed dust to enter.

**CAUTION:** Tailings sensor is a Class 1 laser product and emits laser radiation when powered. When servicing or removing tailings sensors, use caution and do not view beam directly.

Key switch must be turned OFF and tailings sensor must be unplugged before servicing or removing sensors.

DO NOT operate sensor with lens removed. Accessible laser emission when the lens is in place:

- 850 nm
- 500 nsec pulse width
- $\leq 500$  Hz rep rate
- $< 90$  nJ per pulse
- 43 uW average power
- Class 1 levels (eye safe)

Accessible laser emission levels if sensor was operated with lens removed are:

- 850 nm
- 500 nsec pulse width
- $\leq 500$  Hz rep rate
- $< 380$  nJ per pulse
- 188 uW average power
- Class 3R levels (small potential for eye injury)

1. Remove tailings sensors (A) to inspect and clean the lenses if needed.
2. If the lenses are clean, remove and check for dust. If dust is found, clean the area and reassemble the lens onto the unit, making sure that the gasket is sealing.

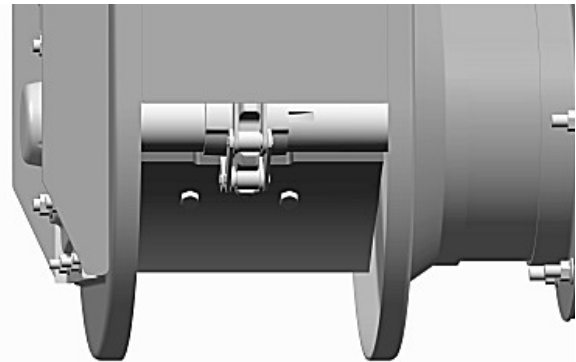
3. Verify that the lens is retained with all previously removed screws prior to installation.

**CAUTION:** Failure to install the plastic cover prior to replacement of the sensors on the elevator may cause malfunction, incorrect harvest readings, or sensor damage and could allow for potentially hazardous eye exposure when the sensor is removed.

4. Install the sensor and test the system.
5. If the display continues to read full or empty, contact your John Deere dealer.

MH69740,00008CC-19-07FEB20

## Tailings System and Clean Grain Elevator Paddles



H128170—UN—25NOV19

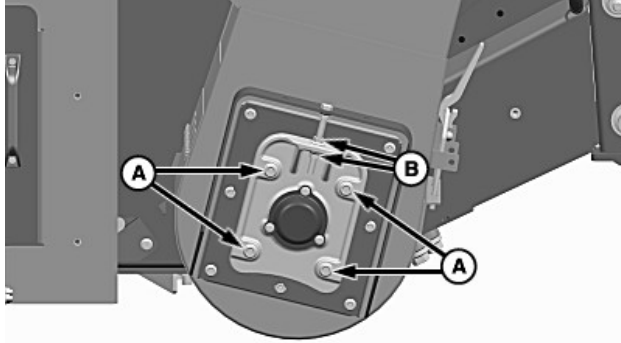
**CAUTION:** Shut OFF engine, set park brake, and remove key.

Check the elevator chain occasionally for worn or missing paddles.

In muddy conditions, one steel paddle may be installed in the elevator chain to act as a wiper.

MH69740,00008CD-19-18FEB20

## Tailings System and Clean Grain Elevator Paddle Chain—Adjusting



H128171—UN—25NOV19  
Tailings System Elevator

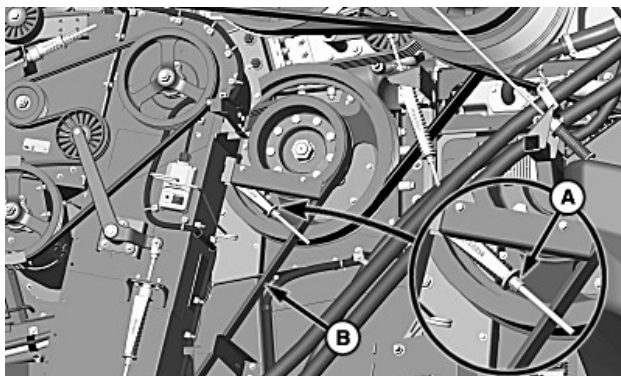
A—Nut (4 used)  
B—Nut (2 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Release the latch and open the lower door.
2. Remove the nuts from the bearing cover.
3. Loosen nuts (A) and use nuts (B) to adjust the chain. Move the bearing carrier downward to tighten the chain.
4. The elevator chain is adjusted properly when the lower end of the chain can be moved side-to-side on the sprocket but cannot be pulled away from the sprocket. When the chain loosens up to 6 mm (1/4 in) from the sprocket, readjust the chain. After a period of use, it may be necessary to remove a half link to adjust the chain correctly.
5. Install the bearing cover and retain with nuts.
6. Close and latch the lower door.

MH69740,00008CE-19-01JUL20

## Tailings System Wear Strips and Rasp Bars—Remove and Install

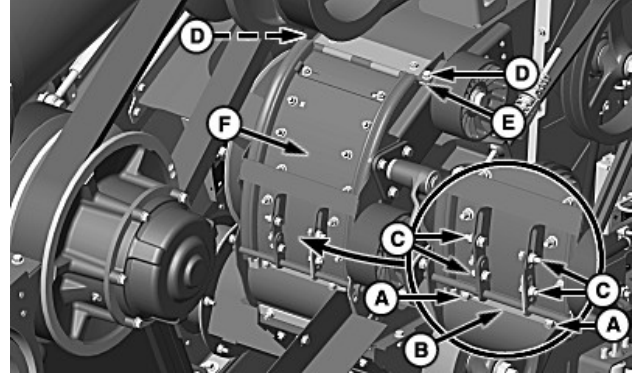


H126852—UN—01AUG19

A—Nut (2 used)  
B—Tailings and Cleaning Fan Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

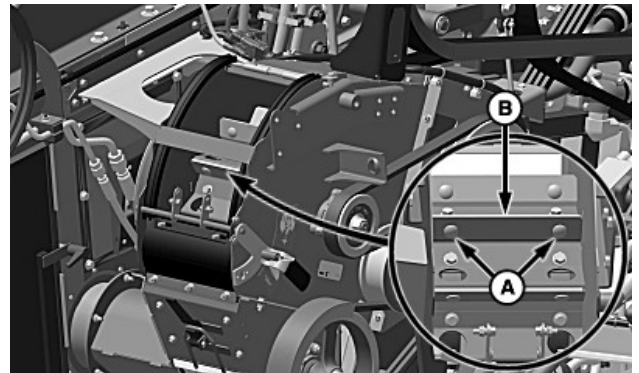
1. Loosen nuts (A) to relieve belt tension from the tailings and cleaning fan drive belt (B).



H127050—UN—16AUG19

A—Cap Screw (3 used)  
B—Strap  
C—Shoulder Bolt (2 used)  
D—Cap Screw  
E—Rod  
F—Access Cover

2. Remove cap screws (A) and strap (B).
3. Remove shoulder bolts (C), cap screw (D), and rod (E) from access cover (F).



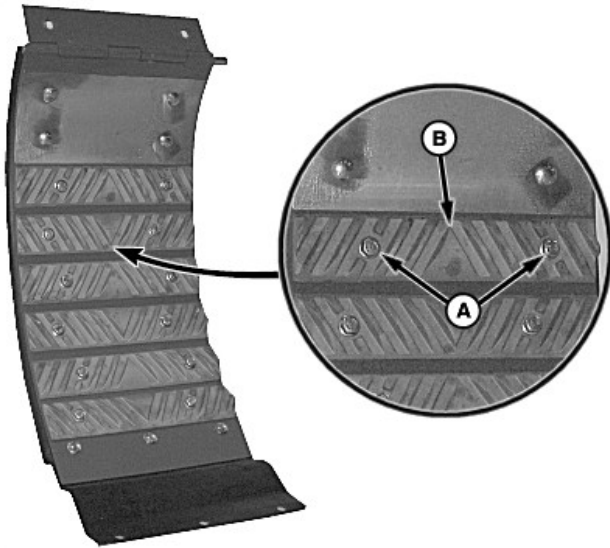
H128738—UN—31JAN20

A—Cap Screw and Nut  
B—Wear Strip

4. Remove cap screws and nuts (A) from wear strips (B).
5. Remove and replace wear strips as needed.
6. Tighten wear strip cap screws to specification.

### Specification

Wear Strip Cap  
Screws—Torque. . . . . 70 N·m  
(52 lb·ft)



A—Cap Screw and Nut  
B—Rasp Bar

H97084—UN—23JUN10

7. Remove cap screws and nuts (A) from rasp bar (B).
8. Remove and replace rasp bars as needed.
9. Tighten rasp bar cap screws to specification.

**Specification**

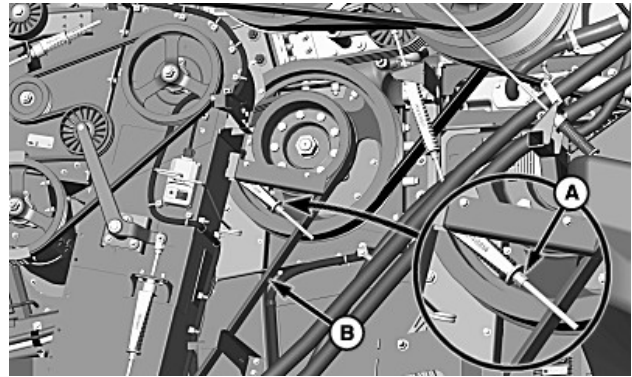
Rasp Bar Cap Screws—Torque. . . . . 37 N·m  
(27 lb·ft)

**NOTE:** Verify that seals on access cover remain in place when installing onto the tailings system.

10. Install access cover and retain with rod and cap screw.
11. Install shoulder bolts, align rubber piece with holes, and install strap and cap screws.
12. Adjust tailings system drive belt tensioner until washer is positioned between end of gauge and bottom of step.

MH69740,00008A3-19-07FEB20

## Tailings System Wear Strips and Rasp Bars—Adjusting

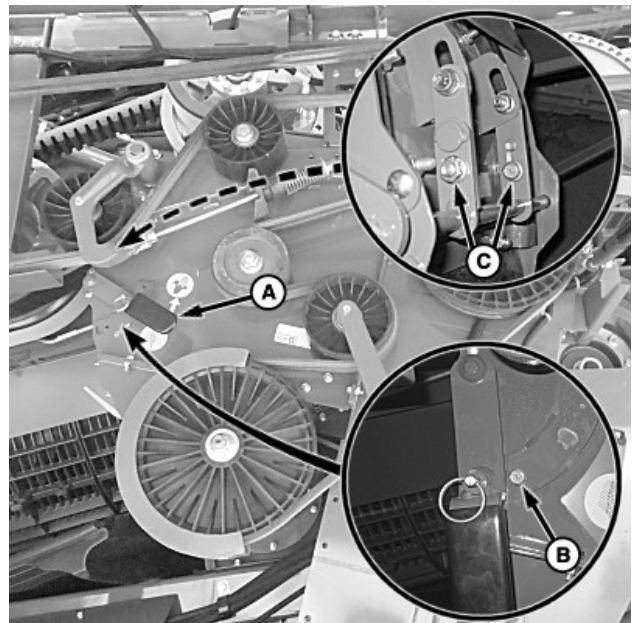


H126852—UN—01AUG19

A—Nut (2 used)  
B—Tailings and Cleaning Fan Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove the tailings elevator shield. See Left-Hand Side Shields.
2. Loosen nuts (A) to remove tension from the tailings and cleaning fan drive belt (B).
3. Remove tailings and cleaning fan drive belt to allow tailings system to turn freely.



H128740—UN—31JAN20

A—Adjustment Handle  
B—Cap Screw, M6  
C—Cap Screw and Nut

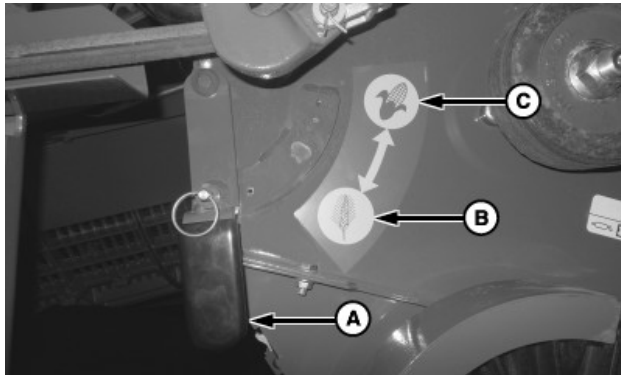
**NOTE:** Moving adjustment handle downward zeroes the position between wear strips and rasp bars.

4. Move adjustment handle (A) downward as shown and install cap screws (B) in existing holes.

5. Loosen cap screws and nuts (C).
6. Slowly adjust access door while rotating beater until "ticking" is heard.
7. Slowly back off until "ticking" stops and tighten cap screws and nuts.
8. Install previously removed belt and adjust the tensioner until washer is positioned between end of gauge and bottom of step.
9. Install previously removed shield.

MH69740,00008A4-19-07FEB20

## Tailings System Return Concave—Adjusting



H127138—UN—22AUG19

A—Crop Selection Handle  
B—Small Grain Position  
C—Large Grain Position

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** To prevent personal injury or machine damage, do not move crop selection handle when machine is running.

*NOTE: See Crop Settings section for recommended tailings system concave position settings.*

### Small Grain Position (B):

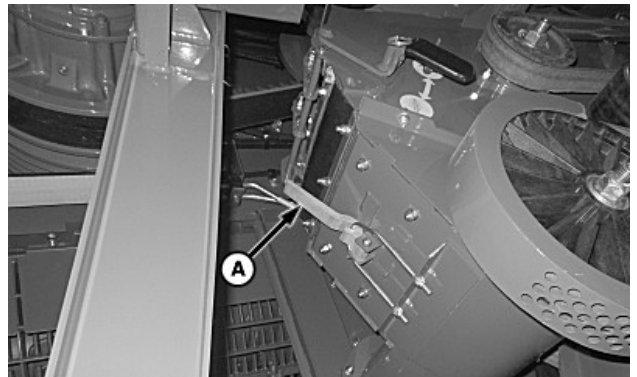
Crop selection handle (A) should be in "LOWER" position when harvesting small grain crops.

### Large Grain Position (C):

Crop selection handle (A) should be in "UPPER" position when harvesting large crops or damage-sensitive crops.

MH69740,00008A5-19-07FEB20

## Tailings System Auger Cleanout Door



H127031—UN—15AUG19

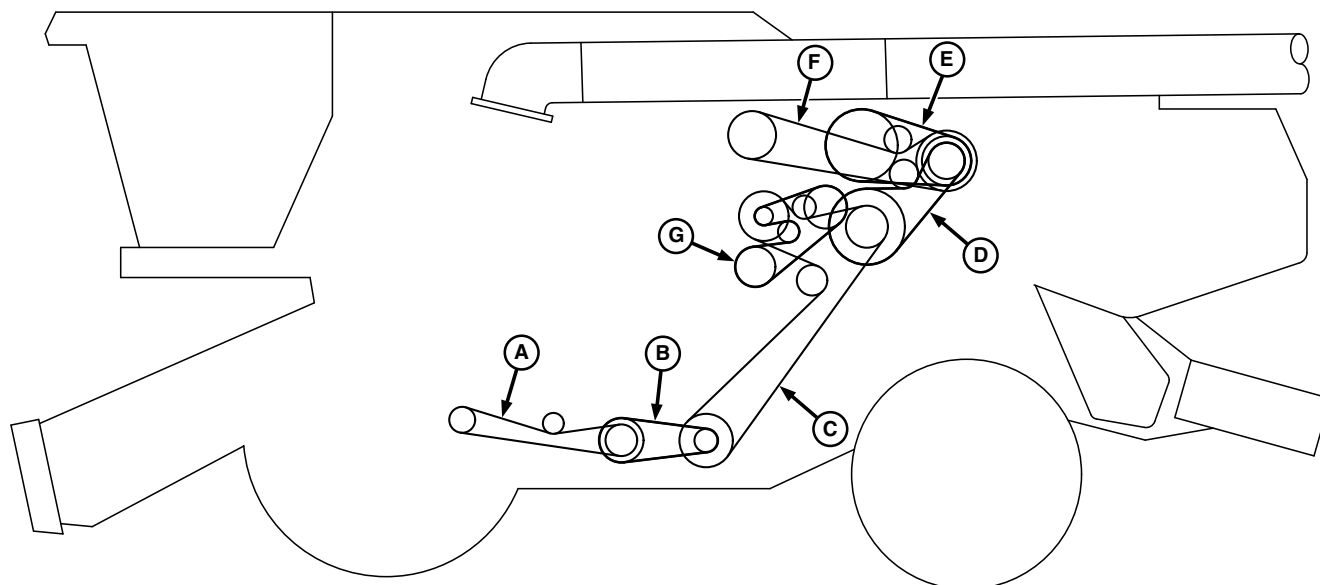
A—Handle

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Use handle (A) to open tailings system auger cleanout door.
2. Remove material as needed.

MH69740,00008A2-19-07FEB20

## Drive Belts—Left-Hand



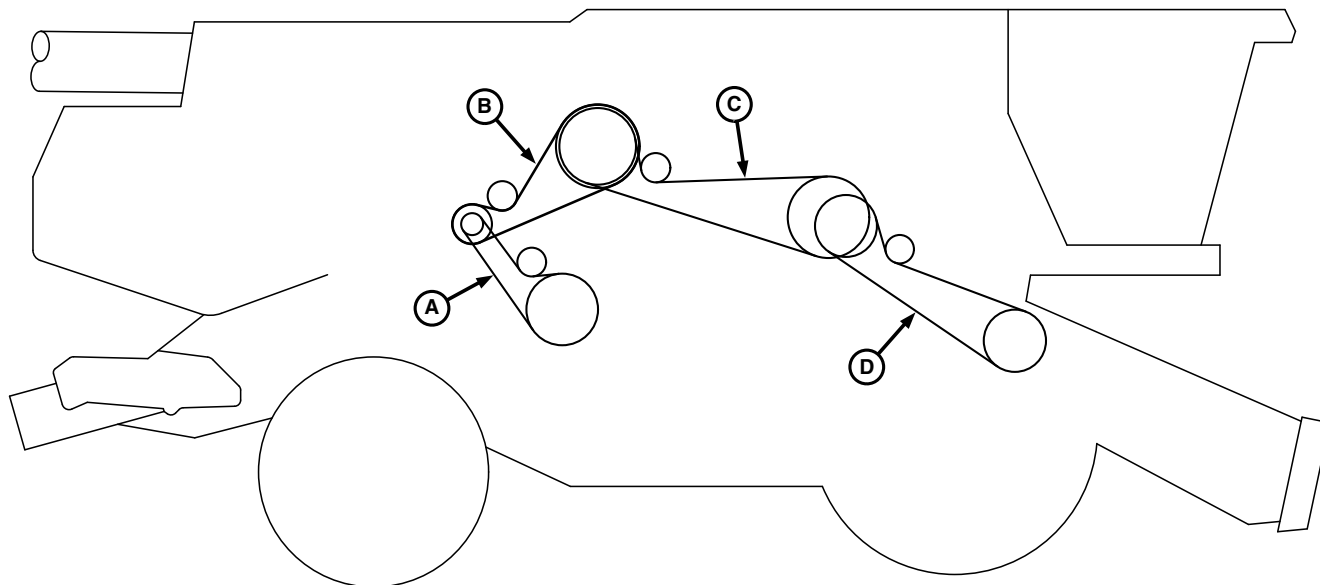
A—Cleaning Fan Front Drive Belt  
B—Cleaning Fan Variable Drive Belt  
C—Cleaning Fan Rear/Tailings Inner Drive Belt  
D—Discharge Beater Drive Belt

E—Rotor Drive Belt  
F—Feeder House Rear Drive Belt  
G—Tailings Outer Drive Belt

H127551—UN—08OCT19

MH69740,0000891-19-19FEB20

## Drive Belts—Right-Hand



A—Cleaning Shoe Drive Belt  
B—Jackshaft Drive Belt

C—Feed Accelerator Gear Case Drive Belt  
D—Feed Accelerator Drive Belt

H127552—UN—08OCT19

MH69740,0000892-19-19FEB20

## Feed Accelerator—Unplugging

**⚠ CAUTION:** Make sure that bystanders are clear of machine when starting engine and when engaging separator.

*NOTE:* Use the feed accelerator unplugging tool (if available). See your John Deere dealer for further information.

1. Disengage the separator.
2. Shut OFF engine, set park brake, and remove key.
3. Shift the separator drive gear case to the neutral position.
4. Shift the feed accelerator gear case to the neutral position.
5. Open the stone trap door and clean. Leave the stone trap door open.
6. Sound horn, start engine, and set engine speed at mid idle.
7. Engage the separator to clean material out of the discharge beater, and chopper.
8. Engage the feeder house reverser to clean material out of the feeder house.
9. Disengage the feeder house reverser and separator.
10. Shut OFF engine, set park brake, and remove key.
11. Remove the feed accelerator access covers and remove the crop material from the accelerator area. After clearing plug, rotate feeder accelerator one revolution to be sure that it is free.
12. Shift the feed accelerator drive by setting the gear case to low-speed.
13. Sound horn, start engine, and set engine speed at low idle.
14. Engage the separator. If the plug does not clear, disengage the separator and repeat steps 10—14.
15. Shut OFF engine, set park brake, and remove key.
16. Close the stone trap door and set the concave spacing back to original setting. Replace the feed accelerator access covers.
17. Shift the separator drive gear case back to the original gear setting and resume operation.

MH69740,0000894-19-10NOV20

## Separator—Unplugging

**⚠ CAUTION:** Make sure that bystanders are clear of machine when starting engine and when engaging separator.

1. Disengage the separator.

*NOTE:* Remember the concave setting and adjust the concave to wide-open position.

2. Shut OFF engine, set park brake, and remove key.
3. Shift the separator drive gear case to the neutral position.
4. Shift the feed accelerator gear case to the neutral position.
5. Open the stone trap door and clean. Close the stone trap door.
6. Sound horn, start engine, and set the engine speed at mid idle.
7. Engage the separator to clean out material from the discharge beater.
8. Disengage the separator.
9. Shut OFF engine, set park brake, and remove key.
10. Shift the separator drive gear case to first gear.
11. Sound horn, start engine, and set the engine speed at mid idle.

**IMPORTANT:** To prevent damage to the main engine gear case and wet clutch, do not engage the separator clutch with a plugged separator more than three times in a period of 3 minutes.

**Wait for 1 minute between plugged separator engagements while idling the machine.**

12. Engage the separator to clear the separator. If the plug does not clear, disengage the separator.
13. If the separator cannot be power unplugged, it is necessary to remove the concaves as needed to remove the straw by hand. After clearing plug, replace the concaves.
14. After the separator is unplugged, set the concave spacing back to the original setting.
15. Shift the feed accelerator drive by setting the gear case back to the original gear setting.
16. Shift the separator drive gear case back to the original gear setting and resume operation.

MH69740,0000895-19-10NOV20

## Discharge Beater—Unplugging

**⚠ CAUTION:** Make sure that bystanders are clear of machine when starting engine and when engaging separator.

1. Disengage the header and separator.

*NOTE: Remember the concave setting and adjust the concave to wide-open position.*

2. Shut OFF engine, set park brake, and remove key.
3. Raise the straw chopper and remove the material from the chopper area.
4. Lower the straw chopper to the operating position.
5. Shift the feed accelerator gear case to the neutral position.
6. Shift the separator drive gear case to the neutral position.
7. Sound horn, start engine, and set engine speed at mid idle.
8. Engage the separator to clean out material from the discharge beater and chopper.
9. Disengage the separator.
10. If the separator is not unplugged:
  - a. Shut OFF engine, set park brake, and remove key.
  - b. To access the discharge beater area, remove the covers and remove the crop material from the discharge beater area.
  - c. Repeat steps 5—9.
  - d. After the separator is unplugged, set the concave spacing back to the original setting.
  - e. Shift the feed accelerator drive by setting the gear case back to the original gear setting.
  - f. Shift the separator drive gear case back to the original gear setting and resume operation.
11. If the separator is unplugged:
  - a. Set the concave spacing back to the original setting.
  - b. Shift the feed accelerator drive by setting the gear case back to the original gear setting.
  - c. Shift the separator drive gear case back to the original gear setting and resume operation.

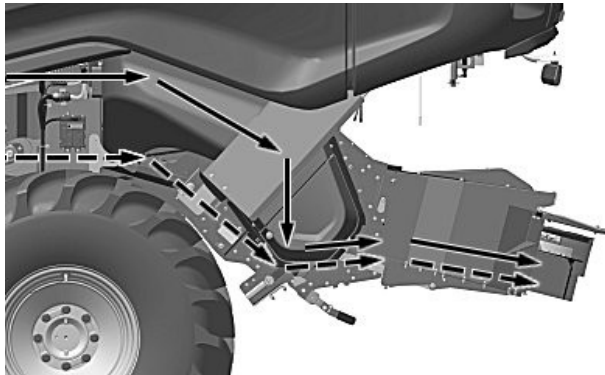
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MH69740,0000896-19-10NOV20



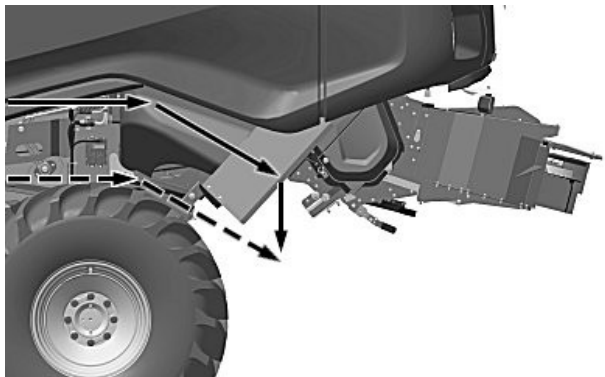
# Residue Management

## Residue Material Handling Option (Standard Residue)



*Chopping Standard*

H128201—UN—26NOV19



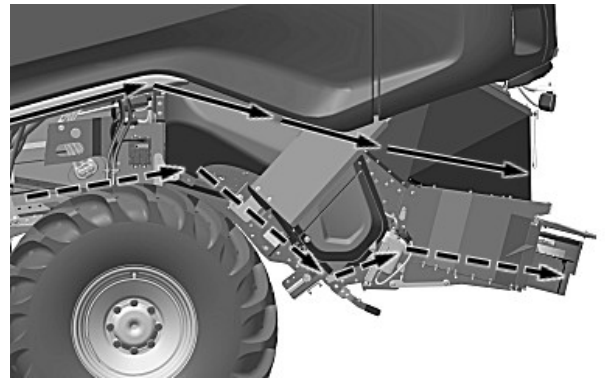
*Windrow Standard*

H128202—UN—26NOV19

**NOTE:** Solid arrows represent flow of straw. Dashed arrows represent flow of chaff.

Straw and chaff get laid down together in a windrow.

MH69740,000093A-19-26NOV19



*Windrow Premium*

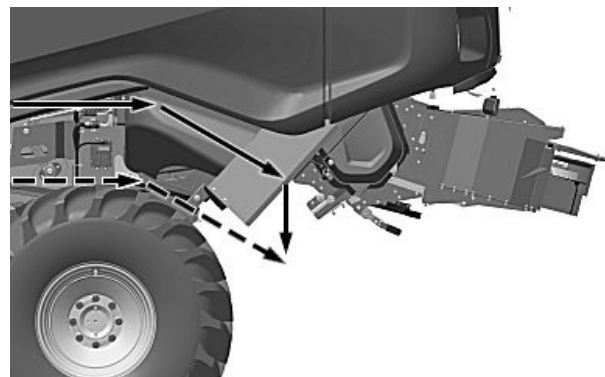
H128204—UN—26NOV19

**NOTE:** Solid arrows represent flow of straw. Dashed arrows represent flow of chaff.

Capability to drop straw and spread chaff.

MH69740,000093B-19-10FEB20

## General Windrowing Information (Standard Residue)



*Windrowing Standard*

H128202—UN—26NOV19

**NOTE:** Solid arrows represent flow of straw. Dashed arrows represent flow of chaff.

- Raise chopper fully. See Chopper Adjusting switch later in this section.
- Shift chopper drive into neutral position. See Chopper Drive Speeds—Changing later in this section.

MH69740,000093C-19-04DEC19

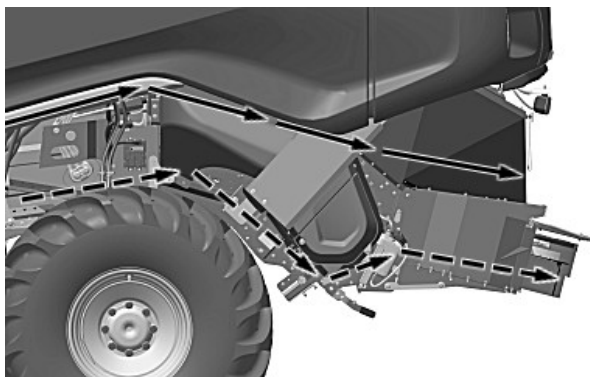
## Residue Material Handling Option (Premium Residue)



*Chopping Premium*

H128203—UN—26NOV19

## General Windrowing Information (Premium Residue)



H128204—UN—26NOV19

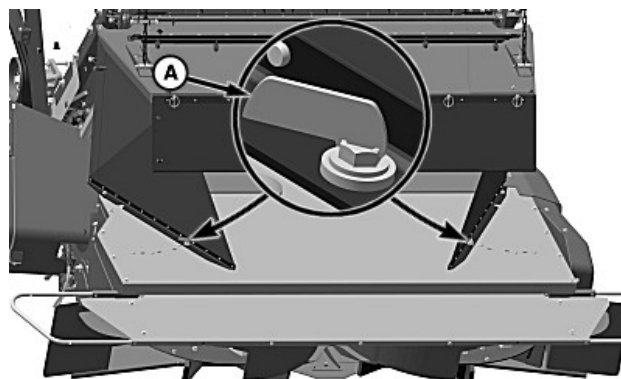
Windrowing Premium

**NOTE:** Solid arrows represent flow of straw. Dashed arrows represent flow of chaff.

- To windrow straw and spread chaff, open chop-to-drop door (premium model). See Residue Management Application Help or Operator's Station Help for further information.

MH69740,000093D-19-10FEB20

## Windrow Side Curtain—Adjusting (Premium Residue)



H128286—UN—05DEC19

### A—Latch (2 used)

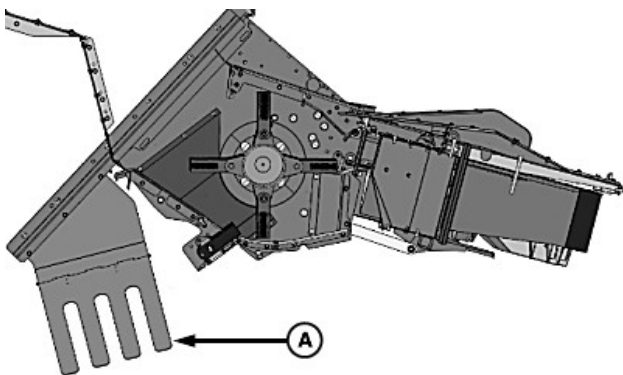
Turn latches (A) to adjust the windrow side curtains to divert straw material into narrower windrows.

Move the windrow side curtains inward when the windrow is too flat.

Move the windrow side curtains outward when the windrow is too tall.

MH69740,0000940-19-27FEB20

## Windrow Convergence Rakes Option (Standard Residue)



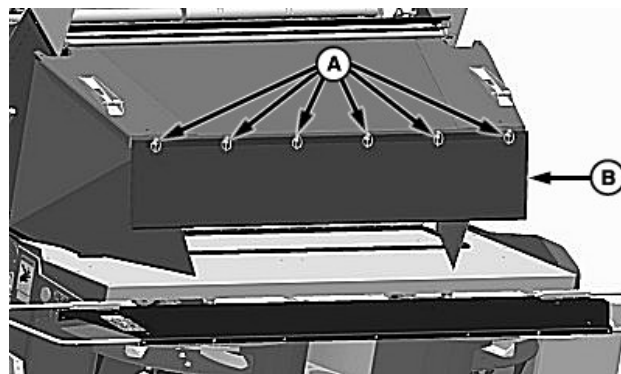
H128281—UN—05DEC19

### A—Convergence Rakes

Convergence rakes (A) are used to divert straw material into a narrower windrow. See your John Deere dealer for further information on the convergence rakes.

MH69740,000093F-19-02MAR20

## Total Loss Curtain (Premium Residue)



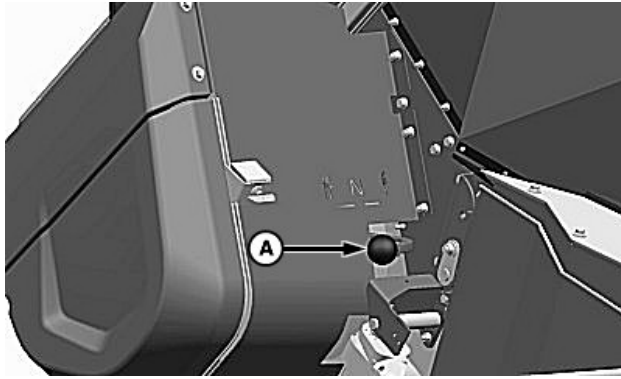
H130772—UN—15JUL20

### A—Quick-lock Pin (6 used)

### B—Total Loss Curtain

**CAUTION:** Shut OFF engine, set park brake, and remove key.

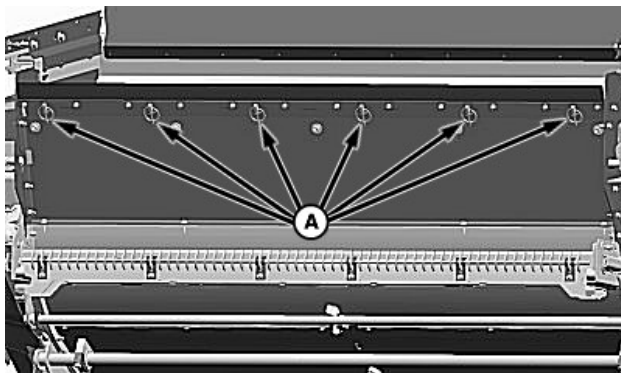
1. Remove clips (A) and the curtain (B).



H130773—UN—15JUL20

**A—Shift Lever**

2. Shift the chopper into neutral position using the shift lever (A).
3. Raise the chopper fully with the switch located on the left-hand side of the machine.

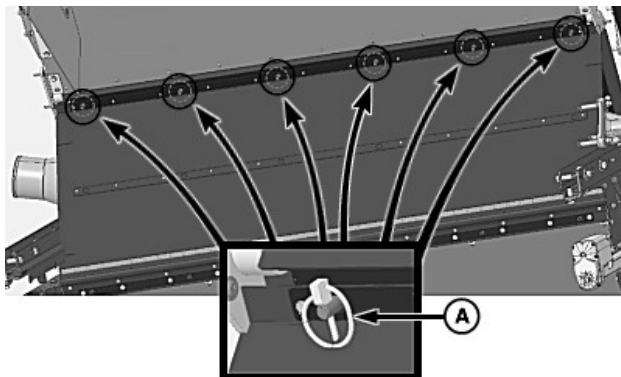


H130774—UN—15JUL20

*Viewed From Inside Chopper*

**A—Quick-lock Pin (6 used)**

4. Remove clips (A) from the chopper housing.

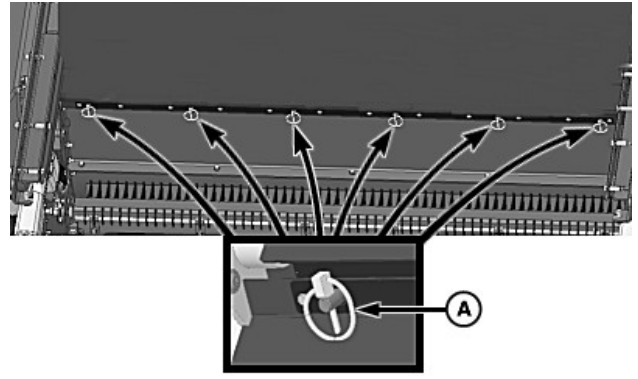


H130775—UN—15JUL20

*Viewed From Inside Chopper*

**A—Quick-lock Pin (6 used)**

5. Unfold the previously removed curtain.
6. Attach the upper portion of the curtain to the chop-drop door using the previously removed quick-lock pins (A).



H130776—UN—15JUL20

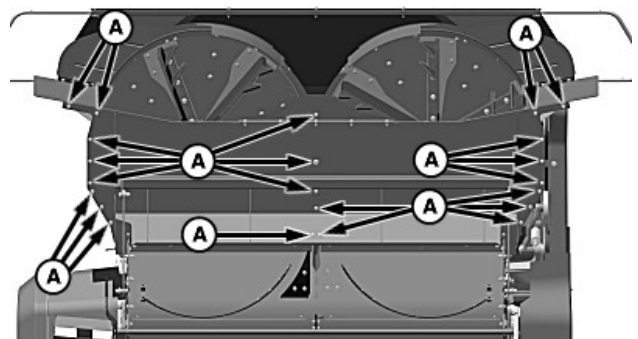
**A—Quick-lock Pin (6 used)**

7. Attach the lower portion of the curtain to the chopper housing using the previously removed quick-lock pins (A).
8. Activate the total loss mode. See Residue Management Application Help or Operator's Station Help for further information.

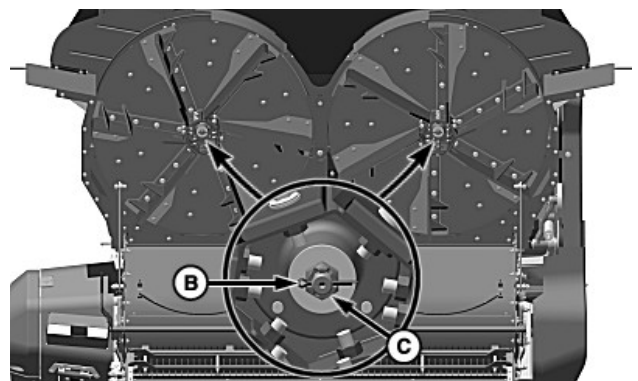
*NOTE: Reverse steps as needed, to return the curtain to the storage position.*

MH69740,0000A18-19-16JUL20

## PowerCast™ Tailboard Paddle—Replacing



H128247—UN—02DEC19



H128248—UN—02DEC19

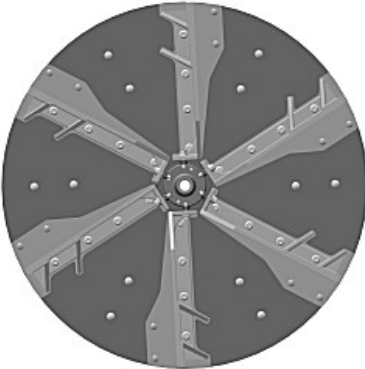
- A—Cap Screw and Nut**
- B—Cotter Pin**
- C—Castle Nut**

**CAUTION:** Shut OFF engine, set park brake, and remove key.

Disk assemblies weigh approximately 32 kg (71 lb).

**IMPORTANT:** Disk assemblies are specific for left-hand and right-hand side. Mark paddle assembly locations before removing.

1. Remove cap screws and nuts (A).
2. Remove cotter pin (B) and castle nut (C).



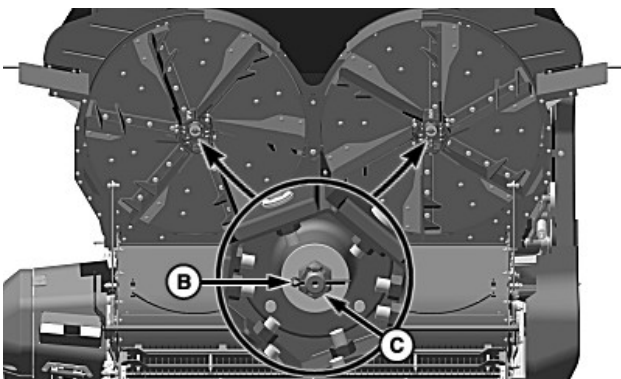
H128368—UN—12DEC19

**IMPORTANT:** When replacing worn or damaged paddles, make sure to replace the paddles on the opposite sides of the disk at the same time to maintain disk rotational balance.

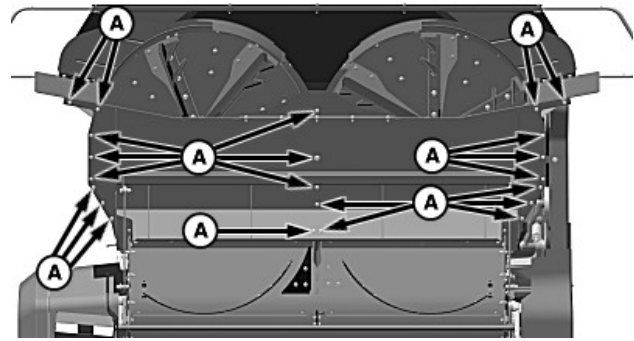
3. Install the replacement paddles as needed and tighten the hardware to specification.

**Specification**

Paddle Hardware—Torque. . . . . 65 N·m  
(48 lb·ft)



H128248—UN—02DEC19



H128247—UN—02DEC19

A—Cap Screw and Nut  
B—Cotter Pin  
C—Castle Nut

4. Install the disk assemblies at the same locations as previously removed.
5. Install the previously removed castle nut (C) and tighten to specification.

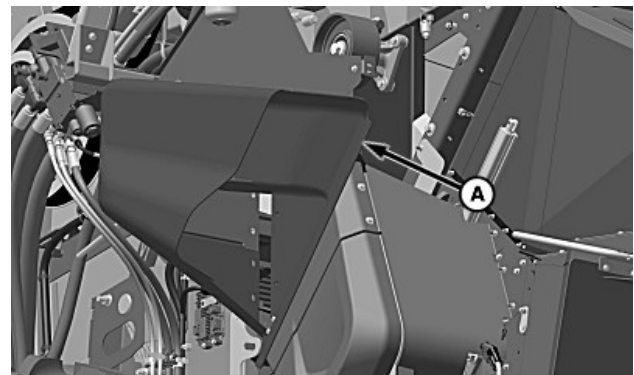
**Specification**

Castle Nut—Torque. . . . . 150 N·m  
(111 lb·ft)

6. Install the previously removed cotter pin (B).
7. Install the previously removed floor and retain with the previously removed cap screws and nuts (A).

MH69740,000093E-19-11NOV20

## Air Chutes



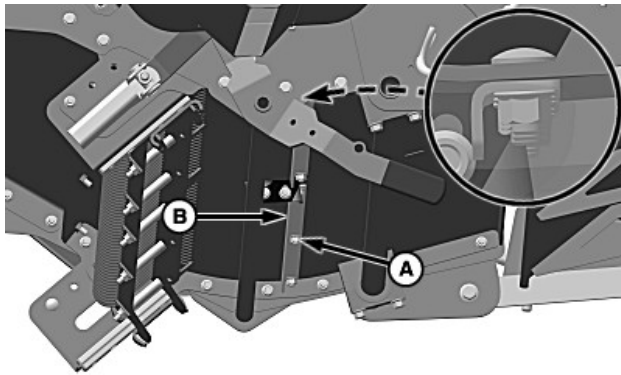
H128294—UN—05DEC19

A—Air Chute

Air chute (A) on both sides of the separator side sheet allows the cleaning shoe to breathe more freely, especially when running on low speed. Depending on harvesting conditions, the grain tank quality may be enhanced and feeder house dust reduced.

MH69740,0000943-19-10FEB20

## Chopper Controller Bar



H128295—UN—05DEC19

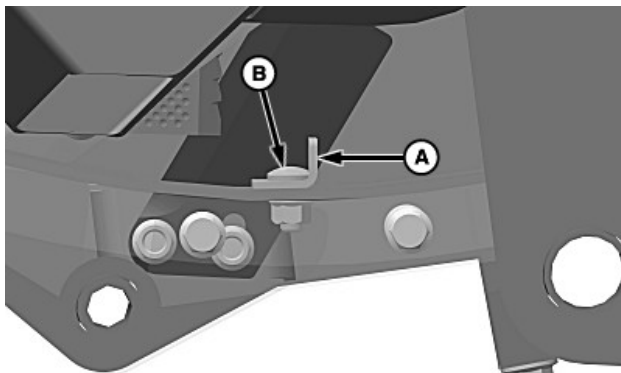
A—Hardware  
B—Controller Bar (2 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** The controller bars must be removed and placed in the storage position when harvesting corn.

The controller bars improve cut quality, distribution, and spread width in tough straw conditions. See your John Deere dealer for further information.

1. Remove hardware (A) and controller bars (B) from the bottom side of the chopper.



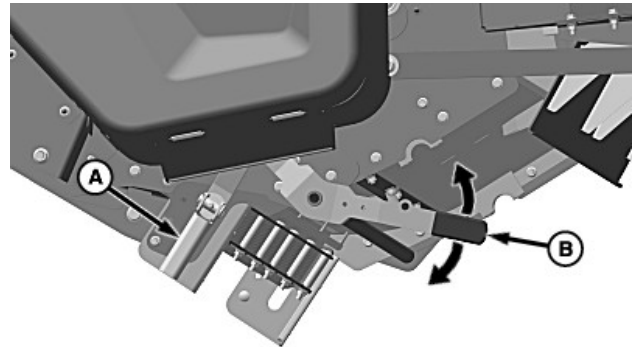
H128296—UN—05DEC19

A—Controller Bar (2 used)  
B—Hardware

2. Raise the chopper fully to install controller bars (A) on the inside of the chopper as shown and retain with hardware (B).

MH69740,0000944-19-11NOV20

## Chopper Stationary Knife Bank (Manual Knife)—Adjusting



H128298—UN—05DEC19

A—Latch  
B—Handle

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** The knife bank must be fully disengaged for corn.

*NOTE: The chopper can be run with the knives disengaged. However, cut quality decreases.*

*Use the position in between the engaged and disengaged positions to optimize the power consumption and achieve satisfactory cut length.*

The knives can be adjusted to any position. Position of the knives determines cut length of the material.

### Knife Bank Engaged Position:

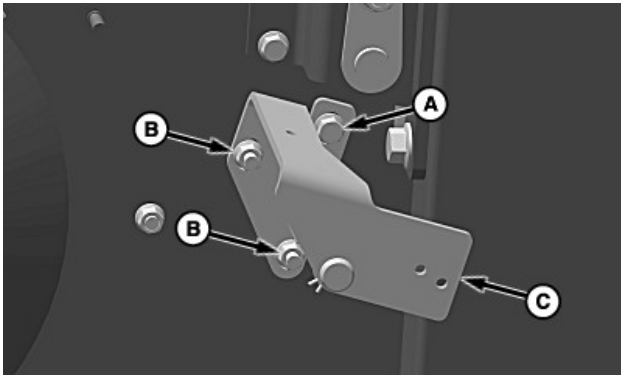
1. Open latch (A) on the chopper.
2. Move adjustment handle (B) downward until the knife bank is at the top of the adjustment slot.
3. Close the latch to lock the knife bank into position.

### Knife Bank Disengaged Position:

1. Open latch (A) on the chopper.
2. Move adjustment handle (B) upward until the knife bank is at the bottom of the adjustment slot.
3. Close the latch to lock the knife bank into position.

MH69740,0000945-19-05DEC19

## Chopper Stationary Knife Bank Electric Actuator—Removing

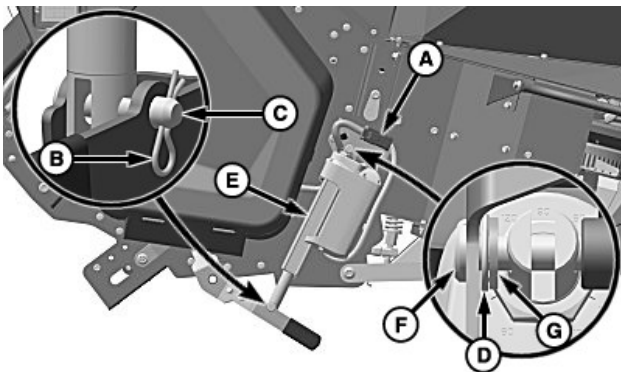


H129314—UN—04MAR20

A—Cap Screw  
B—Nut (2 used)  
C—Upper Actuator Bracket

**CAUTION:** Shut OFF engine, set park brake, and remove key.

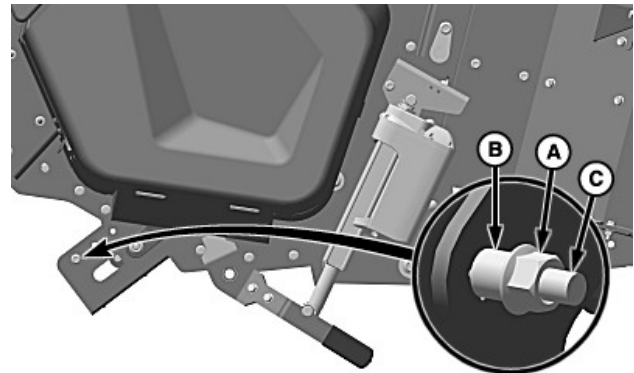
1. Loosen cap screw (A) and nuts (B) on the upper actuator bracket (C).



H128312—UN—25FEB20

A—Electrical Connector  
B—Spring Pin  
C—Pin  
D—Spring Pin  
E—Actuator  
F—Pin  
G—Washer

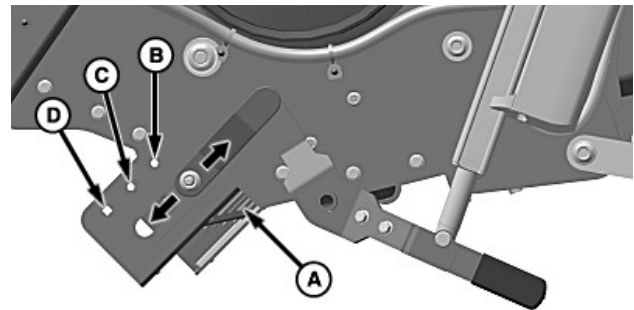
2. Disconnect electrical connector (A).
3. Remove spring pin (B) and pin (C).
4. Remove spring pin (D).
5. While supporting actuator (E), remove the pin (F) and washer (G).
6. Remove actuator from chopper.



H128315—UN—09DEC19

A—Nut (2 used)  
B—Spacer (2 used)  
C—Round-Head Cap Screw (2 used)

7. Remove nut (A), spacer (B), and round-head cap screw (C) from both sides of the machine.

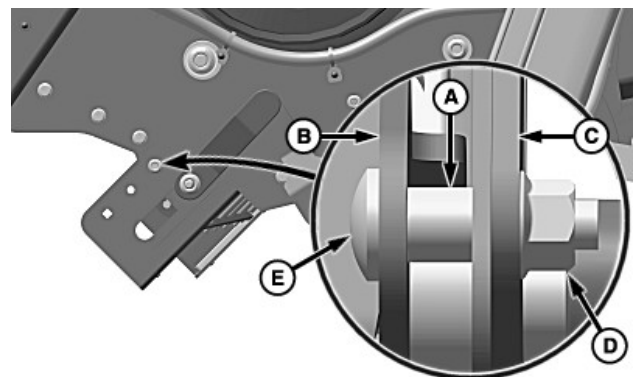


H128321—UN—09DEC19

A—Knife Bank  
B—Hole (100% engaged)  
C—Hole (50% engaged)  
D—Hole (0% engaged)

8. Align knife bank (A) with desired holes (B—D) in the side sheet on both sides of the machine.

- Hole (B) - Knife bank 100% engaged.
- Hole (C) - Knife bank 50% engaged.
- Hole (D) - Knife bank 0% engaged.



H128322—UN—25FEB20

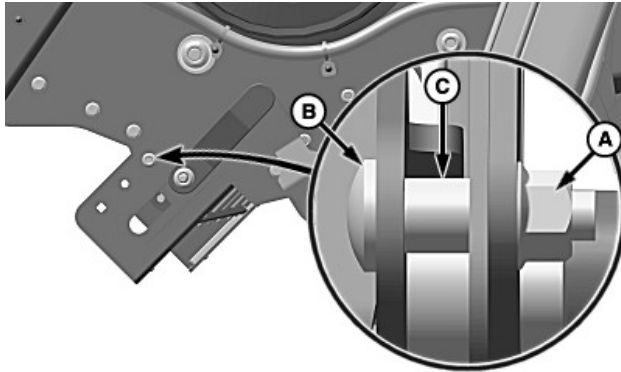
A—Spacer (2 used)  
B—Knife Bank  
C—Side Sheet  
D—Round-Head Cap Screw (2 used)

E—Nut (2 used)

9. Install previously removed spacer (A) between the knife bank (B) and the side sheet (C) on both sides of the machine.
10. Install previously removed round-head cap screw (D) and nut (E) on both sides of the machine.

MH69740,0000946-19-01JUL20

## Chopper Stationary Knife Bank Electric Actuator—Installing

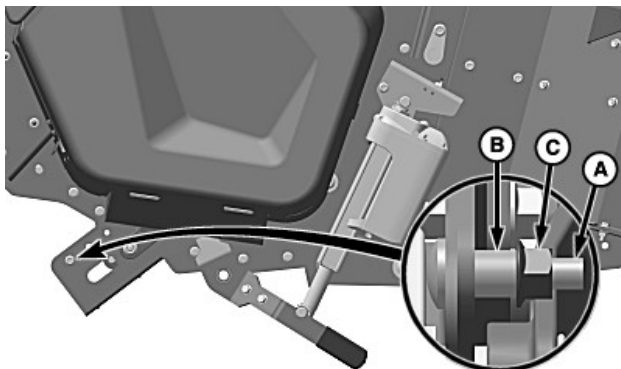


H128323—UN—02MAR20

A—Nut (2 used)  
B—Round-Head Cap Screw (2 used)  
C—Spacer (2 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

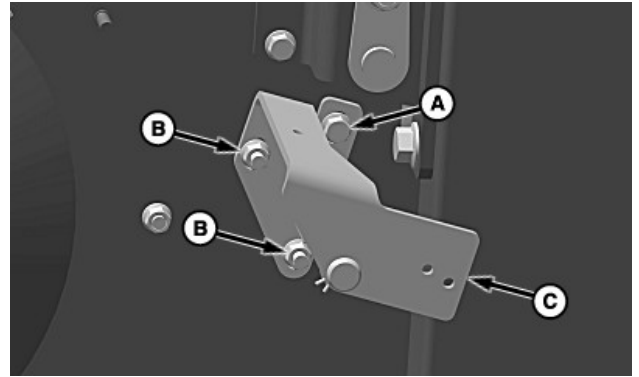
1. Remove nut (A), round-head cap screw (B), and spacer (C) on both sides of the machine.



H128324—UN—03MAR20

A—Round-Head Cap Screw (2 used)  
B—Spacer (2 used)  
C—Nut (2 used)

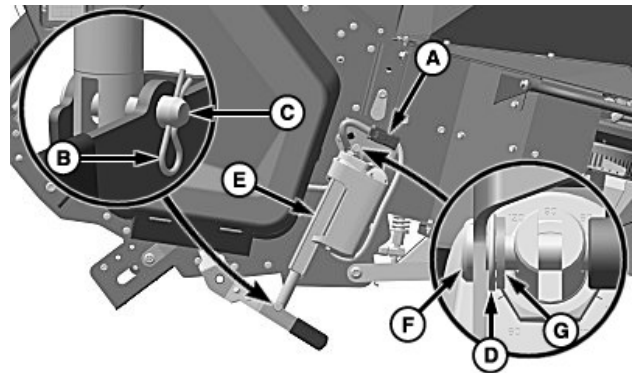
2. Install round-head cap screw (A), spacer (B), and nut (C) in the storage position hole on both sides of the machine.



H129314—UN—04MAR20

A—Cap Screw  
B—Nut (2 used)  
C—Upper Actuator Bracket

3. Loosen cap screw (A), and nuts (B) on the upper actuator bracket (C).

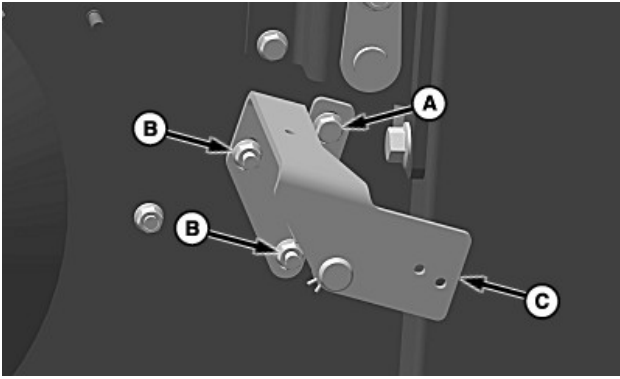


H128312—UN—25FEB20

A—Electrical Connector  
B—Spring Pin  
C—Pin  
D—Spring Pin  
E—Actuator  
F—Pin  
G—Washer

**NOTE:** Actuator must be fully retracted before installing.

4. Install actuator (E) as shown.
5. Install washer (G), pin (F), and spring pin (D).
6. Install pin (C) and spring pin (B).
7. Connect electrical connector (A).



H129314—UN—04MAR20

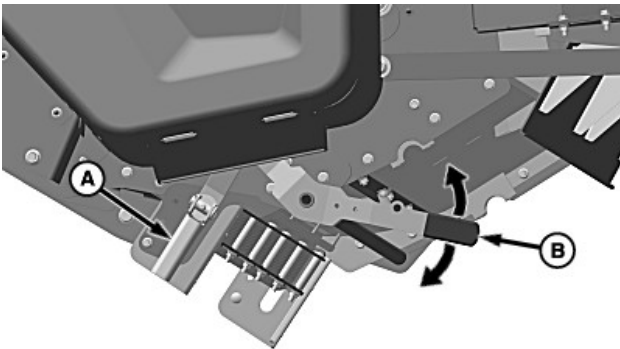
A—Cap Screw  
B—Nut (2 used)  
C—Upper Actuator Bracket

8. Lift the upper actuator bracket (C) until the knife bank is in the fully out position and the slide linkage is under tension. Tighten cap screw (A) and nuts (B).

**NOTE:** Position reading does not reflect the actual position of the knife bank when the separator is shutoff.

MH69740,0000947-19-01JUL20

## Chopper Stationary Knives (Manual Knife) —Replacing

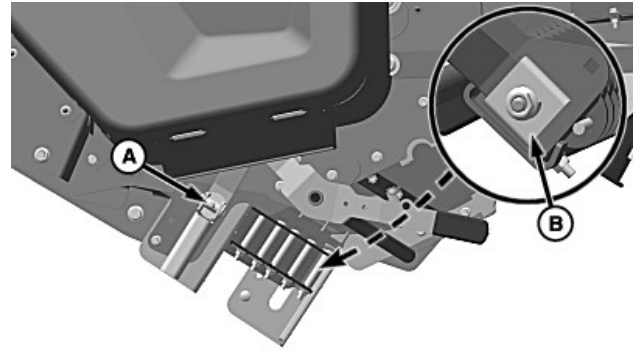


H128298—UN—05DEC19

A—Latch  
B—Handle

**CAUTION:** Shut OFF engine, set park brake, and remove key. Knife blades are sharp.

1. Open latch (A) on the chopper.
2. Move adjustment handle (B) upward until the knife bank is at the bottom of the adjustment slot.



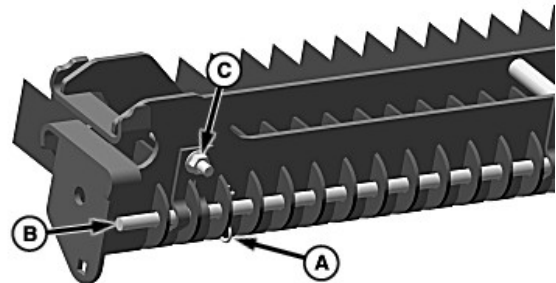
H128329—UN—12FEB20

A—Latch  
B—Tension Rod

3. Twist latch (A) to remove.

**NOTE:** Retain the bushings at the outer ends of the knife bank for later assembly.

4. Support the knife bank and remove the tension rod (B) out of the right-hand side of the machine.



H128969—UN—12FEB20

A—Spring Pin  
B—Retaining Rod  
C—Lock Nut

5. Remove spring pin (A) from retaining rod (B).
6. Loosen lock nuts (C) on the clips holding the retaining rod.
7. Slide the retaining rod out until it clears the knives that need to be replaced.
8. Reverse the knives for more usage or replace the knives if they are worn on both sides.
9. Align the retaining rod with the knives.
10. Tighten the lock nuts on the clips and install the pin.

**NOTE:** Reposition the bushings at the outer ends of the knife bank.

11. Install the knife bank and slide the tension rod in from the right-hand side of the machine.
12. Install the latch.



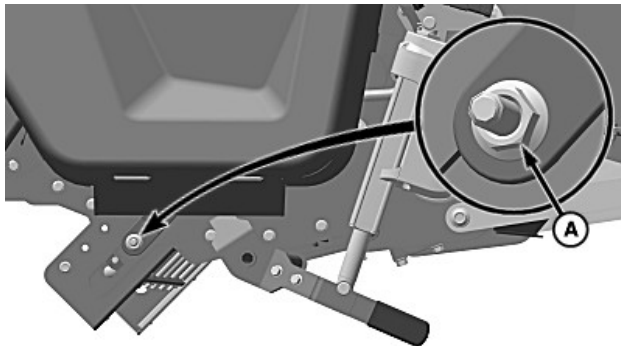
13. Adjust the knife bank to the desired position.

**IMPORTANT: The knife bank must be fully disengaged for corn.**

14. Twist the latch and close to lock the knife bank into position.

MH69740,0000948-19-25FEB20

## Chopper Stationary Knives (Remote Knife) —Replacing

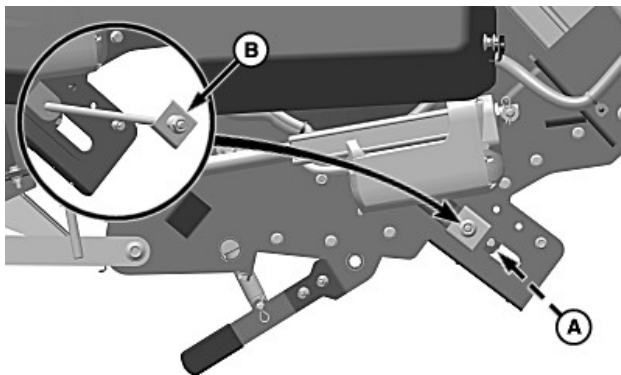


A—Nut

H128334—UN—10DEC19

**CAUTION:** Shut OFF engine, set park brake, and remove key. Knife blades are sharp.

1. Remove nut (A) from the left-hand side of the knife bank adjust.

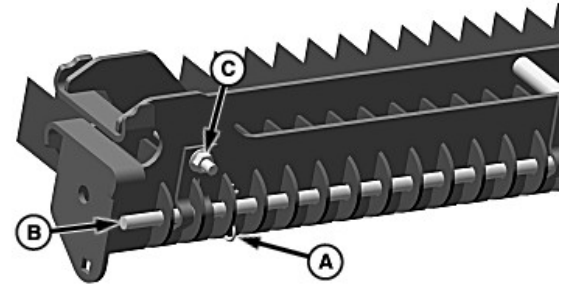


A—Knife Bank  
B—Tension Rod

H128335—UN—10DEC19

**NOTE:** Retain the bushings at the outer ends of the knife bank for later assembly.

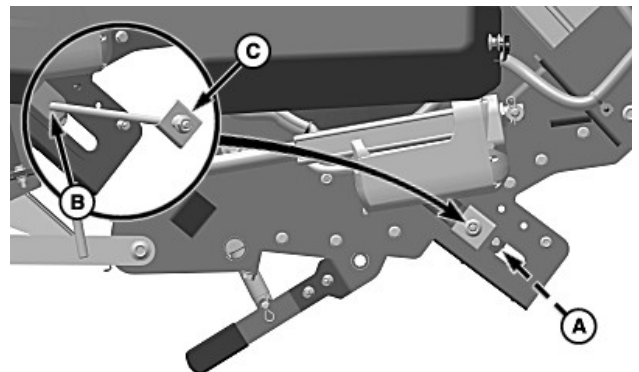
2. While supporting knife bank (A), remove tension rod (B) from the right-hand side of the machine.



A—Pin  
B—Retaining Rod  
C—Lock Nut

H128969—UN—12FEB20

3. Remove pin (A) from retaining rod (B).
4. Loosen lock nuts (C) on clips holding the retaining rod.
5. Slide the retaining rod until it clears the knives that need replaced.
6. Reverse the knives for more usage or replace the knives if they are worn on both sides.
7. Align the retaining rod with the knives.
8. Tighten the lock nuts on the clips and install the pin.



A—Knife Bank  
B—Adjustment Arm  
C—Tension Rod

H128336—UN—10DEC19

9. Install knife bank (A) and align the hole in the adjustment arm (B) with the knife bank.

**NOTE:** Reposition the bushings at the outer ends of the knife bank.

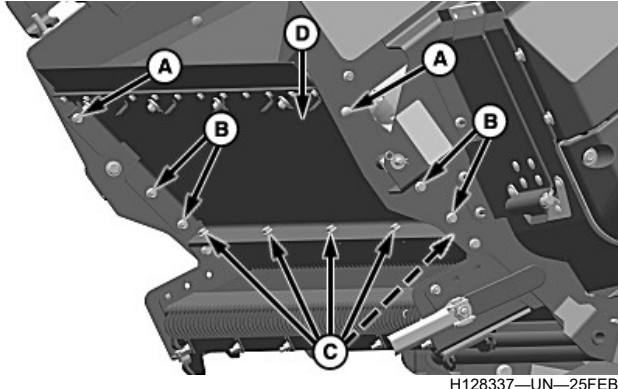
10. Slide tension rod (C) in from the right-hand side of the machine.

**IMPORTANT: The knife bank must be fully disengaged for corn.**

11. On the left-hand side of the machine, install the previously removed nut.

MH69740,0000949-19-13FEB20

## Chopper Access Door



- A—Round-Head Cap Screw (2 used)  
 B—Cap Screw and Nut (4 used)  
 C—Cap Screw (5 used)  
 D—Chopper Access Door

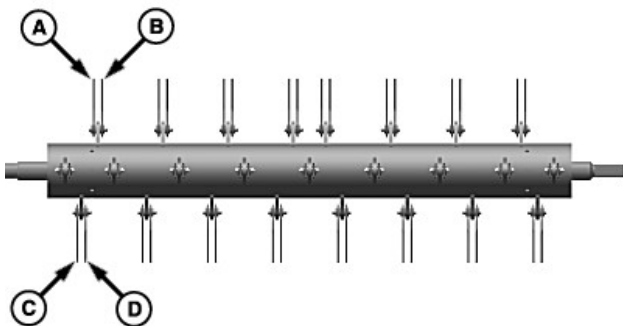
**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove round-head cap screws (A) from both sides of the chopper.
2. Remove cap screws and nuts (B) from both sides of the chopper.
3. Remove cap screws (C) and the chopper access door (D).
4. Install the access door before operating the machine.

MH69740,000094A-19-01JUL20

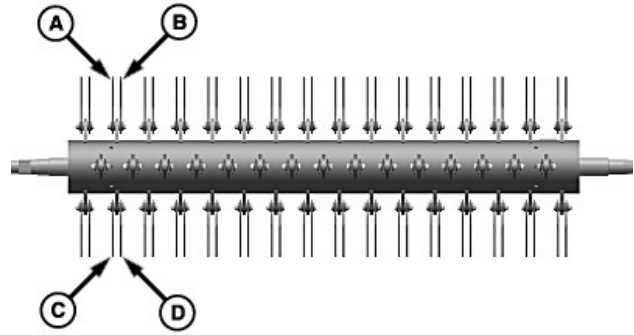
## Chopper Blades—Replacing and Configuration

### Blade Configuration



*Fine Cut Chopper*

H128349—UN—11DEC19



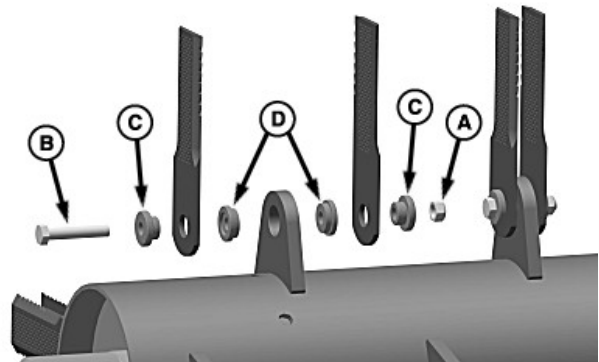
*Extra-Fine Cut Chopper*

H128972—UN—12FEB20

A—D—Chopper Blade

**IMPORTANT:** The chopper balance **MUST** be maintained. Replace **BOTH** blades on a single support and **BOTH** blades on the opposite support (180 degrees). Four blades **MUST** be installed to replace one broken blade, or all the blades can be replaced at one time. This **MUST** be done to maintain balance.

If any blade (A—D) is broken, replace blades (A—D).



H128347—UN—11DEC19

- A—Lock Nut  
 B—Cap Screw  
 C—Bushing (2 used)  
 D—Bushing (2 used)

**NOTE:** If removing the blades or bushings for inspection purposes, be certain to reinstall the blades on the **SAME** support from which they were removed. This must be done to maintain balance. It is a good practice to mark each blade before removal.

When installing or replacing the blades, install new cap screws and lock nuts in the same direction as the hardware that was previously removed.

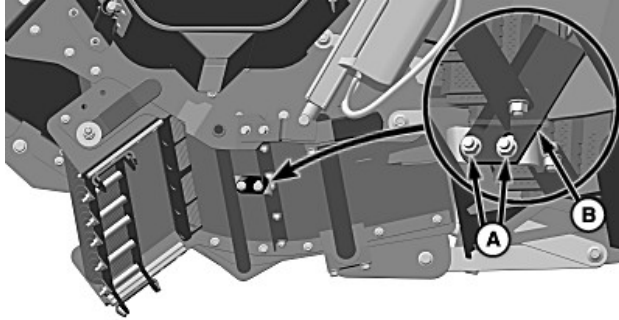
1. Remove lock nut (A) and cap screw (B).
2. Remove and inspect bushings (C and D).
3. Replace the blades and bushings. Install a new cap screw and lock nut. Tighten the lock nut to specification.

### Specification

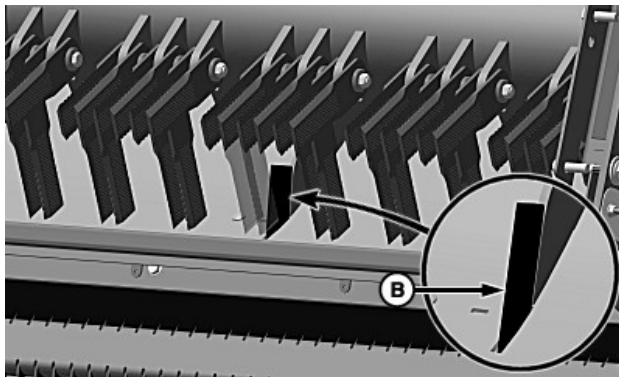
Chopper Blade Lock	
Nut—Torque. . . . .	65 N·m (48 lb·ft)

MH69740,000094B-19-08JUL20

### Middle Splitter Knife—Replacing



H128350—UN—11DEC19



H128351—UN—11DEC19

A—Hardware  
B—Middle Splitter Knife

**CAUTION:** Shut OFF engine, set park brake, and remove key. Knife blade is sharp.

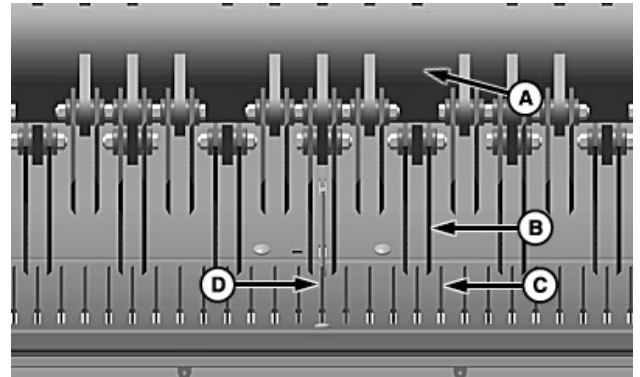
1. Remove hardware (A) and discard the middle splitter knife (B).

**NOTE:** The knife must be seated against the middle splitter so no gap exists.

2. Replace the middle splitter knife and install the previously removed hardware.

MH69740,000094C-19-10FEB20

### Chopper Blades—Centering



H128968—UN—14FEB20

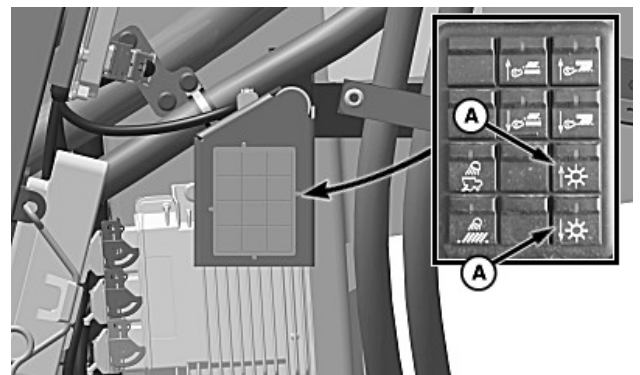
A—Chopper Rotor  
B—Rotor Blade  
C—Counter Knife  
D—Middle Splitter Knife

The chopper blades must be adjusted left and right to ensure that blades and knives do not contact.

See your John Deere dealer for further information.

MH69740,000097B-19-25FEB20

### Chopper Adjusting Switch



H128363—UN—12DEC19

A—Chopper Switch

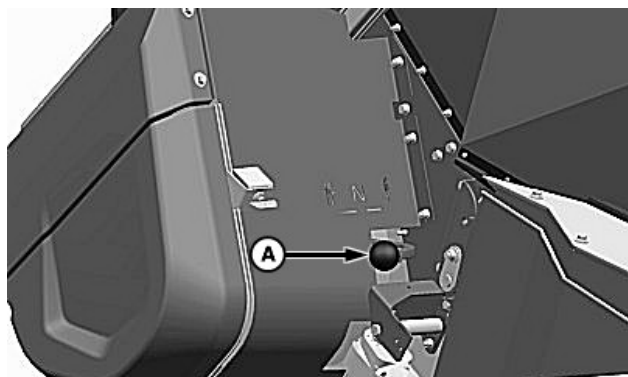
**IMPORTANT:** Before raising the chopper ensure that the tailboard safety rails are in the storage position.

The chopper adjust switch (A) is located on the left-hand side of the machine.

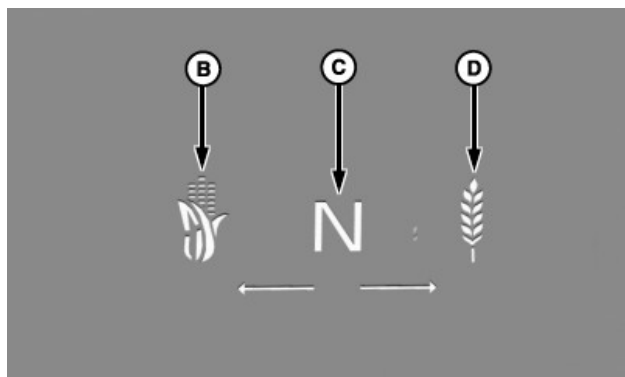
The chopper adjust switch allows the operator to raise or lower the chopper to various positions.

MH69740,000094D-19-18FEB20

## Chopper Drive Speed—Changing



H130773—UN—15JUL20



H130982—UN—28JUL20

- A—Shifter Handle
- B—Slow-Speed Position
- C—Neutral Position
- D—High-Speed Position

**CAUTION:** Shut OFF engine, set park brake, and remove key.

*NOTE: It may be necessary to rotate sheave a small amount while moving shifter handle.*

### Slow-Speed Position (Corn):

Move shifter handle (A) to position (B).

### Neutral Position:

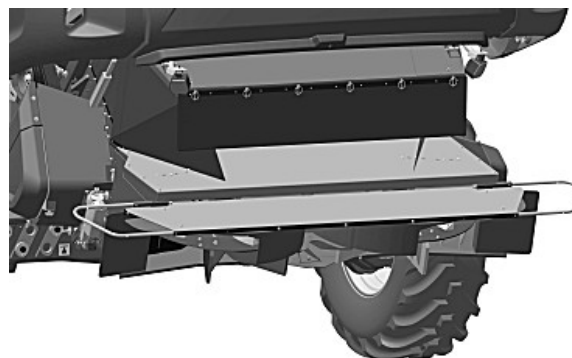
Move shifter handle (A) to position (C).

### High-Speed Position (Wheat):

Move shifter handle (A) to position (D).

MH69740,0000A19-19-07AUG20

## Spreader (General Information)



H128371—UN—12DEC19

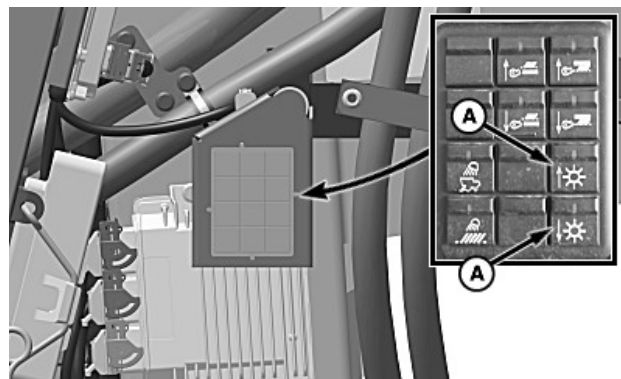
**CAUTION:** Do not let anyone stand behind the spreader while it is running. Shut OFF engine, set park brake, and remove key before adjusting spreader.

*NOTE: See Residue Management Application Help or Operator's Station Help for further information.*

MH69740,000094F-19-10FEB20

## Spreader—Windrow Position

### Standard Residue

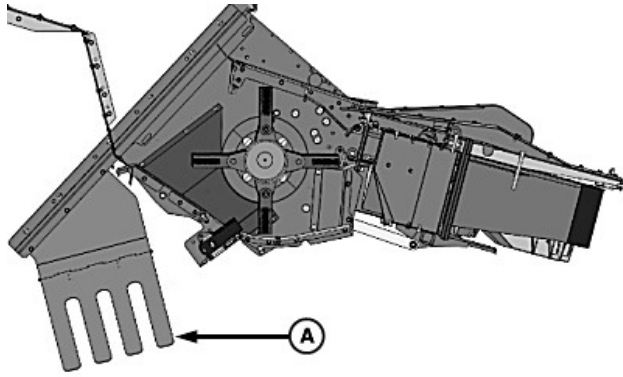


H128363—UN—12DEC19

A—Chopper Raise/Lower Button

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Raise the chopper using buttons (A).



H128281—UN—05DEC19

A—Convergence Rake (2 used)

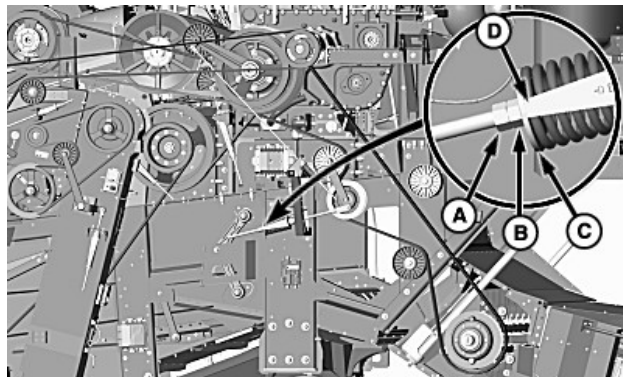
2. Install convergence rakes (A), if equipped.
3. Adjust the rakes as needed for windrowing.

### Premium Residue

To windrow straw and spread chaff, open the chop-to-drop door. See Residue Management Application Help or Operator's Station Help for further information.

MH69740,0000950-19-18FEB20

### Chopper Drive Belt—Adjusting



H126931—UN—07AUG19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

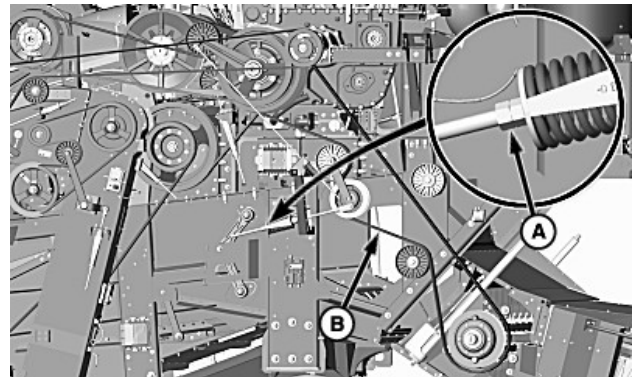
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut.

#### Specification

Lock Nut—Torque. . . . . 60 N·m  
(44 lb·ft)

MH69740,0000886-19-17FEB20

### Chopper Drive Belt—Replacing



H126932—UN—07AUG19

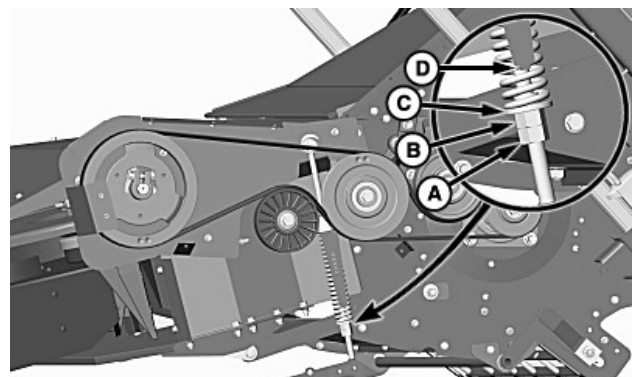
A—Nut (2 used)  
B—Chopper Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove chopper drive shields. See Left-Hand Side Shields.
2. Loosen nuts (A) to remove tension from the chopper drive belt (B) and install replacement belt.
3. Adjust chopper drive belt. See Chopper Drive Belt—Adjusting.
4. Install previously removed chopper drive shields.

MH69740,0000887-19-17OCT19

### Spreader Drive Belt—Adjusting



H126937—UN—08AUG19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.

3. Tighten lock nut.

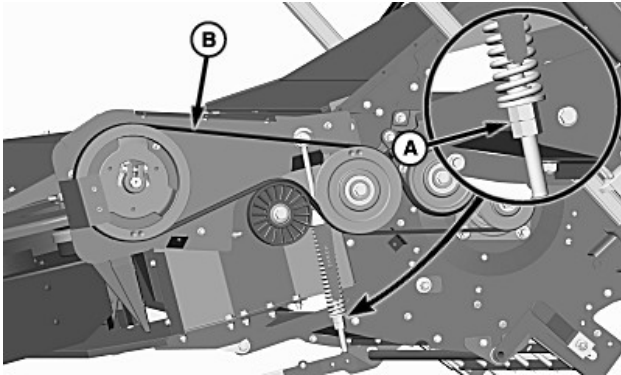
**Specification**

Lock Nut—Torque. . . . . 60 N·m  
(44 lb·ft)

MH69740,000088B-19-18FEB20

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## Spreader Drive Belt—Replacing



H126936—UN—08AUG19

A—Nut (2 used)  
B—Spreader Drive Belt

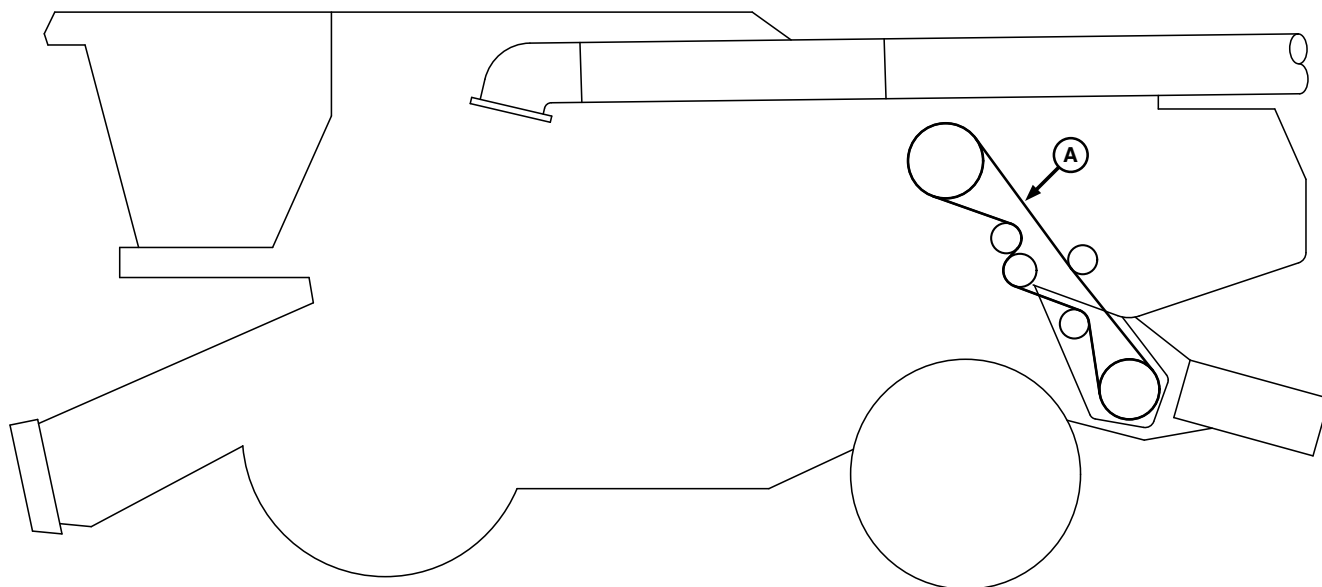
**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the spreader drive belt (B) and install replacement belt.
2. Adjust spreader drive belt. See Spreader Drive Belt—Adjusting.

MH69740,000088C-19-17OCT19

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## Drive Belts—Left-Hand

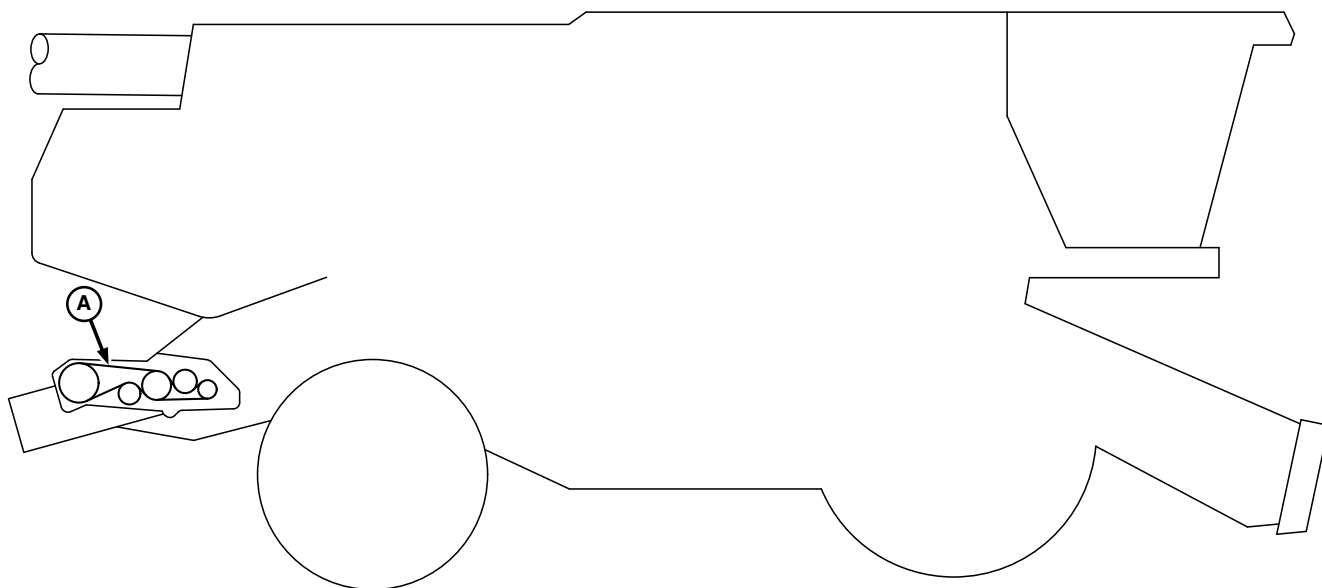


H127555—UN—08OCT19

A—Chopper Drive Belt

MH69740,00008DD-19-19FEB20

## Drive Belts—Right-Hand



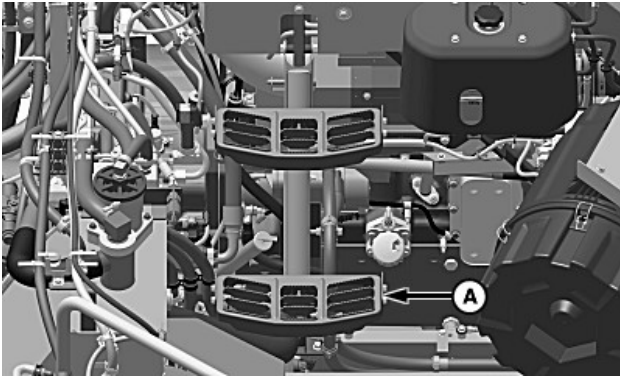
H127556—UN—08OCT19

A—Spreader Drive Belt

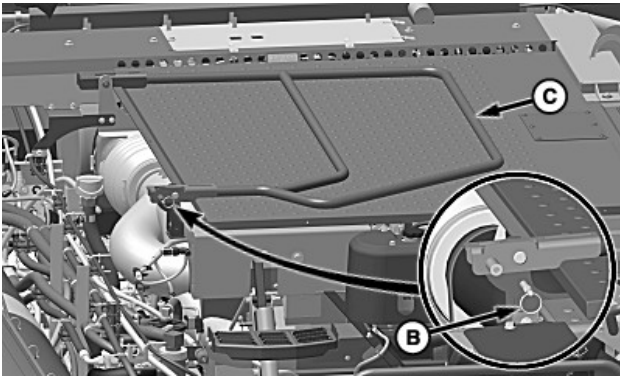
MH69740,00008DE-19-19FEB20

# Grain Tank and Unloading System

## Grain Tank/Engine Ladder



H127165—UN—14FEB20



H127169—UN—14FEB20

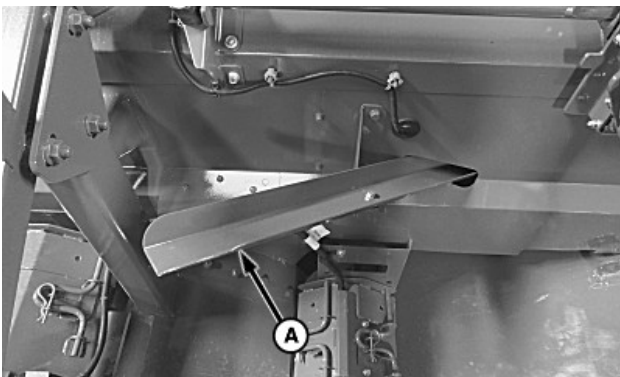
A—Ladder  
B—Lockout Pin  
C—Handrail

**CAUTION:** Shut OFF engine, set park brake, and remove key.

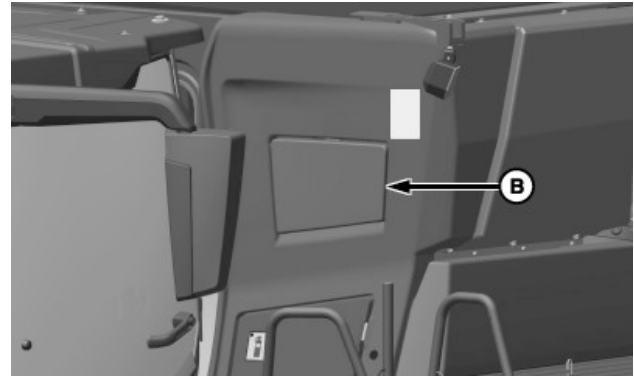
1. Use ladder (A) to access the grain tank.
2. Pull lockout pin (B) and rotate handrail (C) up until handrail locks into place.

MH69740,00008A7-19-10FEB20

## Grain Tank Sample Trough



H127171—UN—26AUG19



H128572—UN—20JAN20

A—Sample Trough  
B—Door

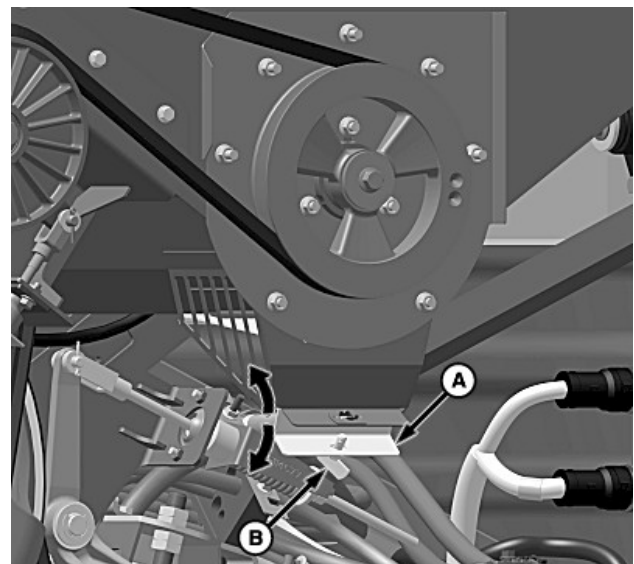
1. Grain tank sample trough (A) allows operator to take a sample of the harvested crop from the loading auger without entering the grain tank.
2. With machine full of the harvested crop, move multi-function lever to neutral position and set the park brake.
3. Disengage the header and separator.

**CAUTION:** Do not have a second person check for a grain tank sample.

4. Open door (B). Lower end of the grain tank trough spills off a sample of the harvested crop.

MH69740,00008A8-19-12NOV20

## Grain Tank Cleanout Doors



H128595—UN—21JAN20

A—Cleanout Door (2 used)  
B—Latch (2 used)

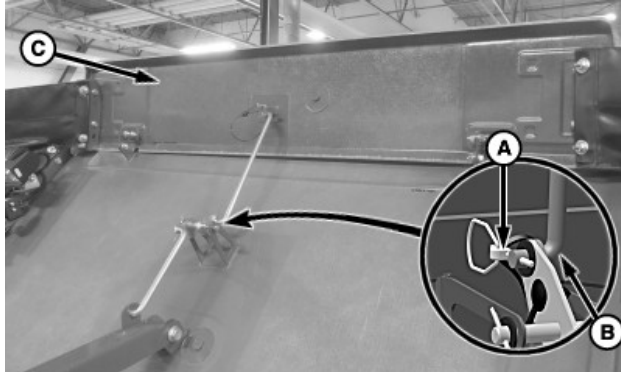
**CAUTION:** Shut OFF engine, set park brake, and remove key.



1. The cleanout doors (A) are on the right-hand end of both grain tank cross augers.
2. These cleanout doors must be opened during storage or for cleaning the grain tank.
3. Release latch (B) and lower the cleanout door away from both the cross auger troughs.

MH69740,00008A9-19-21JAN20

## Grain Tank Access Door



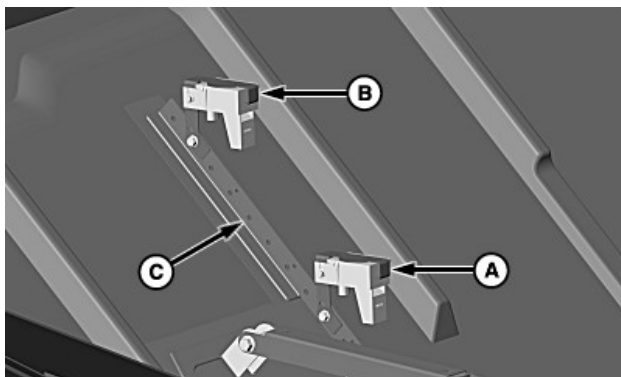
H127749—UN—18FEB20

A—Pin  
B—Linkage  
C—Access Door

1. Remove pin (A) and linkage (B).
2. Twist access door (C) towards the inside of the grain tank.

MH69740,00008DF-19-05DEC19

## Grain Tank Fill Sensors—Adjusting



H127176—UN—27AUG19

A—3/4 Full Sensor  
B—4/4 Full Sensor  
C—Holes

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Header drive must be engaged for the buzzer to sound.

## Grain Tank 3/4 Full Sensor:

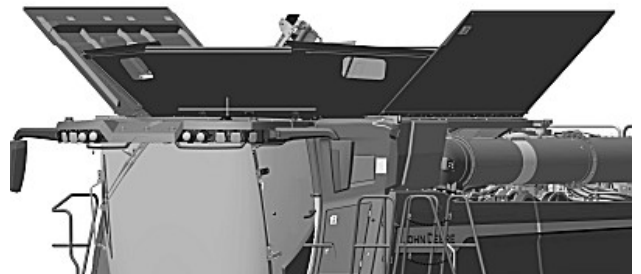
1. The grain tank 3/4 full sensor (A) is on the right-hand grain tank extension or the grain tank cover.
2. Adjust the sensor by moving it higher or lower in the slot or holes (C) to adjust the switch "trip" point. The higher the sensor is positioned, the fuller the grain tank is when the buzzer sounds.
3. The grain tank 3/4 full icon appears on the display when the grain reaches the sensor.
4. When the grain tank is 3/4 full, the beacon lights illuminate to provide a signal to the grain cart operator that the grain tank is nearly full.

## Grain Tank 4/4 Full Sensor:

1. The grain tank 4/4 full sensor (B) is on the right-hand grain tank extension or the grain tank cover.
2. Adjust the sensor by moving it higher or lower in the slot or holes to adjust the switch "trip" point. The higher the sensor is positioned, the fuller the grain tank is when the buzzer sounds.
3. The grain tank 4/4 full icon appears on the display when the grain reaches the sensor.

MH69740,00008AA-19-10FEB20

## Grain Tank Covers—Operating



H128596—UN—21JAN20



Folding Button

H115016—UN—22MAR16

**CAUTION:** The grain tank covers must be closed and the radio antenna removed and placed in the manual storage location compartment located behind the operator's seat before transporting the machine on the roadway. Avoid contact with low-hanging power lines and tree limbs.

**IMPORTANT:** Grain tank must be empty before folding grain tank covers.

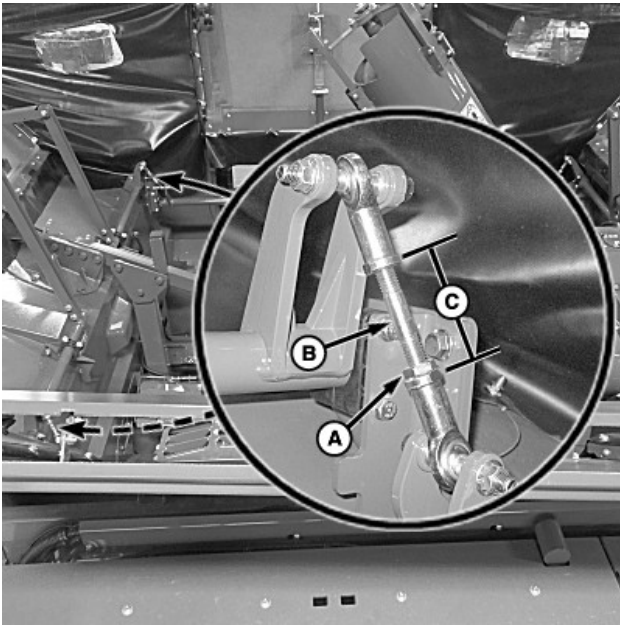
**NOTE:** Grain tank covers must be opened all the way in order to engage separator.

Clean grain loading auger rises when grain tank covers are opened. Auger swings down when covers are closed.

Press folding button on navigation bar. See Folding Application Help or Operator's Station Help for further information on raising or lowering grain tank covers.

MH69740,0000942-19-25JUN20

## Grain Tank Covers—Adjusting



H128741—UN—31JAN20

A—Nut  
B—Bolt  
C—Nominal Distance, 72 mm (2-13/16 in)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Only adjust turnbuckles on the left-hand side of machine. Turnbuckles on the right-hand side of machine are not adjustable.

1. Raise the grain tank covers fully.

**NOTE:** The nominal distance does not include the nuts.

2. Loosen nut (A) and adjust the bolt (B) until a nominal distance (C) is achieved between the turnbuckle ends as shown.

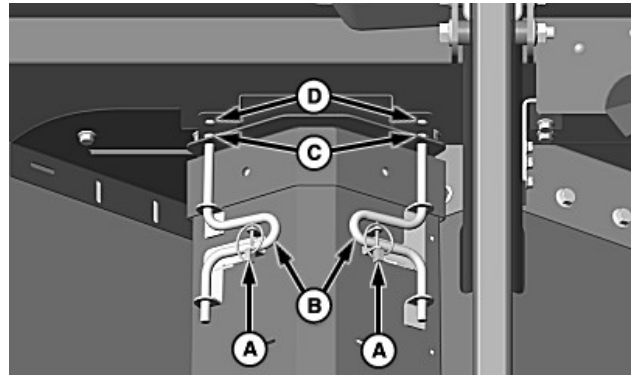
**NOTE:** Increasing turnbuckle distance increases clearance between left cover and front/rear covers.

Decreasing turnbuckle distance decreases clearance between left cover and front/rear covers.

3. Tighten the nut when distance is achieved.
4. Repeat as needed on the remaining turnbuckle.

MH69740,00008AB-19-11NOV20

## Grain Tank Cross Auger Covers



H127177—UN—27AUG19

A—Spring Pin (2 used)  
B—Handle (2 used)  
C—Lower Hole  
D—Upper Hole

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** If the auger covers are adjusted too far, auger drive shear bolt can break repeatedly, or damage can occur to the augers or the grain tank.

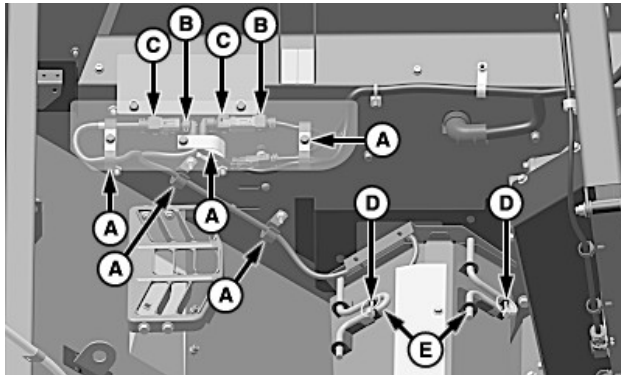
Auger covers are used to adjust the unloading rate. To adjust auger covers:

1. Remove spring pin (A) and slide the handles (B) toward the inside of the cross auger cover.
2. Place the auger cover in the desired position and slide the handles into the appropriate lower or upper holes (C and D).
3. Install the previously removed spring pin.
4. Repeat the procedure on the opposite side of the cross auger cover.

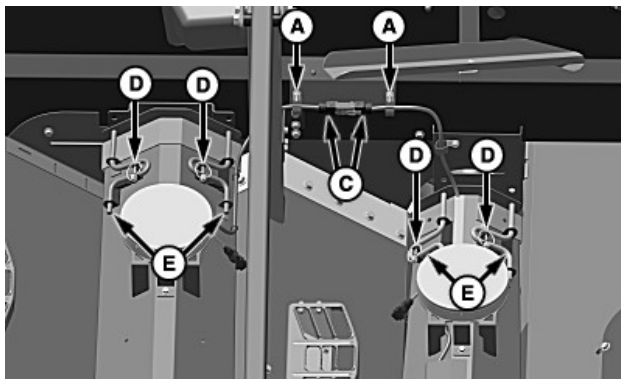
**NOTE:** If needed, adjust the cross auger covers up or down to increase or decrease flow rate depending on the crop type and moisture conditions. Adjusting the cross auger covers also affects the unload system power consumption.

MH69740,00008AC-19-27AUG19

## ActiveYield™ Cross Auger Covers— Removing



H127605—UN—30SEP19



H127606—UN—30SEP19

- A—Clamp (7 used)  
 B—Grain Tank Harness Connector (2 used)  
 C—ActiveYield™ Sensor Harness Connector (4 used)  
 D—Spring Pin (6 used)  
 E—Handle (6 used)

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** Use extra care when removing and installing auger covers. Do not stand on, drop, or allow objects to fall onto sensors.

**NOTE:** In certain crop conditions and speciality crops, cross auger covers must be removed.

ActiveYield™ system **MUST** be disabled when cross auger covers are removed. See *Calibrations Application Help* or *Operator's Station Help* for further information.

1. Remove the wiring harnesses from clamps (A) as needed.
2. Disconnect grain tank connectors (B) from the front cross auger connectors (C).
3. Disconnect the front cross auger connector from the rear cross auger connector.
4. Connect the grain tank connectors together and retain with clamps as needed.

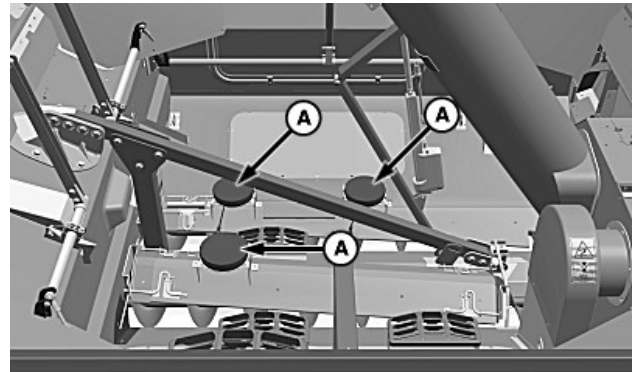
ActiveYield is a trademark of Deere & Company

**IMPORTANT:** Connect harnesses together to enable yield monitoring, even if ActiveYield™ is disabled. To prevent contact with cross augers, retain wiring harness with clamps.

5. Remove spring pin (D), then twist the handle (E) upward and towards the inside of the grain tank on both sides of the machine.
6. Remove the auger cover from the machine and repeat on the remaining auger cover.

MH69740,00008D1-19-25FEB20

## ActiveYield™ Sensor Locations



H127620—UN—30SEP19

A—Sensor

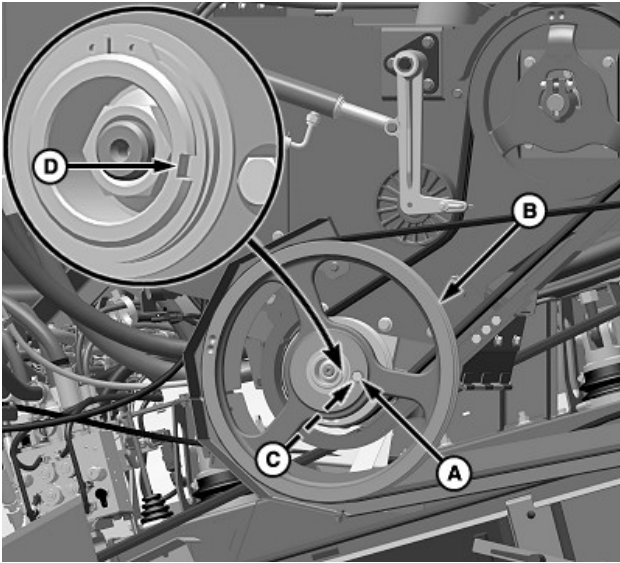
**IMPORTANT:** To prevent damage to the sensors, do not stand on, drop, or allow objects to fall onto the sensors.

**NOTE:** Two sensors are on the front cross auger cover and one sensor is on the rear cross auger cover.

ActiveYield™ uses sensors (A) located in the grain tank on the cross auger covers to measure the mass of harvested grain.

MH69740,00008D2-19-25FEB20

## Unloading Auger Drive Shear Bolt



H129592—UN—12MAR20

- A—Shear Bolt  
B—Pulley  
C—Hole  
D—Notch

**CAUTION:** Shut OFF engine, set park brake, and remove key.

Use only John Deere supplied shear bolt (A) (cap screw through pulley into hub), see your John Deere dealer for replacement shear bolts.

Extra shear bolts are provided on the machine. See Shear Bolt Location in this section for further information.

1. Rotate pulley (B) until hole (C) aligns with notch (D).
2. Install replacement shear bolt and tighten to specification.

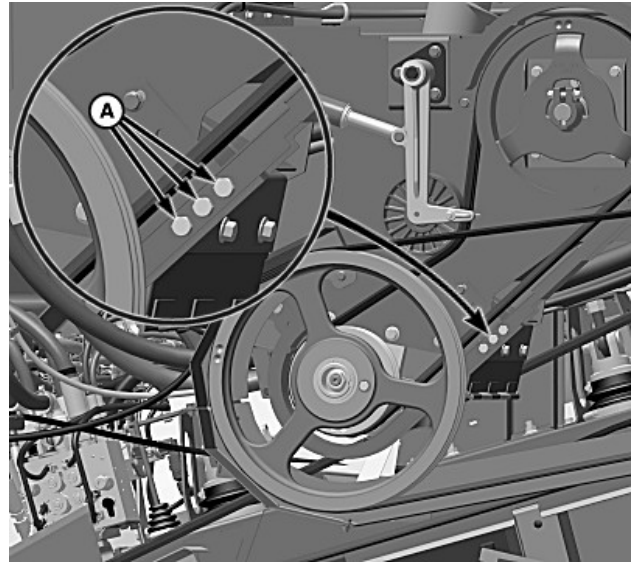
### Specification

Cap Screw—Torque. . . . . 42 N·m  
(31 lb·ft)

**IMPORTANT:** Do not install a tire inner tube or a sack to end of unloading auger. Any restriction at the end of the auger can damage the unloading auger system and could cause shear bolt failure.

OUC6075,0004DC5-19-12MAR20

## Shear Bolt Location



H129593—UN—12MAR20

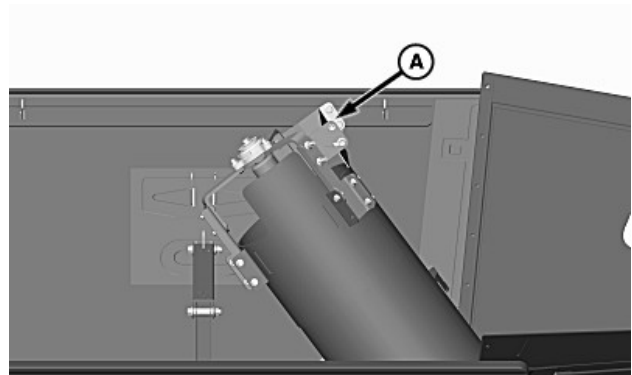
- A—Shear Bolt (3 used)

**NOTE:** Three extra shear bolts are provided.

If the unloading auger drive shear bolt breaks, remove and replace with an extra shear bolt (A) from location shown.

OUC6075,0004DC6-19-12MAR20

## Grain Tank Loading Auger Deflector



H127178—UN—27AUG19

- A—Deflector

**CAUTION:** Shut OFF engine, set park brake, and remove key.

Position deflector (A) as needed.

Counterclockwise rotation:

- Use in windy conditions when harvesting crops like grass seed or rape.
- Corn—Grain tank fills to the left and to the rear.

Clockwise rotation:

- Grain—Grain tank fills to the right and to the front.

MH69740,00008AD-19-10FEB20

## Grain Tank Loading Auger—Folding



H127636—UN—01OCT19



H115016—UN—22MAR16

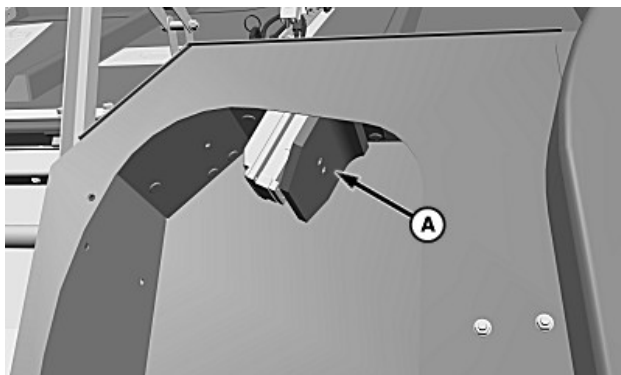
Folding Button

**IMPORTANT:** Grain tank must be empty before folding the grain tank loading auger.

Press folding button on navigation bar. See Folding Application Help or Operator's Station Help for further information on folding and unfolding of the grain tank loading auger.

MH69740,00008D3-19-01OCT19

## Mass Flow Sensor Plate—Cleaning



H127637—UN—01OCT19

A—Mass Flow Sensor Plate

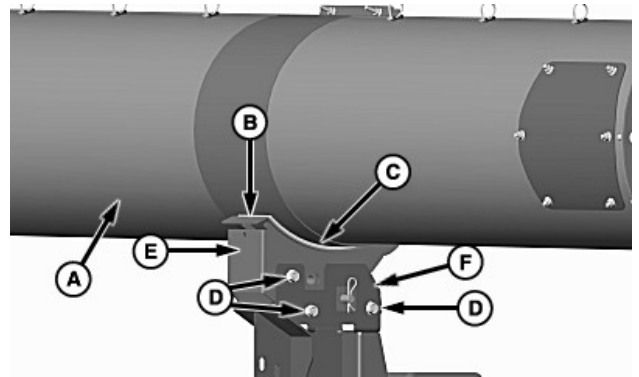
**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Lower the grain tank loading auger.

2. Clean the mass flow sensor plate (A).
3. Raise the grain tank loading auger.

MH69740,00008D4-19-11NOV20

## Unloading Auger Cradle Support—Adjusting



H127193—UN—28AUG19

A—Unloading Auger  
B—Wear Plate  
C—Location  
D—Cap Screw  
E—Cradle Support  
F—Grain Tank Plate

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Swing the unloading auger to storage or transport position.

**NOTE:** When the unloading auger is in the transport position the transport lock will engage.

No gap should exist between the unloading auger (A) and the wear plate (B) at location (C) when adjusted properly.

2. If a gap exists between the unloading auger and the wear plate, loosen cap screws (D) and adjust cradle support (E) vertically until the wear plate contacts the lower surface of the unloading auger.

**NOTE:** The top surface of cradle support (E) **MUST** be parallel with the top of the grain tank plate (F).

3. Tighten the cap screws when the cradle is adjusted.

MH69740,00008AE-19-11FEB20

## Unloading Auger Adjustable Spout (If Equipped)



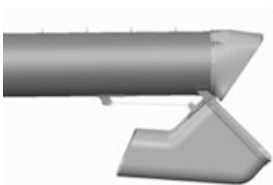
Field Transport Position

H128289—UN—05DEC19



Unload Position

H128290—UN—05DEC19



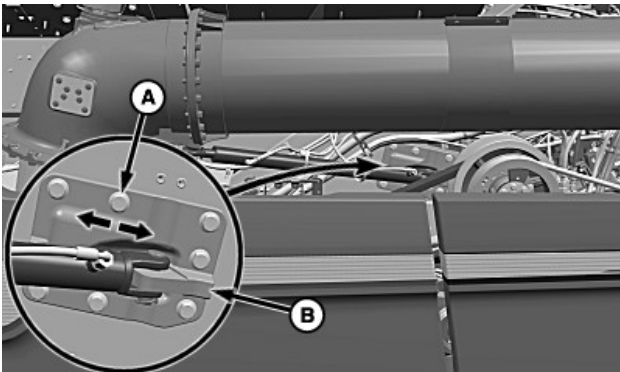
Road Transport Position

H128291—UN—05DEC19

Press the folding button on the navigation bar. See Folding Application Help or Operator's Station Help for further information on folding the unloading auger adjustable spout.

MH69740,0000941-19-04MAR20

## Unloading Auger Position—Adjusting



A—Cap Screw (7 used)  
B—Cylinder Bracket

H127674—UN—02OCT19

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**NOTE:** Cylinder must be fully retracted to set the correct position.

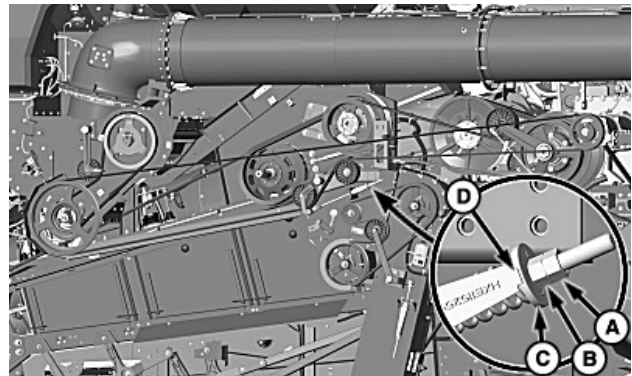
1. Loosen cap screws (A).
2. Adjust unloading auger inward or outward to move the cylinder bracket (B) forward or rearward until the unloading auger sets properly on the cradle support.
3. Tighten cap screws to specification.

### Specification

Cap Screws—Torque. . . . . 422 N·m  
(311 lb·ft)

MH69740,00008D5-19-02OCT19

## Unloading Auger Drive Belt—Adjusting



H126966—UN—09AUG19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

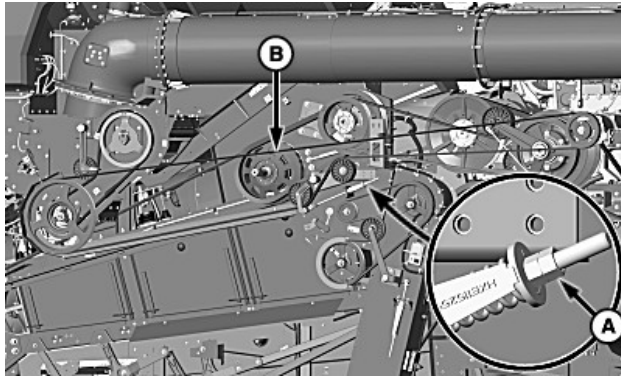
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000088F-19-12FEB20

## Unloading Auger Drive Belt—Replacing



H126967—UN—09AUG19

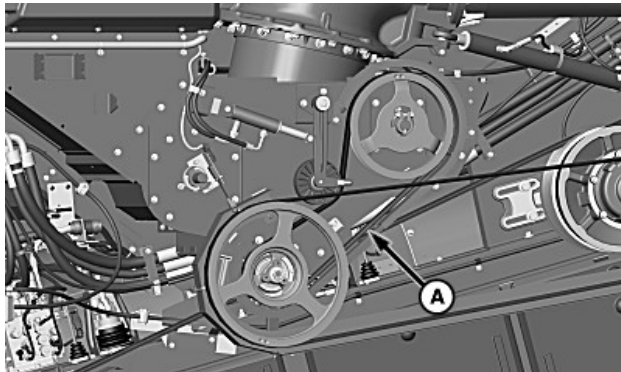
- A—Nut (2 used)  
B—Unloading Auger Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the unloading auger drive belt (B).
2. Remove the unloading auger drive belt and install replacement belt.
3. Adjust the unloading auger drive belt. See Unloading Auger Drive Belt—Adjusting.

MH69740.0000890-19-09AUG19

## Cross Auger Clutch Belt—Replacing



H126981—UN—12AUG19

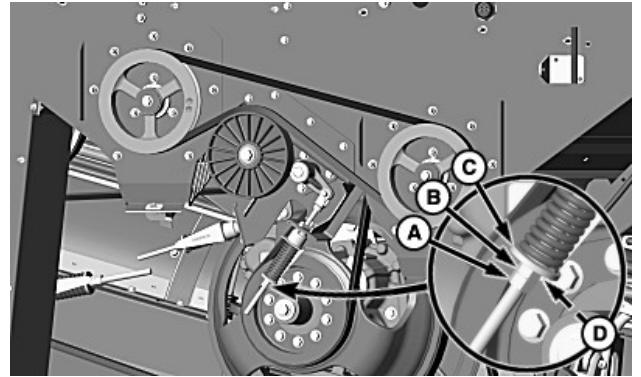
- A—Cross Auger Clutch Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove cross auger clutch belt (A).
2. Install replacement cross auger clutch belt.

MH69740.0000898-19-19FEB20

## Cross Auger Drive Belt—Adjusting



H126980—UN—12AUG19

- A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

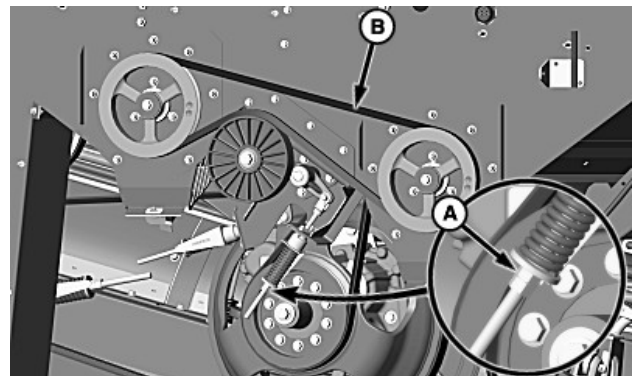
1. Loosen lock nut (A).
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

### Specification

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740.0000899-19-19FEB20

## Cross Auger Drive Belt—Replacing



H126982—UN—12AUG19

- A—Nut (2 used)  
B—Cross Auger Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the cross auger drive belt (B).

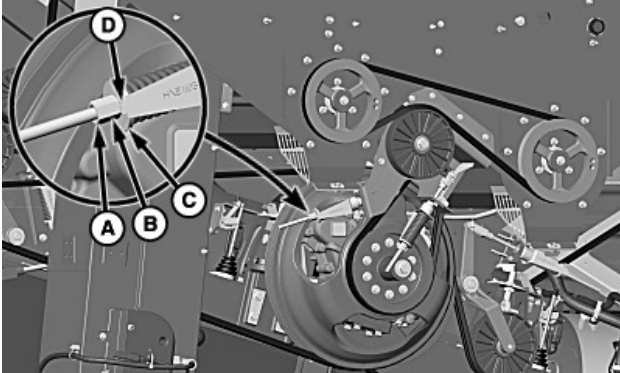
2. Remove the cross auger drive belt and install replacement belt.
3. Tighten lock nut to specification.

**Specification**

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000089A-19-19FEB20

## Loading Auger Belt—Adjusting



H126992—UN—13AUG19

A—Lock Nut  
B—Nut  
C—Washer  
D—Gauge

**CAUTION:** Shut OFF engine, set park brake, and remove key.

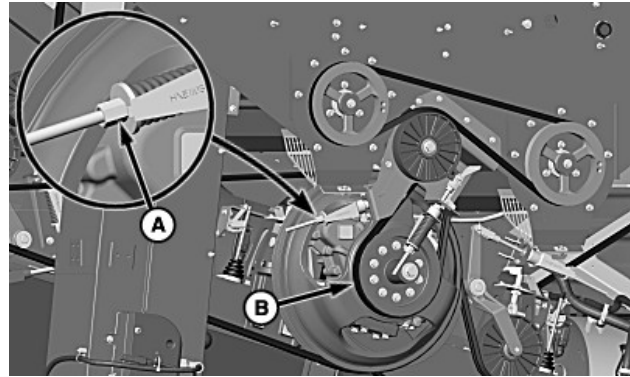
1. Loosen lock nut (A)
2. Tighten nut (B) until the washer (C) is positioned between the end of the gauge (D) and the bottom of the step.
3. Tighten lock nut to specification.

**Specification**

Lock Nut—Torque. . . . . 24 N·m  
(212 lb·in)

MH69740,000089C-19-19FEB20

## Loading Auger Belt—Replacing



H126993—UN—13AUG19

A—Nut (2 used)  
B—Loading Auger Belt

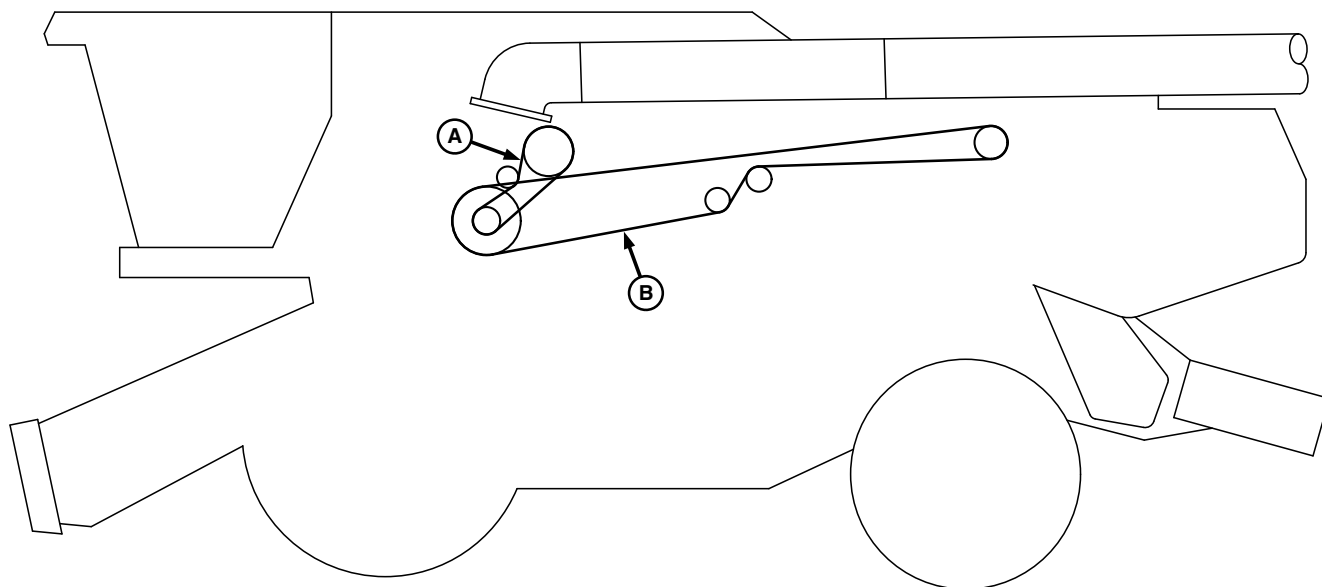
**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Loosen nuts (A) to remove tension from the loading auger belt (B).
2. Remove the loading auger belt and install replacement belt.
3. Adjust the loading auger belt. See Loading Auger Belt—Adjusting.

MH69740,000089D-19-19FEB20



## Drive Belts—Left-Hand



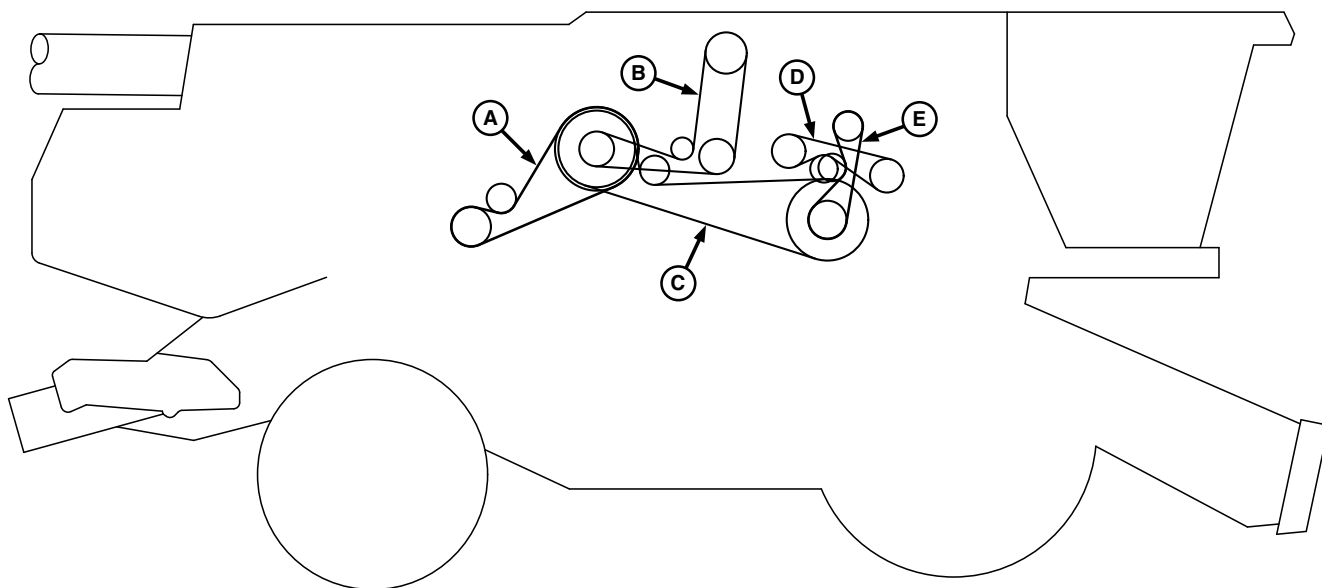
A—Cross Auger Clutch Drive Belt

B—Unloading Auger Drive Belt

H127553—UN—08OCT19

MH69740,00008DB-19-19FEB20

## Drive Belts—Right-Hand



A—Jackshaft Drive Belt  
B—Clean Grain Elevator Drive Belt  
C—Feeder House Gear Case Drive Belt

D—Cross Auger Drive Belt  
E—Loading Auger Gear Case Drive Belt

H127554—UN—08OCT19

MH69740,00008DC-19-19FEB20

# Service—Electrical System

## Welding Near Electronic Control Units



TS953—UN—15MAY90

**IMPORTANT:** Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.
6. After welding, reverse Steps 1—5.

DX,WW,ECU02-19-14AUG09

## Keep Electronic Control Unit Connectors Clean

**IMPORTANT:** Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure. (See your John Deere dealer.)
5. The wiring harness terminals and connectors for electronic control units are repairable.

DX,WW,ECU04-19-11JUN09

## Observe Electrical Precautions



H127224—UN—29AUG19

**CAUTION:** Machine must be on a flat surface to accurately check fluid levels. Battery fluid level should be visible at the top of each fill port covering the plates in each cell.

Keep all sparks and flames away from batteries as gas given off by electrolyte is explosive. To avoid sparks, connect ground cable last and disconnect it first. To avoid shocks and burns, turn battery disconnect switch OFF before servicing any part of the electrical system or when removing batteries.

MH69740,00008AF-19-29AUG19

## Basic Electrical Component Handling / Precautions for Vehicles Equipped with Computer Controlled Systems

- Never disconnect the batteries while the key switch is on and the engine is running.  
Why: This can cause electrical voltage spikes that can damage electronic components.
- Do not connect jumper cables while the key switch is on.  
Why: This can cause electrical voltage spikes that can damage electronic components.
- Disconnect batteries prior to recharging (if possible)  
Why: Electrical loads in the machine can slow the recharging process. Battery chargers can cause electrical voltage spikes that can damage electronic components.
- Never jump start the machine with a voltage higher than the machine is designed to operate on  
Why: This can damage electronic components

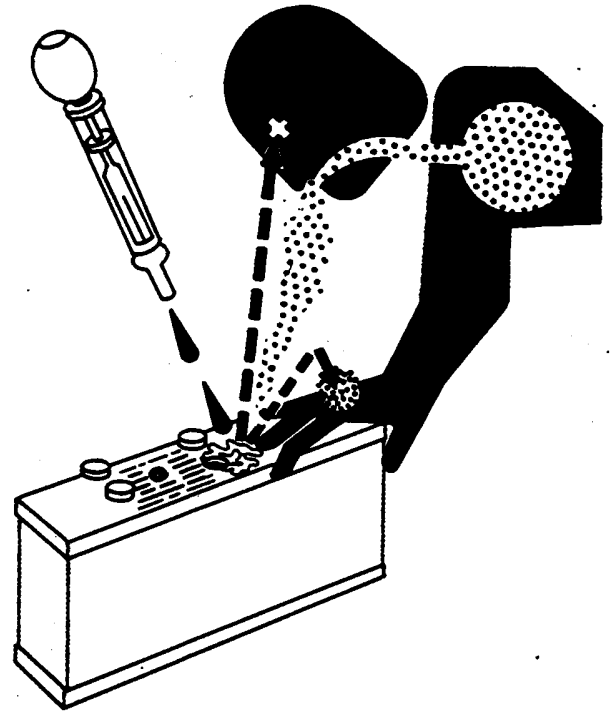
- Do not connect or disconnect electrical connectors while the key switch is on or the machine is running.  
Why: This can cause computer system errors from interrupting a computer program while it is running and electrical voltage spikes that are produced can damage electronic components.

- Do not apply power or ground to any component as a test unless specifically instructed to do so.  
Why: Connecting the wrong voltage to the wrong point of an electronic system can cause electronic component failures.

- When welding on the machine, make sure to connect ground lead to the parts being welded. For maximum protection disconnect all electronic controllers before welding.

Why: The high currents associated with welding can damage wiring harnesses that are involved in the ground path. Welding can also cause electrical voltage spikes that can damage electronic components.

KC01776,00003CF-19-19MAR01



TS203—UN—23AUG88

Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace grounded clamp last.

Sulfuric acid in battery electrolyte is poisonous and strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

**Avoid hazards by:**

- Filling batteries in a well-ventilated area
- Wearing eye protection and rubber gloves
- Avoiding use of air pressure to clean batteries
- Avoiding breathing fumes when electrolyte is added
- Avoiding spilling or dripping electrolyte
- Using correct battery booster or charger procedure.

**If acid is spilled on skin or in eyes:**

1. Flush skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush eyes with water for 15—30 minutes. Get medical attention immediately.

**If acid is swallowed:**

## Handling Batteries Safely



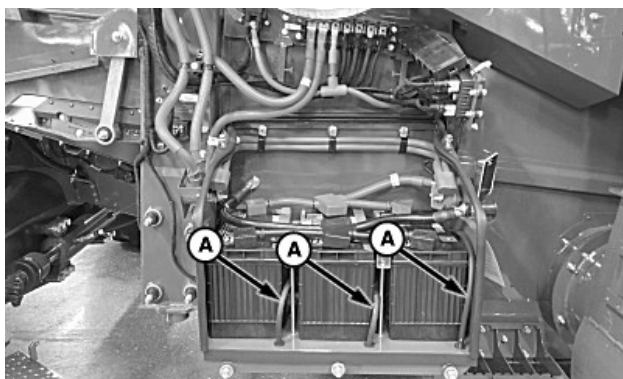
TS204—UN—15APR13

1. Do not induce vomiting.
2. Drink large amounts of water or milk, but do not exceed 2 L (2 qt.).
3. Get medical attention immediately.

**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

DX,WW,BATTERIES-19-02DEC10

## Batteries—Safe Installation



H127225—UN—29AUG19

A—Vent Tube

**CAUTION:** Machine must be on a flat surface to accurately check fluid levels. Battery fluid level should be visible at the top of each fill port covering the plates in each cell.

Avoid serious injury or death from explosions. High levels of hydrogen gas can accumulate if the battery box is not vented properly. Always reinstall the vent tubes (A) after performing service or maintenance on the batteries or the battery box. Verify that the ventilation hoses are not bent or kinked.

Replacement batteries must have a ventilation fitting suited for ventilation hose attachment. See your John Deere dealer for replacement batteries equipped with ventilation fittings.

If ventilation tubes are not attached to the battery, then the battery lid must remain off whenever the machine engine is running or whenever the batteries are being charged with an external charger.

MH69740,00008B0-19-11FEB20

## Battery Cables—Connecting

**CAUTION:** BATTERIES ARE NEGATIVE GROUNDED ONLY. Always connect the battery ground strap to the negative (-) posts of the battery. Connect the starter cable to the positive (+) post of the battery. Reversed polarity in the battery or alternator connections results in permanent damage to the electrical system. Connect the ground strap to the negative (-) terminal last.

**IMPORTANT:** Batteries must have same terminal locations.

1. Turn off all of the switches and accessories. Clean the battery posts and the terminals.
2. QUICKLY TAP the ground strap to the negative post. Arcing must not occur. If arcing occurs, DO NOT MAKE CONNECTION. Check to see if the battery position is reversed.
3. If arcing still occurs, check again that all of the switches and accessories are off. Then, check for shorts, broken wires, and loose or corroded connections.
4. Connect the negative (-) battery ground straps.

MH69740,00008B2-19-11FEB20

## Batteries—Charging

Keep the battery fully charged, especially during cold weather. Failure to keep the battery fully charged, above 12.50 volts, may result in reduced battery life.

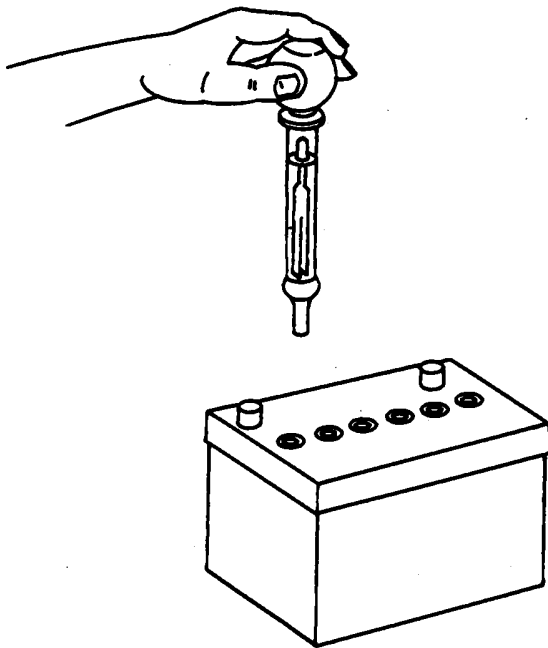
**CAUTION:** Never charge a frozen battery. Thaw at room temperature before connecting to the battery charger. Only charge the batteries in a well ventilated area. Disconnect both cables from the battery terminals when charging the batteries in combine.

**IMPORTANT:** If the batteries are not fully charged, the electrolyte may freeze.

1. Determine which battery needs to be charged.
2. Disconnect both of the battery cables and connect the charger positive cable to the "+" terminal and the charger negative cable to the "-" terminal.
3. Follow instructions provided with the charger. Always charge the batteries with a 12-volt charger.

MH69740,00008B3-19-11FEB20

## Batteries—Checking Specific Gravity



TS182—UN—23AUG88

**CAUTION:** Batteries must be on a flat surface to accurately check fluid levels. Battery fluid level should be visible at the top of each fill port covering the plates in each cell.

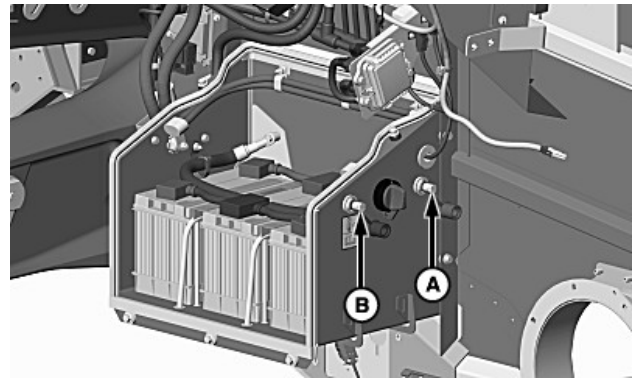
Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check the battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

1. Check specific gravity of the electrolyte in each cell with a battery hydrometer to determine battery condition. Charge battery if reading is below 1.225. Replace battery if difference between cells is more than 0.050.
2. Always correct specific gravity reading for electrolyte temperature variation. Add 0.004 for every 10°F above 80°F. (Add 0.007 for every 10°C above 27°C.) Subtract at the same rate if the electrolyte temperature is below 80°F (27°C). Corrected specific gravity of a fully charged battery is 1.265—1.280.

MH69740,00008B4-19-11FEB20

## Batteries—Connecting Booster



H127226—UN—29AUG19

A—Positive (+) Post  
B—Negative (-) Post

1. Cold weather starting can be easier by connecting an additional 12 V battery in parallel.

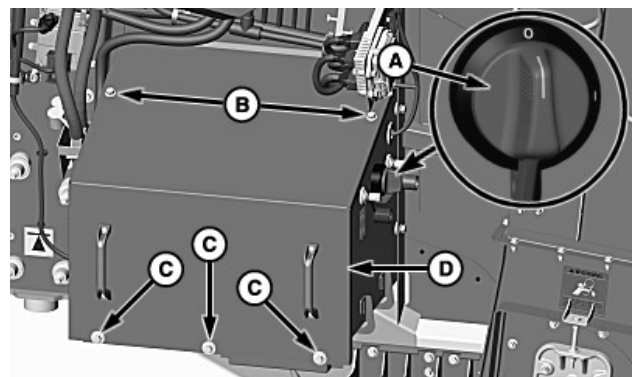
**CAUTION:** Gas given off by batteries is explosive. Avoid sparks near batteries.

**IMPORTANT:** Never connect jumper cables with the key switch or battery disconnect switch ON. Never jump-start with more than 12 V.

2. Remove protective caps from posts.
3. First jumper cable must first be connected to positive (+) post of the booster battery. Connect other end to positive (+) post (A) of the machine battery. Second jumper cable must first be connected to negative (-) post of the booster battery. Connect other end to negative (-) post (B) of the machine battery.

MH69740,00008B1-19-30AUG19

## Batteries—Removing and Installing

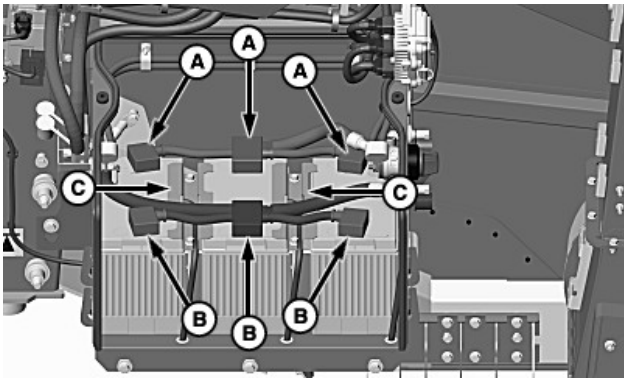


H127228—UN—29AUG19

A—Battery Disconnect Switch  
B—Cap Screw  
C—Cap Screw  
D—Cover

1. Turn the battery disconnect switch (A) counterclockwise to the OFF position.

2. Remove cap screws (B) and loosen cap screws (C).
3. Remove cover (D) to access batteries.

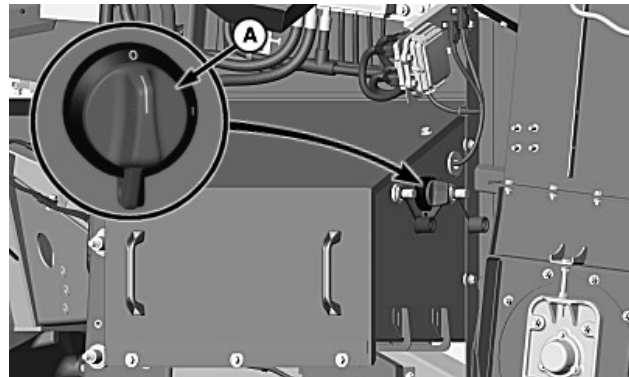


A—Positive Cable  
B—Negative Cable  
C—Clamp

4. Disconnect negative (-) cable (B) from the batteries and the negative jump-start post.
5. Disconnect positive (+) cable (A) and the positive jump-start post.
6. Remove clamp (C) and the battery vent tubes.
7. Clean the batteries and the battery mounting area.
8. Install the batteries in the battery box and on the plastic tray.
9. Clean the battery cables and posts and reconnect the battery vent tubes.
10. Loosely install the clamp (C).
11. Attach positive (+) cable (A) and the positive jump-start post.
12. Attach negative (-) cable (B) and the negative jump-start post.
13. Tighten the battery clamp.
14. Install the cover and retain with the previously removed cap screws.
15. Turn the battery disconnect switch clockwise to the ON position.

MH69740,00008B5-19-11FEB20

## Battery Disconnect Switch



A—Battery Disconnect Switch

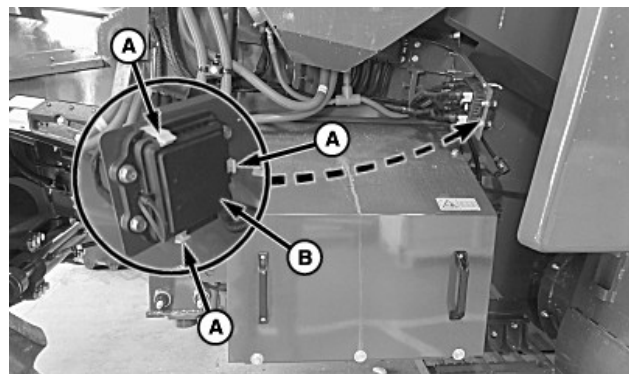
**IMPORTANT: Final Tier 4/Stage V: Do not disconnect battery for at least 90 seconds after machine is shut OFF. Selective catalyst reduction (SCR) system automatically purges lines of diesel exhaust fluid (DEF) during this time, immediately after machine is shut OFF. If adequate time is not allowed for lines to be purged, any fluid remaining in lines can crystallize and plug lines. In freezing weather, fluid will freeze and possibly burst lines.**

*NOTE: Turn the battery disconnect switch OFF if the machine is stored longer than 25 days. If the storage period is longer than 90 days, remove the negative lead to the batteries to minimize the load to batteries.*

Turn the battery disconnect switch (A) clockwise to turn ON the machine electrical system or turn the switch counterclockwise to turn OFF the machine electrical system.

MH69740,00008B6-19-11FEB20

## Machine Fuse Center



A—Lock Tab (3 used)  
B—Cover

**NOTE:** Spare fuses and fuse puller are located underneath cover.

Pull lock tabs (A) and remove cover (B).

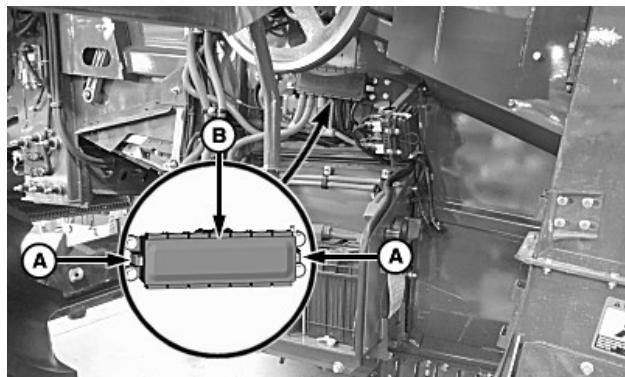
- F101—(10 A) (cc# 4972), AutoTrac™ Control Unit
- F102—(10 A) Not Used
- F103—(10 A) (cc# 9582), Engine Interface Control Unit Power
- F104—(15 A) (cc# 9052), Sieve Domain Extender Power
- F105—(15 A) Not Used
- F106—(10 A) (cc# 9072), Tailings Domain Extender Power
- F107—(15 A) (cc# 9062), Chaffer Domain Extender Power
- F108—(20 A) (cc# 0462), Multi-Motor Transmission Control Unit (PTP) Power 4
- F109—(20 A) (cc# 0452), Multi-Motor Transmission Control Unit (PTP) Power 3
- F110—(20 A) (cc# 9212), Front-End Domain Control Unit Power 3
- F111—(20 A) (cc# 9012), Front-End Domain Control Unit Power 1
- F112—(20 A) (cc# 9202), Front-End Domain Control Unit Power 2
- F113—(20 A) (cc# 0442), Multi-Motor Transmission Control Unit (PTP) Power 2
- F114—(20 A) (cc# 9222), Front-End Domain Control Unit Power 4
- F115—(20 A) (cc# 9402), Harvesting Domain Extender Power 1
- F116—(20 A) (cc# 9432), Harvesting Domain Extender Power 4
- F117—(30 A) (cc# 9682), Header Control Unit Power 2
- F118—(20 A) (cc# 9422), Harvesting Domain Extender Power 3
- F119—(20 A) (cc# 9472), Cold Start Relay Power
- F120—(20 A) (cc# 9412), Harvesting Domain Extender Power 2
- F121—(40 A) (cc# 5012), Engine Control Unit Power 1
- F122—(40 A) Not Used
- F123—(40 A) (cc# 9672), Header Control Unit Power 1
- F124—(30 A) (cc# 0912), Grain Sensing System Power
- F125—(25 A) (cc# 5022), Engine Control Unit Power 2
- F126—(30 A) (cc# 9282), Boot Actuator
- F127—(30 A) (cc# 9722), Folding Unloading Auger Actuator

*AutoTrac is a trademark of Deere & Company*

- F128—(30 A) (cc# 9192), Fountain Auger Actuator

MH69740,00008BD-19-11FEB20

## High Current Fuse Center



H127345—UN—06SEP19

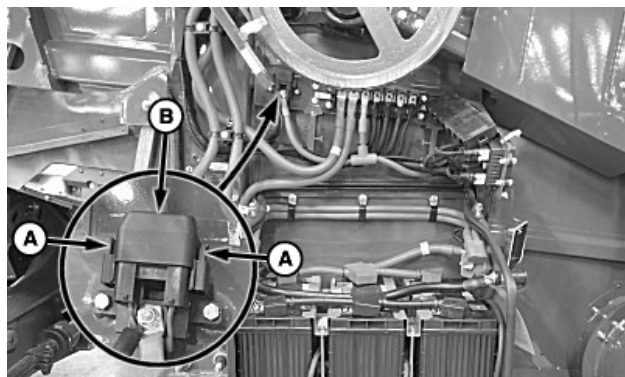
**A—Lock Tab (2 used)**  
**B—Cover**

Pull lock tabs (A) and remove cover (B).

- F301—(125 A) (cc# 8902), Operator's Station Domain Power
- F302—(40 A) (cc# 9032), Powertrain Domain Control Unit Power
- F303—(40 A) (cc# 9022), Harvesting Domain Extender Control Unit Power
- F304—(125 A) (cc# 8912), Cab Fuse Power
- F305—(350 A) (cc# 0013), Power In
- F306—(250 A) (cc# 0003), Power to Low and Residue Fuse Centers
- Shunt—(cc# 0023), Power to 12 V Alternator G1

MH69740,00008BE-19-11FEB20

## Residue Fuse Center



H127360—UN—10SEP19

**A—Lock Tab (2 used)**  
**B—Cover**

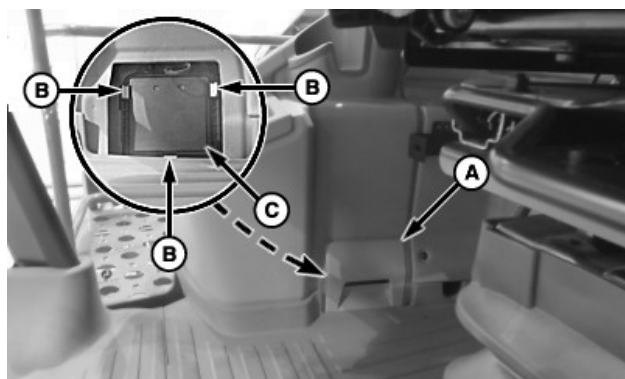
Squeeze lock tabs (A) and remove cover (B).

- F203—(30 A) (cc# 9322), Chop-to-Drop Actuator

- F204—(30 A) (cc# 9452), Left Chopper and Knife Bank
- F205—(40 A) (cc# 9442), Left and Right Shroud Power
- F207—(30 A) (cc# 9462), Windrow Pivot and Right Chopper Actuator
- Shunt—(cc# 0003), Power In

MH69740,00008C0-19-19FEB20

## Cab Fuse Center



H127361—UN—10SEP19

- A—Cover  
B—Lock Tab (3 used)  
C—Cover

Remove cover (A), pull lock tabs (B), and remove cover (C).

- C1—C4 Not Used
- F81—(30 A) (cc# 8472), Blower Motor Fuse (2 used)
- F801—(15 A) (cc# 8262), ARMC Power
- F802—(10 A) (cc# 8802), Server-Monitor Power
- F804—(15 A) (cc# 8072), Primary Display Unit (PDU) Power
- F805—(15 A) (cc# 8152), GreenStar™ Power
- F806—(15 A) (cc# 8162), Miscellaneous Cab Power
- F807—(10 A) (cc# 8192), ATC Power
- F810—(20 A) (cc# 8172), Seat Power
- F811—(5 A) (cc# 8092), Accessory Power

- F812—(10 A) (cc# 8242), Auxiliary Power Outlet
- F813—(20 A) (cc# 8252), Auxiliary Power Stripe
- F814—(20 A) (cc# 8612), Rear Wiper Power (SPFH only)
- F815—(20 A) (cc# 8622), Front Wiper Power
- F816—(10 A) (cc# 8312), Radio Power
- F817—(10 A) (cc# 8322), Armrest Auxiliary Outlet Power
- F819—(5 A) Not Used
- F820—(5 A) Not Used
- F822—(5 A) (cc# 8292), Door Cinch Power
- F832—(40 A) (cc# 8422), Inline Fuse (2 used)
- F833—(30 A) (cc# 8942), Top Seat Fuse
- F834—(20 A) (cc# 8922), Top Seat
- F835—(10 A) (cc# 8952), E-Seat Fuse
- K8—(30 A) (cc# 8013), Relay Switched Input
- K8-9—(40 A) (cc# 0010E), Relay Ground
- K9—(40 A) (cc# 8013), Relay Switched Input

MH69740,00008BF-19-11FEB20

## Video Safety

**CAUTION:** Do not rely on a camera for collision avoidance or bystander detection. To avoid possible injury or death to operator or others, always remain alert and aware of surroundings when operating machine. Read and understand Avoid Backover Accidents in Safety section.

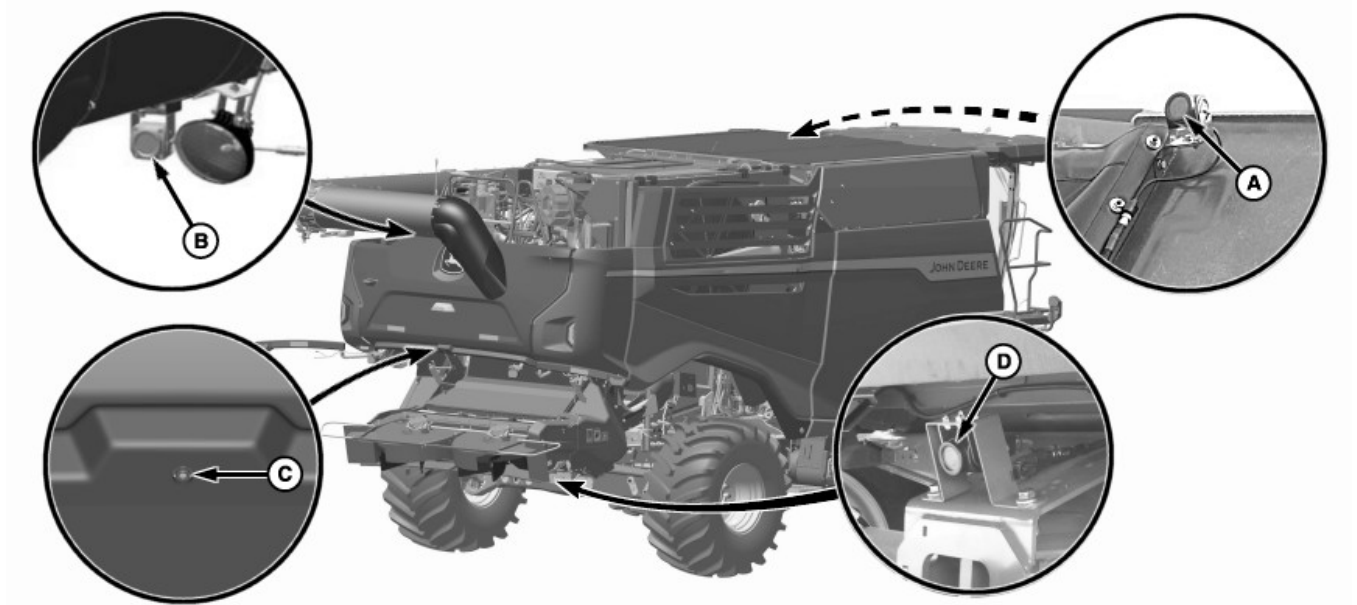
### IMPORTANT:

- Correctly understand whether camera or video application is "mirrored".
- Mount camera in a sturdy and secure location.
- Understand camera's field of view.
- Keep camera properly serviced.
- Keep camera lens clean.

OUC6075,00013B2-19-31JAN13



## Adjust Cameras (If Equipped)



H127238—UN—02DEC19

**A—Grain Tank Camera**  
**B—Unloading Auger Camera**

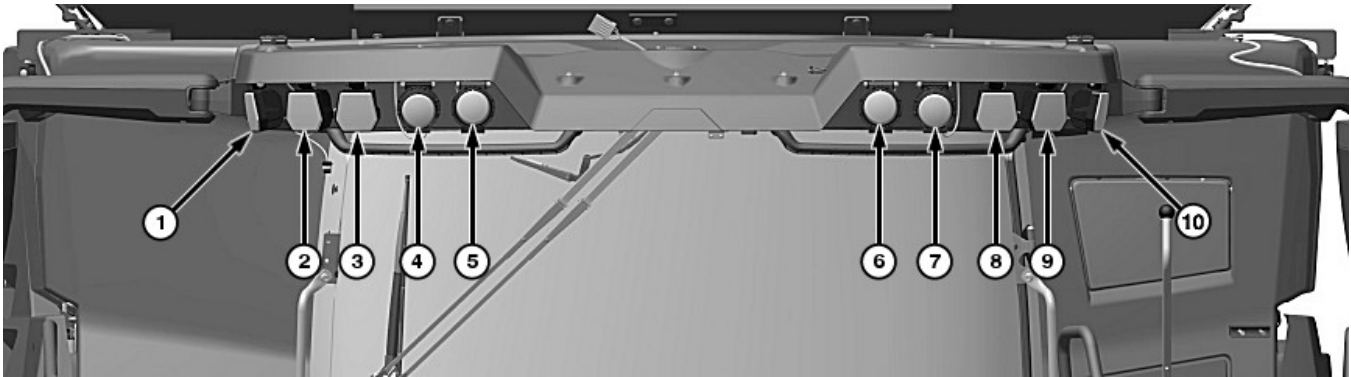
**C—Rear Camera**  
**D—Hitch Camera**

*NOTE: Camera styles may vary from what is shown.  
See your John Deere dealer or qualified service  
provider for further information.*

If machine is equipped with cameras (A—D), adjust  
cameras as needed.

MH69740,00008B7-19-11FEB20

## Adjust Machine Light Angles (Quick Adjustment)



H132053—UN—29OCT20

**NOTE:** Verify that machine has correct tire pressure and is placed on a level surface before adjusting lights.

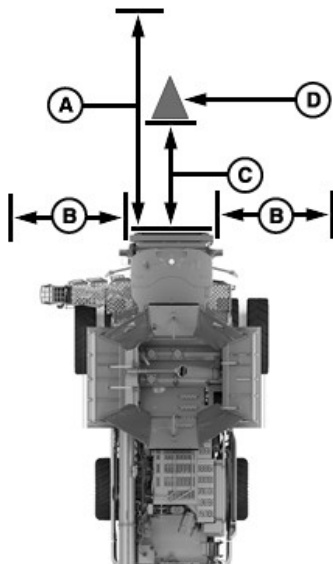
See *Adjust Machine Light Angles (Detailed Adjustment)* for further information on adjusting the various lights around the machine.

Position	Right-Hand Cab Lights					Left-Hand Cab Lights				
	Light 1	Light 2	Light 3	Light 4	Light 5	Light 6	Light 7	Light 8	Light 9	Light 10
Horizontal	-76°	-34°	-10°	0°	0°	0°	0°	10°	34°	76°
Vertical	20°	15°	35°	8°	6°	6°	8°	35°	15°	20°

Positive value indicates a counterclockwise direction for the horizontal value.  
Negative value indicates a clockwise direction for the horizontal value.

OUO6075,0004F70-19-27OCT20

## Adjust Machine Light Angles (Detailed Adjustment)



H132037—UN—20OCT20

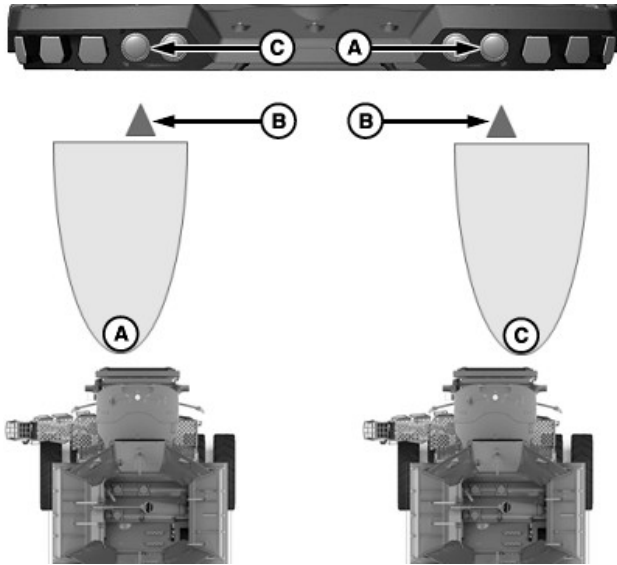
A—Distance, 50 m (164 ft)  
B—Distance, 20 m (66 ft)  
C—Distance, 30 m (98 ft)  
D—Object (traffic cone)

**NOTE:** Verify that machine has correct tire pressure and is placed on a level surface before adjusting lights.

1. Move machine away from any obstructions using dimensions (A and B).

**NOTE:** A traffic cone, for example, can be used as an object for a reference point.

2. Use dimension (C) to place an object (D) directly in front of the machine as a reference point.
3. Use the detailed information shown to adjust the following lights around the machine:
  - Cab Headlights (low-beam)
  - Cab Headlights (high-beam)
  - Cab Worklights
  - Row Finder Lights
  - Stubble Lights
  - 360° Side Lights (optional)
  - Rear Discharge Lights

**Cab Headlights (Low-Beam)**

A—Cab Headlight (low-beam), Left-Hand  
 B—Object (traffic cone)  
 C—Cab Headlight (low-beam), Right-Hand

**NOTE:** Press Lights button on navigation bar below display. See Lights Application Help or Operator's Station Help for further information.

1. Turn ON the cab headlights (low-beam) (A and C).

**NOTE:** If you have difficulty using the Lights Application, unplug the lights and plug them in as needed.

2. Use the Lights Application to turn OFF all the lights except for the left-hand cab headlight (low-beam).

**NOTE:** The light pattern should stop just before the object (B) placed in front of the machine.

3. Adjust the left-hand cab headlight (low-beam) to specification. See information later in this section on adjusting the cab headlights.

Location	Horizontal Specification	Vertical Specification
Left-Hand Cab Headlight (low-beam)	0°	8°

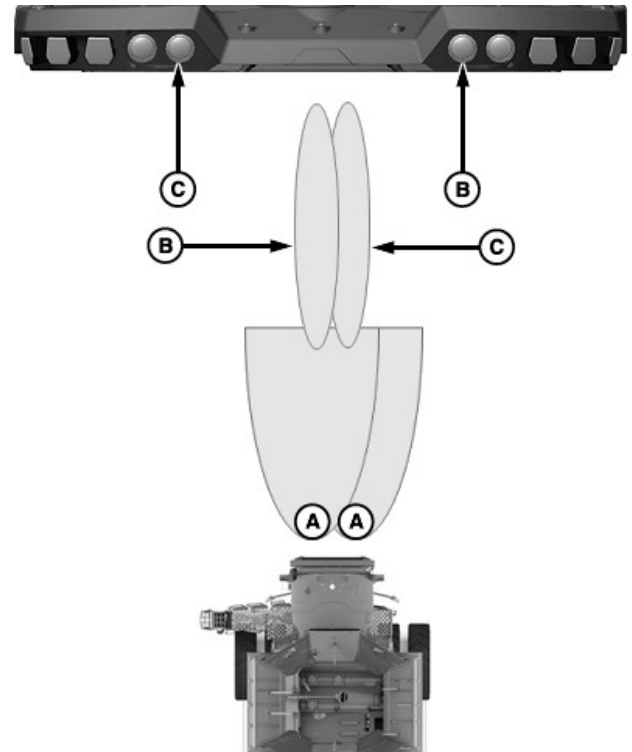
4. Turn OFF the left-hand cab headlight (low-beam).
5. Turn ON the right-hand cab headlight (low-beam) (C).

**NOTE:** The light pattern should stop just before the object (B) placed in front of the machine.

6. Adjust the right-hand cab headlight (low-beam) to specification.

Location	Horizontal Specification	Vertical Specification
Right-Hand Cab Headlight (low-beam)	0°	8°

7. Turn ON both cab headlights (low-beam).
8. Verify that there is a consistent cut-off line from left to right at the 30 m (98 ft) mark. Adjust the cab headlights (low-beam) if needed.

**Cab Headlights (High-Beam)**

A—Cab Headlights (low-beam)  
 B—Cab Headlight (high-beam), Left-Hand  
 C—Cab Headlight (high-beam), Right-Hand

**NOTE:** Press Lights button on navigation bar below display. See Lights Application Help or Operator's Station Help for further information.

1. Turn ON both cab headlights (low-beam).

**NOTE:** If you have difficulty using the Lights Application, unplug the lights and plug them in as needed.

2. Use the Lights Application to turn OFF all the lights except the cab headlights (low-beam) (A) and the left-hand cab headlight (high-beam) (B).

**NOTE:** The high-beam light pattern should start at approximately 27 m (89 ft) to blend the high- and low-beam headlights together.

3. Adjust the left-hand cab headlight (high-beam) to

specification. See information later in this section on adjusting the cab headlights.

Location	Horizontal Specification	Vertical Specification
Left-Hand Cab Headlight (high-beam)	0°	6°

- Turn OFF the left-hand cab headlight (high-beam) (B).
- Turn ON the right-hand cab headlight (high-beam) (C).

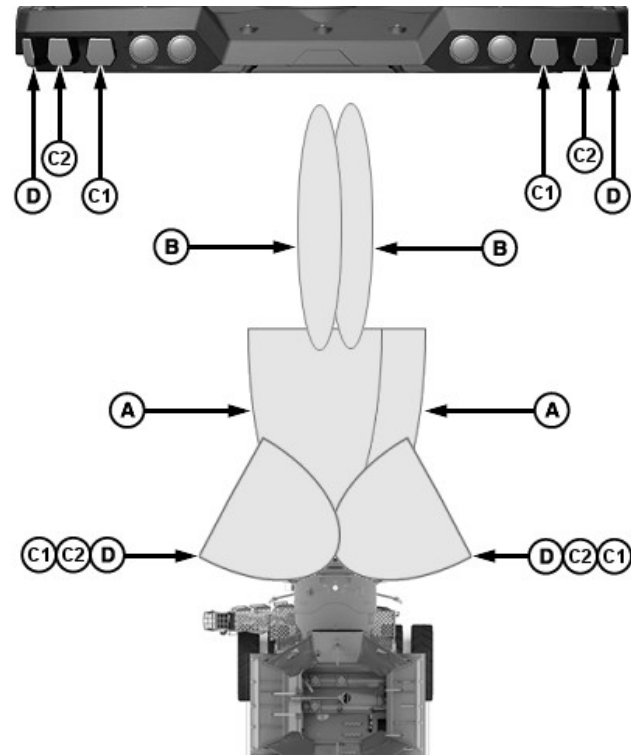
**NOTE:** The high-beam light pattern should start at approximately 27 m (89 ft) to blend the high- and low-beam headlights together.

- Adjust the right-hand cab headlight (high-beam) to specification.

Location	Horizontal Specification	Vertical Specification
Right-Hand Cab Headlight (high-beam)	0°	6°

- Turn ON both cab headlights (high-beam) and check the high- and low-beam overlap.
- If the cab headlights (high-beam) pattern is too narrow, try rotating the lights outward (horizontally 1° or 2°). Adjusting these lights reduces the overlap between the left-hand and right-hand cab headlights (high-beam).

### Cab Worklights and Row Finder Lights



H132040—UN—29OCT20

- A—Cab Headlights (low-beam)**  
**B—Cab Headlights (high-beam)**  
**C1—Cab Worklights (inner)**  
**C2—Cab Worklights (outer)**  
**D—Row Finder Lights**

**NOTE:** It is best to perform this procedure with the header attached. By doing so, the lights can be adjusted to the various work surfaces on the header.

Press Lights button on navigation bar below display. See Lights Application Help or Operator's Station Help for further information.

- Turn ON cab headlights (low-beam) (A) and cab headlights (high-beam) (B).
- Turn ON cab worklights (C1 and C2) and row finder lights (D).
- View the light pattern area around the header working area.
- Adjust the cab worklights to specification. See information later in this section on adjusting the cab headlights.

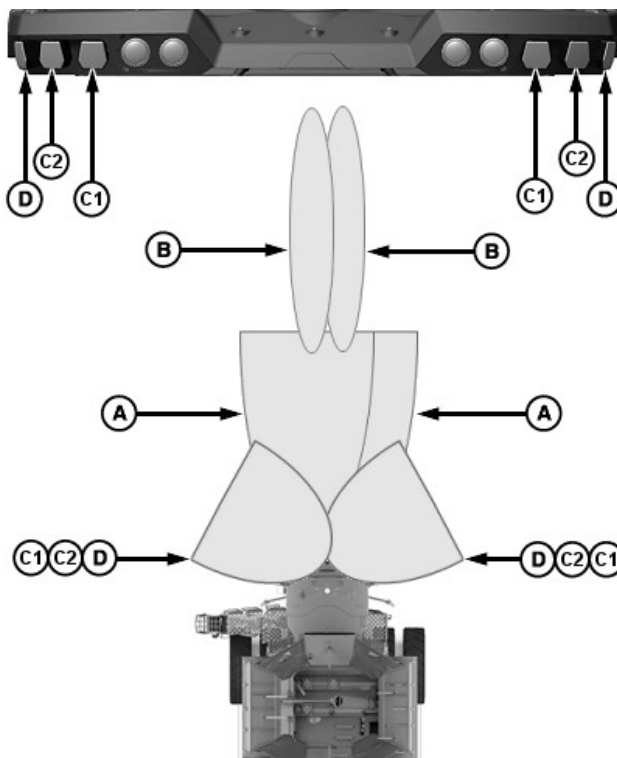
Location	Horizontal Specification	Vertical Specification
Left-Hand Cab Worklight (inner) (C1)	10°	35°
Right-Hand Cab Worklight (inner) (C1)	-10°	35°

Location	Horizontal Specification	Vertical Specification
Left-Hand Cab Worklight (outer) (C2)	34°	15°
Right-Hand Cab Worklight (outer) (C2)	-34°	15°
Positive value indicates a counterclockwise direction for the horizontal value. Negative value indicates a clockwise direction for the horizontal value.		

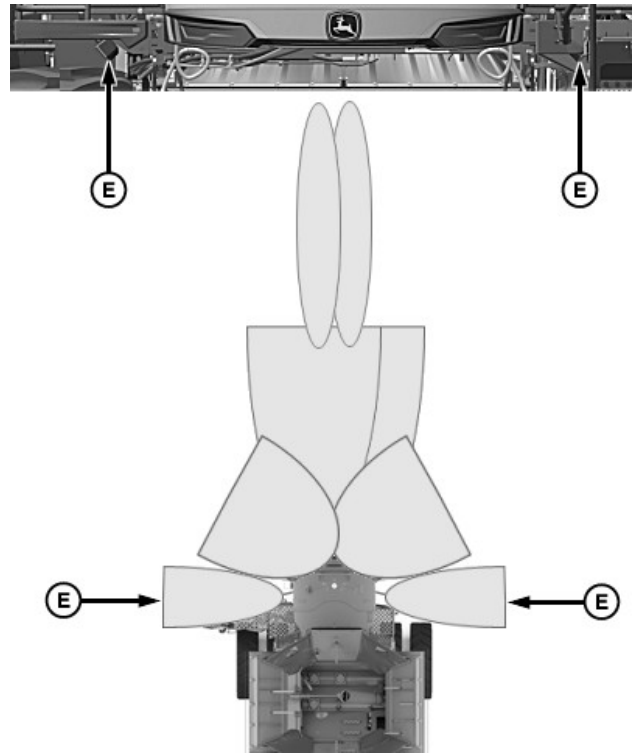
5. Adjust the row finder lights to specification. See information later in this section on adjusting the cab headlights.

Location	Horizontal Specification	Vertical Specification
Left-Hand Row Finder Light	76°	20°
Right-Hand Row Finder Light	-76°	20°
Positive value indicates a counterclockwise direction for the horizontal value. Negative value indicates a clockwise direction for the horizontal value.		

### Stubble Lights



H132040—UN—29OCT20



H132046—UN—19OCT20

- A—Cab Headlights (low-beam)  
B—Cab Headlights (high-beam)  
C1—Cab Worklights (inner)  
C2—Cab Worklights (outer)  
D—Row Finder Lights  
E—Stubble Lights

**NOTE:** It is best to perform this procedure with the header attached. By doing so, the lights can be adjusted to the various work surfaces on the header.

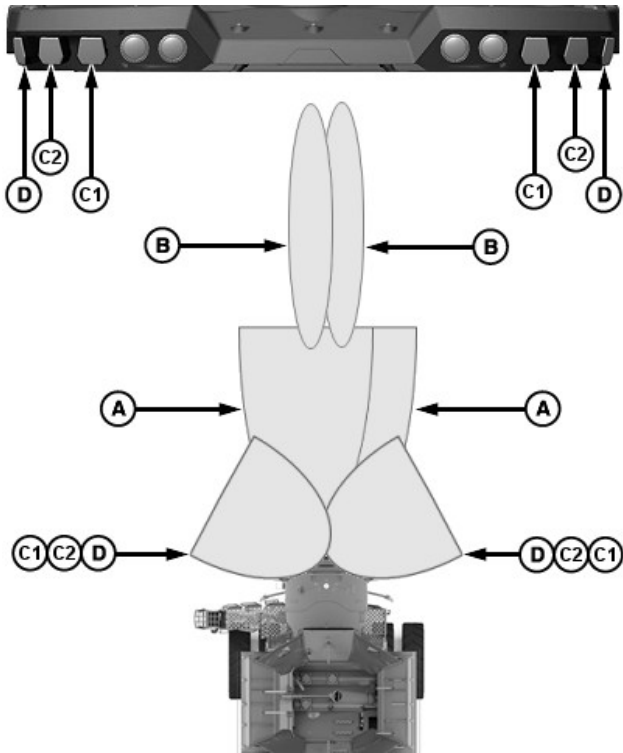
Press Lights button on navigation bar below display. See Lights Application Help or Operator's Station Help for further information.

1. Turn ON cab headlights (low-beam) (A) and cab headlights (high-beam) (B).
2. Turn ON cab worklights (C1 and C2) and row finder lights (D).
3. Turn ON stubble lights (E).
4. Adjust the stubble lights to specification or until the lights illuminate the back surface area of the attached header and the ground directly behind the header. See information later in this section on adjusting the stubble lights.

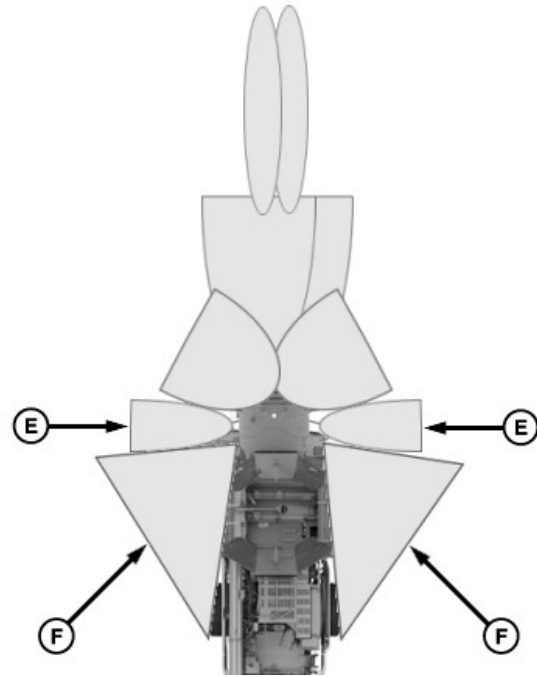
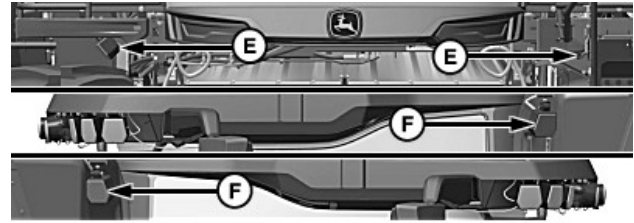
Location	Horizontal Specification	Vertical Specification
Left-Hand Stubble Light	86°	25°
Right-Hand Stubble Light	-86°	25°
Positive value indicates a counterclockwise direction for the		

Location	Horizontal Specification	Vertical Specification
horizontal value. Negative value indicates a clockwise direction for the horizontal value.		

### 360° Side Lights (Optional)



H132040—UN—29OCT20



H132049—UN—20OCT20

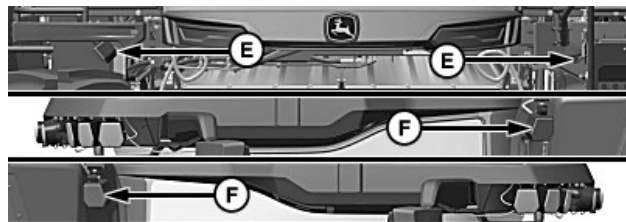
- A—Cab Headlights (low-beam)
- B—Cab Headlights (high-beam)
- C1—Cab Worklights (inner)
- C2—Cab Worklights (outer)
- D—Row Finder Lights
- E—Stubble Lights
- F—360° Side Lights (optional)

**NOTE:** Press *Lights* button on navigation bar below display. See *Lights Application Help* or *Operator's Station Help* for further information.

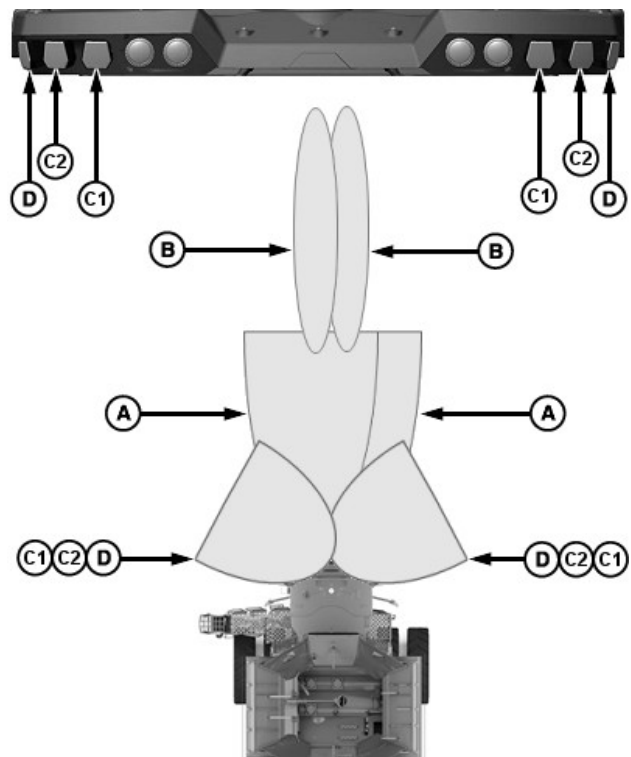
1. Turn ON cab headlights (low-beam) (A) and cab headlights (high-beam) (B).
2. Turn ON cab worklights (C1 and C2) and row finder lights (D).
3. Turn ON stubble lights (E).
4. Turn ON 360° side lights (F).
5. Adjust the 360° side lights to specification or until the edge of the light pattern meets the edge of the stubble lights pattern. The light pattern should also meet the edge of the rear tires. See information later in this section on adjusting the 360° side lights.

Location	Horizontal Specification	Vertical Specification
Left-Hand 360° Side Light	124°	25°
Right-Hand 360° Side Light	-120°	25°

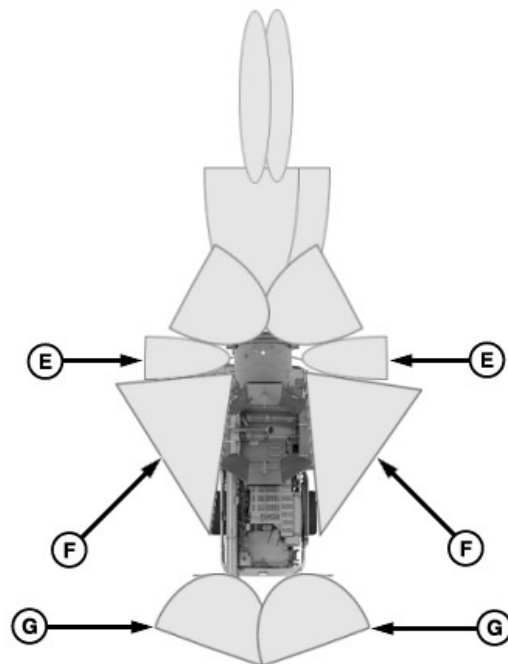
Positive value indicates a counterclockwise direction for the horizontal value.  
Negative value indicates a clockwise direction for the horizontal value.



### Rear Discharge Lights



H132040—UN—29OCT20



H132051—UN—20OCT20

A—Cab Headlights (low-beam)  
 B—Cab Headlights (high-beam)  
 C1—Cab Worklights (inner)  
 C2—Cab Worklights (outer)  
 D—Row Finder Lights  
 E—Stubble Lights  
 F—360° Side Lights (optional)  
 G—Rear Discharge Lights

**NOTE:** Press Lights button on navigation bar below display. See Lights Application Help or Operator's Station Help for further information.

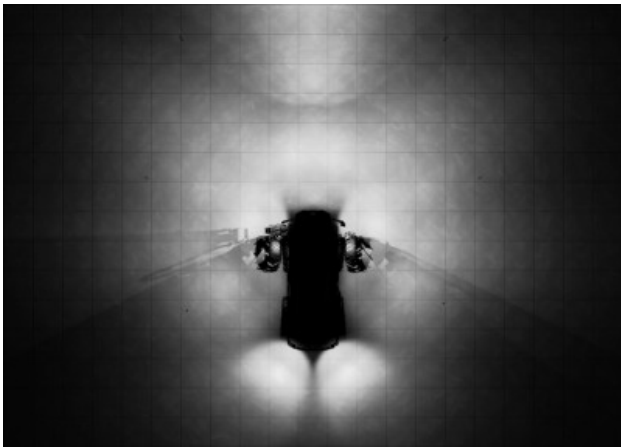
1. Turn ON cab headlights (low-beam) (A) and cab headlights (high-beam) (B).
2. Turn ON cab worklights (C1 and C2) and row finder lights (D).
3. Turn ON stubble lights (E).
4. Turn ON 360° side lights (F).
5. Turn ON rear discharge lights (G).

**NOTE:** A slight gap in the coverage area at the rear of the machine towards the center may exist. This is not visible from inside the cab.

6. Adjust the rear discharge lights to specification or outboard enough to cover the chopper spread width.

See information later in this section on adjusting the rear discharge lights.

Location	Horizontal Specification	Vertical Specification
Left-Hand Rear Discharge Light	145°	28°
Right-Hand Rear Discharge Light	-145°	28°
Positive value indicates a counterclockwise direction for the horizontal value. Negative value indicates a clockwise direction for the horizontal value.		

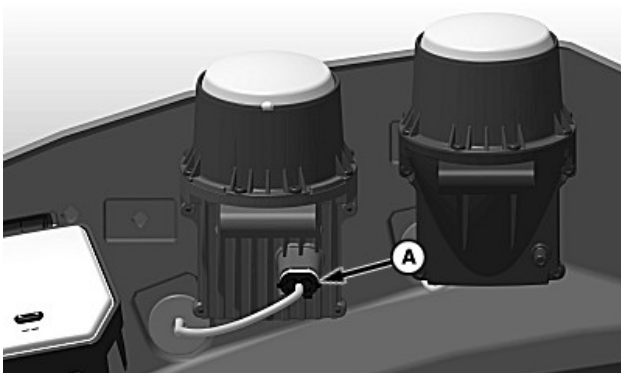


H132052—UN—20OCT20

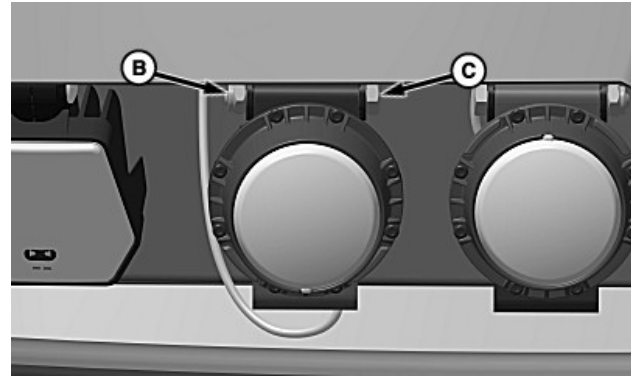
**NOTE:** Light pattern may vary depending on the machine lighting configuration. When all the lights are aimed properly, the fully optional lighting package provides a 360° illumination as shown.

OOU6075,0004F75-19-19NOV20

## Cab Headlights—Replacing



H128375—UN—16DEC19



H128376—UN—16DEC19

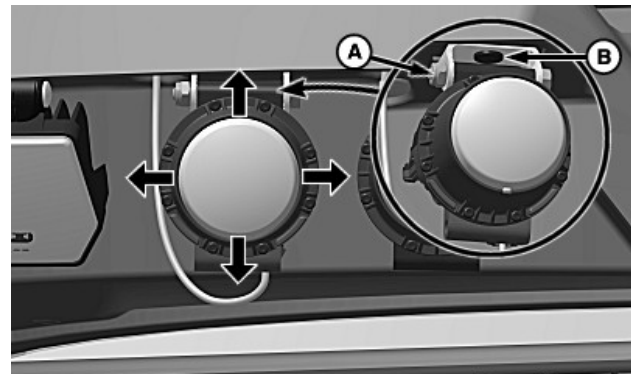
A—Connector  
B—Nut  
C—Cap Screw

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key before replacing or adjusting the headlights.

1. Disconnect the wiring harness connector (A) from the headlight assembly.
2. Remove nut (B) and cap screw (C).
3. Remove and replace the headlight assembly.

MH69740,0000952-19-28OCT20

## Cab Headlights—Adjusting



H128377—UN—17DEC19

A—Nut  
B—Cap Screw

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key before replacing or adjusting the headlights.

**NOTE:** The light assemblies can be adjusted as needed to achieve the correct lighting angles.

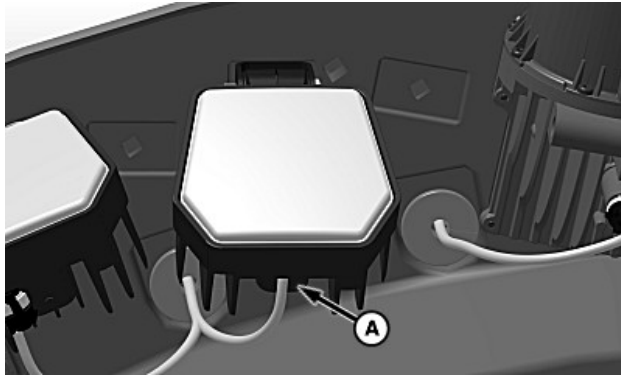
**Vertical Adjustment:** Loosen nut (A). Rotate the light assembly up or down to desired position and tighten the nut. Repeat on the remaining lights as needed.



**Horizontal Adjustment:** Loosen cap screw (B). Rotate the light assembly left or right to desired position and tighten the cap screw. Repeat on the remaining lights as needed.

MH69740,0000953-19-28OCT20

## Cab Worklights—Replacing



H128378—UN—17DEC19



H128379—UN—17DEC19

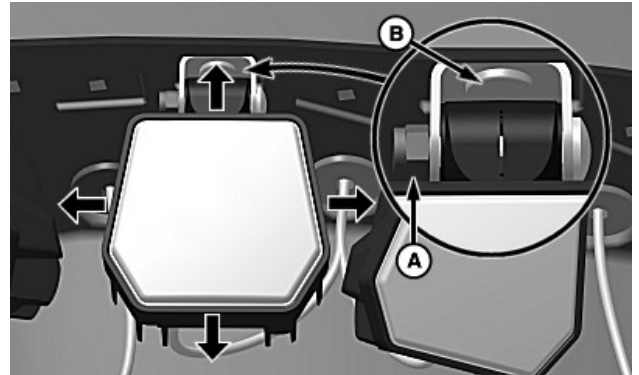
A—Connector  
B—Nut  
C—Cap Screw

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key before replacing or adjusting the worklights.

1. Disconnect the wiring harness connector (A) from the worklight assembly.
2. Remove nut (B) and cap screw (C).
3. Remove and replace the worklight assembly.

MH69740,0000954-19-28OCT20

## Cab Worklights—Adjusting



H128380—UN—17DEC19

A—Nut  
B—Cap Screw

**CAUTION:** Raise the feeder house, engage the feeder house safety lock, shut OFF engine, set park brake, and remove key before replacing or adjusting the worklights.

**NOTE:** The light assemblies can be adjusted as needed to achieve the correct lighting angles.

### Vertical Adjustment

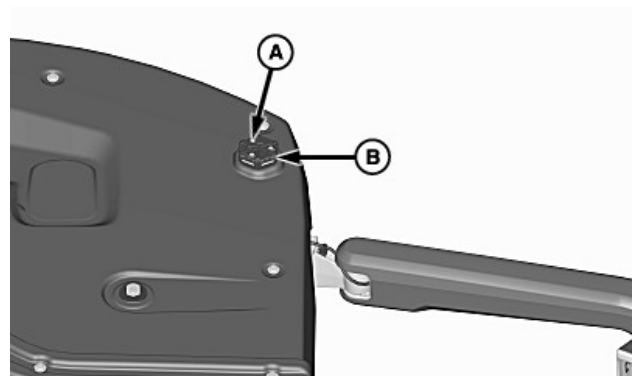
Loosen nut (A). Rotate the light assembly up or down to desired position and tighten the nut. Repeat on the remaining lights as needed.

### Horizontal Adjustment

Loosen cap screw (B). Rotate the light assembly left or right to desired position and tighten the cap screw. Repeat on the remaining lights as needed.

MH69740,0000955-19-28OCT20

## Beacon Lights—Replacing



H127240—UN—30AUG19

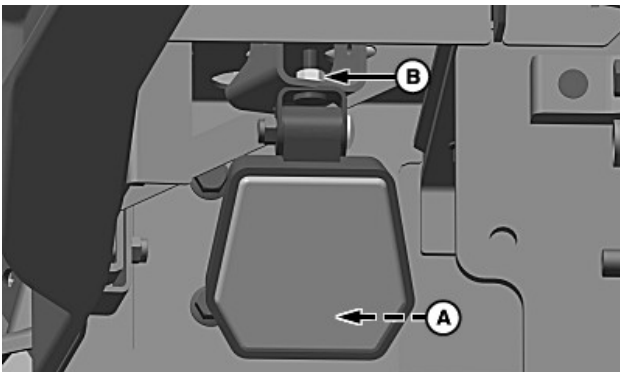
A—Hex Socket Screw (3 used)  
B—Beacon Light

**CAUTION:** Falling while installing or removing electronic components mounted on equipment can cause serious injury. Use a ladder or platform to easily reach each mounting location. Use sturdy and secure footholds and handholds. Do not install or remove components in wet or icy conditions.

1. Remove hex socket screws (A) and remove the beacon light (B) from the electrical outlet.
2. Remove and replace the beacon light assembly.
3. Push down on the beacon light assembly to ensure that there is a good connection with the electrical outlet and tighten the hex socket screws.
4. Repeat on the remaining lights as needed.

MH69740,00008B8-19-01JUL20

## Discharge Lights, Auxiliary Field Lights, Access Door Worklights, Stubble Lights, Grain Tank Lights, and Unloading Auger Light—Replacing



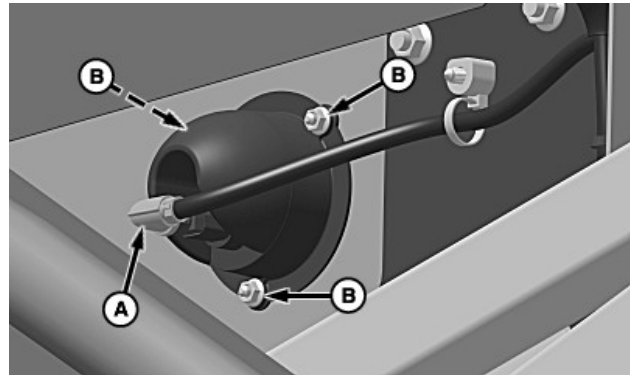
H128381—UN—17DEC19

A—Connector  
B—Nut

1. Disconnect wiring harness connector (A) from the bulb assembly.
2. Loosen nut (B) and replace the light assembly.

MH69740,0000956-19-11FEB20

## Side Finder Lights and Cleaning Shoe Lights—Replacing



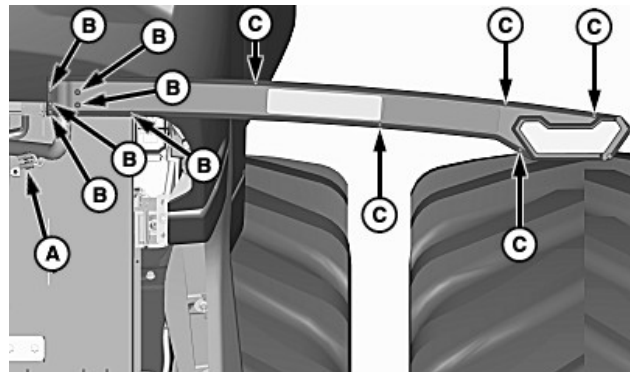
H128382—UN—18DEC19

A—Connector  
B—Nut (3 used)

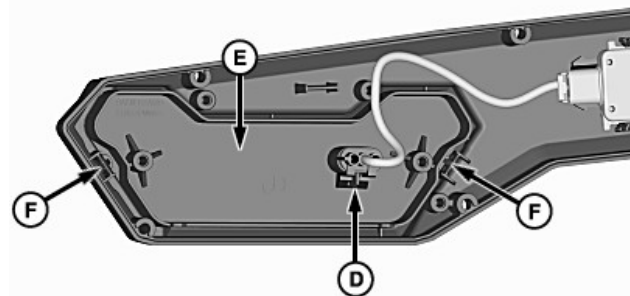
1. Disconnect wiring harness connector (A) from the light assembly.
2. Loosen nuts (B) and replace the light assembly.

MH69740,0000957-19-18DEC19

## Warning Lights—Replacing



H127266—UN—03SEP19



H127267—UN—03SEP19

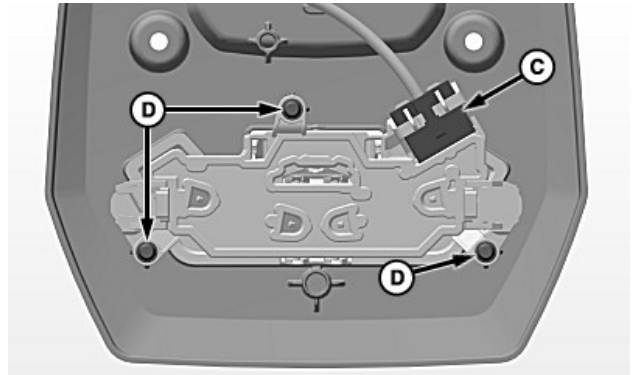
Inside of Warning Light Assembly

A—Connector (2 used)  
B—Socket Head Cap Screw (6 used)  
C—Socket Head Cap Screw (5 used)  
D—Connector  
E—Light Assembly

**F—Retention Clip (2 used)**

1. Disconnect connectors (A) and push into the warning light bar.
2. Remove socket head cap screws (B) and the warning light arm.
3. Remove socket head cap screws (C) and split open the warning light arm.
4. Remove connector (D) from light assembly (E).
5. Depress retention clips (F) and remove light assembly.
6. Replace light assembly and install in reverse order.

MH69740,00008B9-19-11FEB20



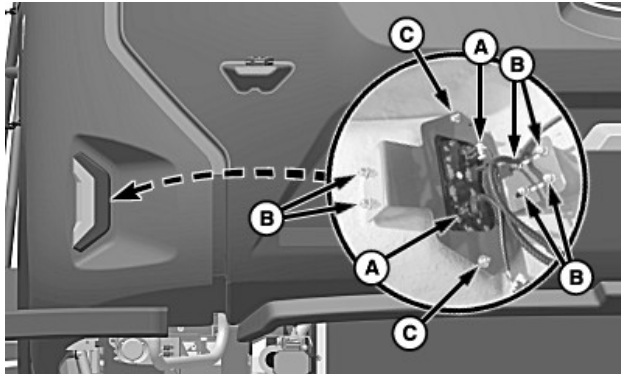
H128384—UN—18DEC19

- A—Cap Screw (2 used)**  
**B—Cover**  
**C—Connector**  
**D—Cap Screw (3 used)**

1. Remove cap screws (A) and cover (B).
2. Remove connector (C) and cap screws (D).
3. Remove and replace the light assembly.

MH69740,00008BB-19-18DEC19

**Rear Hazard Lights and Marker/Brake Lights—Replacing**



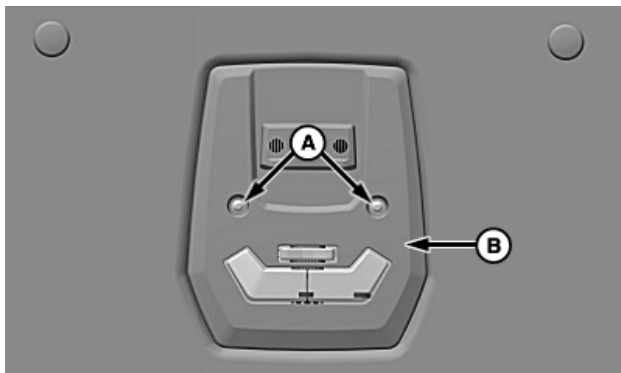
H127276—UN—04SEP19

- A—Connector (2 used)**  
**B—Cap Screw (6 used)**  
**C—Cap Screw (2 used)**

1. Remove connectors (A) and cap screws (B).
2. Remove cap screws (C) and remove light assembly.
3. Replace light assembly and install in reverse order.

MH69740,00008BA-19-04SEP19

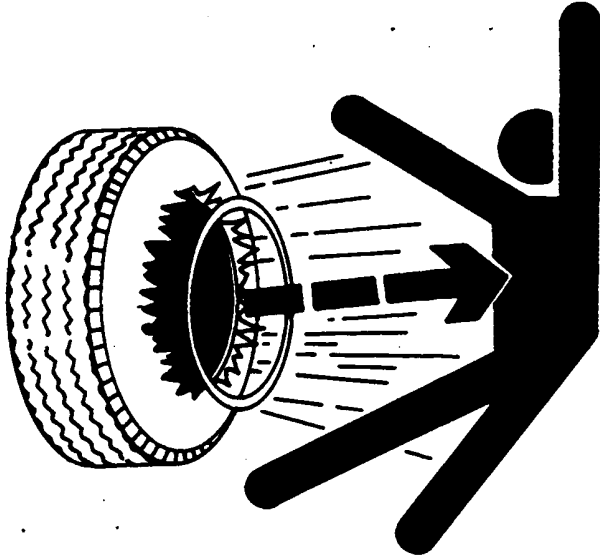
**Cab Interior Light—Replacing**



H128383—UN—18DEC19

# Ground Drive and Rear Axle

## Service Tires Safely



TS211—UN—15APR13

**CAUTION:** Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure.

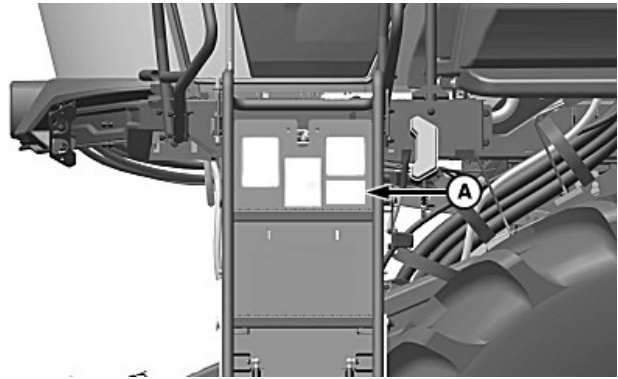
Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

DX,RIM1-19-27OCT08

## Tire Loading Decal



H128744—UN—31JAN20

A—Decal

Decal (A) (located on cab ladder) contains important information concerning tire loading.

MH69740,000096A-19-31JAN20

## Care and Service of Tires

**IMPORTANT:** Installing tires that do not meet original equipment tire specifications may cause machine malfunction. Consult your dealer or tire supplier for guidance.

Use of substandard tires or larger than recommended tires will void warranty and may decrease stability, affect steering, result in premature tire failure, or cause other durability or safety issues.

Check tires daily for damage or noticeably low pressure.

At least every 100 hours of operation, check tire pressure. If tires contain liquid ballast, use a special air-water gauge and measure with valve stem at bottom.

A small puncture in a tubeless tire can be temporarily repaired without dismounting the tire, thus avoiding down time during a busy season.

Protect tires from exposure to sunlight, petroleum products, and chemicals.

Drive carefully. Try to avoid rocks and sharp objects.

**IMPORTANT:** A permanent repair should be made as soon as possible to prevent further tire damage.

**NOTE:** Tire information and specifications are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice. See the online Combine Ag Sales Manual or your John Deere dealer for further information on Tire Pressure Charts.

Tire pressures listed in charts may differ from the tire pressures shown on the side of the tires.

Header compatibility and specified inflation pressures are based on front axle load of a coarse grain configuration.

Load varies based on configuration. This may not reflect the worst case scenario. Consult your local tire dealer if in doubt.

Not all tires are available on all machines or at all manufacturing facilities.

Onboard Air Compressor (if equipped) - not recommended to inflate tires on the machine or run air tools.

OUO6075,0004635-19-20MAR17

## Basic Tire Information

### Diagonal Tire (Bias)

16.9 - 28 10PR R1

(A) (B) (C) (D) (E)

H125004—UN—25SEP18

The diagonal tire (bias) is identified by conventional nomenclature.

- A**—Width of the tread of the tire in inches.
- B**—Indicates that the tire is diagonal.
- C**—Indicates the diameter of the rim in inches.
- D**—Ply Rating, indicates the strength of the carcass and not the number of plies.
- E**—Type and size of lug tire.

### Radial Tire

16.9 R 28 R1W

(A) (B) (C) (D)

H125005—UN—25SEP18

The radial tire can be identified by conventional nomenclature or international system.

### Conventional nomenclature

- A**—Width of the tread of the tire in inches.
- B**—Indicates that the tire is radial.
- C**—Indicates the diameter of the rim in inches.
- D**—Type and size of lug tire.

600 /65 R 28 R1 155 A8

(A) (B) (C) (D) (E) (F) (G)

H125006—UN—25SEP18

### International system

- A**—Indicates the width of the tire in millimeters.
- B**—Indicates the height of the tire (side) as a percentage of the width.
- C**—Indicates that the tire is radial.

- D**—Indicates the diameter of the rim in inches.
- E**—Type and size of lug tire.
- F**—Indicates the index of the tire load capacity.
- G**—Indicates the maximum speed that the tire is indicated.

### High Flotation Tire

850 /60 - 38 R1

(A) (B) (C) (D) (E)

H125007—UN—25SEP18

The high flotation tires are identified by a mixed nomenclature.

- A**—Indicates the width of the tire in millimeters.
- B**—Indicates the height of the tire (side) as a percentage of the width.
- C**—Indicates that the tire is diagonal.
- D**—Indicates the diameter of the rim in inches.
- E**—Type and size of lug tire.

OUO6075,0004A27-19-08JAN19

## Tire Tread Types



H125003—UN—24SEP18

**NOTE:** Tire tread shape varies depending on tire manufacture.

There are three types of tread and these are the most used on agricultural application.

- A**—R1 tire. Are most common in agricultural application and suitable for most soil conditions.
- B**—R1W tire. The lugs are 20% higher than the R1 tire, providing greater durability when used to run on roads.
- C**—R2 tire. Used in land with muddy, wet and with little support. For example, in irrigated rice field.

OUO6075,0004A28-19-24SEP18

## Front Tire Pressure

NOTE: See Care and Service of Tires in this section for further information.

**IMPORTANT: All road transportation MUST be done at pressure shown in No Head/Transport column. Improper pressure during transport may decrease vehicle stability. Proper pressure results in better fuel economy and longer tire life.**

Configuration	Transport Speed 40 km/h (25 mph)		Harvest Speed 10 km/h (6 mph)			
	No Head/ Transport <sup>a</sup>	4500—5500 kg	1500—2500 kg	3500—4500 kg	4500—5500 kg	5500—6500 kg
Approximate Header Mass		9900—12 100 lb	3300—5500 lb	7700—9900 lb	9900—12 100 lb	12 100—14 300 lb
Belt Pickup/Draper Heads	Not Applicable	Not Applicable	BP15	RD30F RD35F RD40F	HD35R HD40R/X HD45R RD45F 740X	HD50R
Corn Heads	Not Applicable	C12F C16F C18F	Not Applicable	C12R	C12F C16R C18R	C16F C18F
Front Tire Size	Tire Pressure - bar/kPa (psi)					
VF 900/60R38 CFO+ 193A8 R-1W Michelin® CEREXBIB2	1.2/120 (17)	2.6/260 (41)	2.1/210 (30)	2.3/230 (33)	2.5/250 (36)	2.8/280 (41)
IF 1100/50R42 CFO 197B R-1W Firestone® MAXI TRACTION	1.2/120 (17)	2.6/260 (38)	1.6/160 (23)	1.8/180 (26)	2.2/220 (32)	2.4/240 (35)
LSW 1100/45R46 CFO 195D R-1W Goodyear® DT930 LSW	1.2/120 (17)	2.2/220 (32)	1.6/160 (23)	2.0/200 (29)	2.4/240 (35)	2.4/240 (35)
VF 580/85R42 CFO 183B R-2 Duals Goodyear® CUSTOM FLO GRIP	1.2/120 (17)	1.6/160 (23)	1.4/140 (20)	1.6/160 (23)	1.8/180 (26)	2.0/200 (29)
VF 580/85R42 CFO 183B R-1W Duals Firestone® DEEP TREAD 23	1.2/120 (17)	1.6/160 (23)	1.4/140 (20)	1.6/160 (23)	1.8/180 (26)	2.0/200 (29)
IF 580/85R42 CFO 178A8 R-1W Duals Goodyear® OPTITRAC H+	1.2/120 (17)	2.4/240 (35)	1.4/140 (20)	1.6/160 (23)	1.8/180 (26)	2.0/200 (29)
650/85R38 173A8/B R-1W Duals Michelin® MACHXBIB	1.2/120 (17)	1.7/170 (25)	1.6/160 (23)	2.1/210 (30)	2.4/240 (35)	2.4/240 (35)
650/85R38 173A8 R-1W Duals Firestone® DEEP TREAD 23	1.2/120 (17)	1.7/170 (25)	1.6/160 (23)	2.1/210 (30)	2.4/240 (35)	2.4/240 (35)
650/85R38 173A8/B R-1W Duals Goodyear® DT824	1.2/120 (17)	1.7/170 (25)	1.6/160 (23)	2.1/210 (30)	2.4/240 (35)	2.4/240 (35)
650/85R38 176A8 R-1W Duals Mitas® SFT	1.2/120 (17)	1.7/170 (25)	1.2/120 (17)	2.1/210 (30)	2.0/200 (29)	2.0/200 (29)
VF 710/70R42 CFO 184B R-1W Duals Firestone® MAXI TRACTION	1.2/120 (17)	1.6/160 (23)	1.2/120 (17)	1.6/160 (23)	1.6/160 (23)	1.6/160 (23)
VF 710/70R42 CFO 193B R-1W Duals Mitas® HC 3000	1.2/120 (17)	1.6/160 (23)	1.2/120 (17)	1.6/160 (23)	1.6/160 (23)	1.6/160 (23)

<sup>a</sup>Indicates road transport configuration (no header, no grain in tank).

OOU6075,0004D3D-19-28OCT20

## Rear Tire Pressure

**NOTE:** See Care and Service of Tires in this section for further information.

**IMPORTANT:** All road transportation **MUST** be done at pressure shown in No Head/Transport column. Improper pressure during transport may decrease vehicle stability. Proper pressure results in better fuel economy and longer tire life.

Configuration	Transport Speed 40 km/h (25 mph)		Harvest Speed 10 km/h (6 mph)			
Approximate Header Mass	No Head/ Transport <sup>a</sup>	4500—5500 kg	1500—2500 kg	3500—4500 kg	4500—5500 kg	5500—6500 kg
		9900—12 100 lb	3300—5500 lb	7700—9900 lb	9900—12 100 lb	12 100—14 300 lb
Belt Pickup/Draper Heads	Not Applicable	Not Applicable	BP15	RD30F RD35F RD40F	HD35R HD40R/X HD45R RD45F 740X	HD50R
Corn Heads	Not Applicable	C12F C16F C18F	Not Applicable	C12R	C12F C16R C18R	C16F C18F
Rear Tire Size	Tire Pressure - bar/kPa (psi)					
VF 620/70R26 CFO+ 173A8 Michelin® CEREXBIB2	2.4/240 (35)	1.4/140 (20)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 620/75R26 CFO 172B Firestone® Radial All Traction DT	2.4/240 (35)	1.4/140 (20)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 620/75R26 CFO 178D Goodyear® Optitrac	2.4/240 (35)	1.4/140 (20)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 710/65R26 177D R-2 Special Sure Grip TD8	2.4/240 (35)	1.4/140 (20)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 750/60R30 CFO 180D Goodyear® Optitrac LSW	1.6/160 (23)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 750/65R26 CFO+ 180A8 Michelin® CEREXBIB2	1.6/160 (23)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
Firestone® VF 750/65R26 177B Firestone® Radial All Traction DT	1.6/160 (23)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 750/65R26 177D Goodyear® Optitrac DT830	1.6/160 (23)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)
VF 750/65R26 CFO 180B Mitas® HC 3000	1.6/160 (23)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)	1.2/120 (17)

<sup>a</sup>Indicates road transport configuration (no header, no grain in tank).

OOU6075,0004D8B-19-28OCT20

## Front and Rear Tire Information

If tires or final drives are changed from what was originally shipped from the factory, it is necessary to recalibrate the system.

**IMPORTANT:** When changing drive wheels, tire radius may also change. POD control unit **MUST** be set to the new tire radius. See your John Deere dealer for further information on changing the tire codes.

**Failure to calibrate system results in inaccurate Harvest Monitor Yields.**

For additional information shown below on front and

rear tires, see your John Deere dealer for further information.

### Front Tires:

- Tire Sizes
- Header Compatibility
- Row Spacings
- Wheel Spacers
- Axle Spacers
- Wheel Offsets

### Rear Tires:

- Tire Sizes
- Axle Types

- Spindle Types
- Axle Positions
- Front to Rear Height Differences

OOU6075,0004D87-19-04FEB20

## Drive Wheel Starter Stud

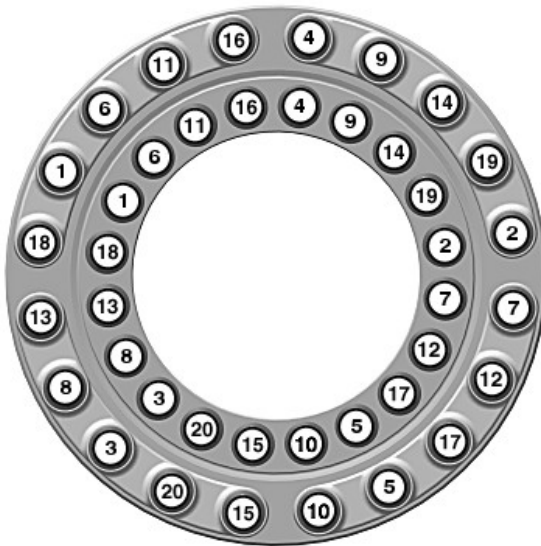


H97547—UN—06AUG10

If a wheel is removed, thread wheel starter stud (HXE16110) into axle, then install wheel. This stud can also be used for duals.

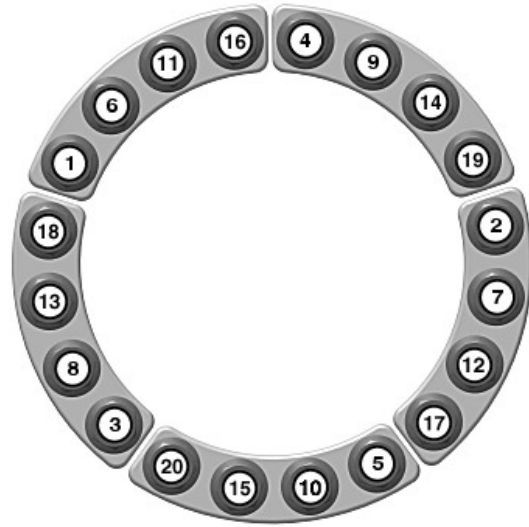
OOU6075,00007CC-19-06AUG10

## Drive Wheel Bolt Torque



H127764—UN—10OCT19

710 Duals Only



H127763—UN—10OCT19

All Other Tire Options

Each time drive wheels are repositioned or replaced, torque wheel bolts to specification in a crisscross pattern.

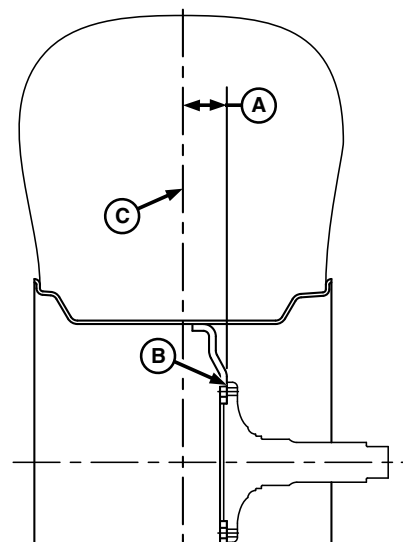
### Specification

Wheel Bolts—Torque (dry). . . . . 710 N·m  
(524 lb·ft)

After the first hour of operation and again after every 10 hours of operation, torque wheel bolts to specification until 50 hours of operation is complete. Torque wheel bolts every 100 hours thereafter.

MH69740,00008E2-19-21FEB20

## Front Drive Wheel Offset



H65047—UN—30OCT00

Single Wheel

A—Dimension  
B—Spindle Surface  
C—Tire Centerline



**CAUTION:** Avoid serious injury or death resulting from final drive failure and loss of drive wheel during transport or field operation. Do not exceed maximum wheel offset.

**IMPORTANT:** Use only John Deere supplied wheels, tires, and spacers. Use of non-John Deere components not meeting specification voids the warranty.

Do not use clamp-on style duals. They do not meet John Deere specification.

Wheel offset distance severely affects life of final drive parts. When installing drive wheels, ensure that offset dimension (A) measured from spindle surface (B) to centerline (C) is within specification.

**Maximum Wheel Offset — Specification**

Single Wheel—Distance. . . . . 114.3 mm (4-1/2 in.)

OUO6075,0004919-19-07MAR18

## Preparing Dual Wheels for Transport or Service

**CAUTION:** Do not attempt to operate machine in the field with outer dual wheels removed. Machine damage can occur.

Only move machine short distances with outer duals removed. Before moving machine reduce machine weight by removing header and emptying grain tank.

**IMPORTANT:** If machine must be transported without outer wheels in place, 5 socket head cap screws and 15 wheel bolts **MUST** be installed and tightened to specification before lowering front axle to ground. Segmented spacers are omitted for road transport, loading, and unloading.

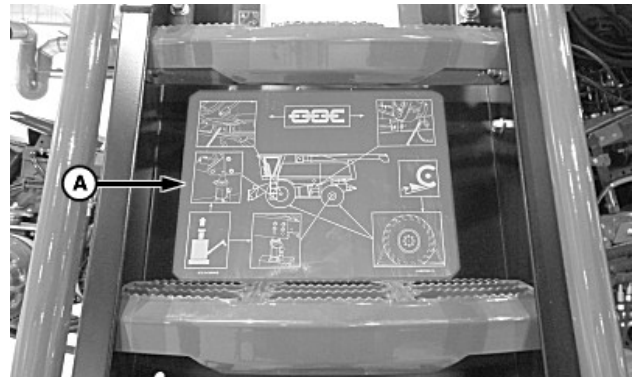
When preparing dual wheels for transport, outer wheels can be removed to reduce transport width.

Refer to the following directions whenever the front wheels (outer and inner) need removed or installed on a dual wheel machine. Inner wheel cannot be removed without first removing outer wheel.

Pay close attention to "CAUTION" statements as they address your safety, the safety of others and safe operations of the machine.

OUO6075,000491A-19-23MAY18

## Jack Point Locations Decal



H128575—UN—21JAN20

A—Jack Point Locations Decal

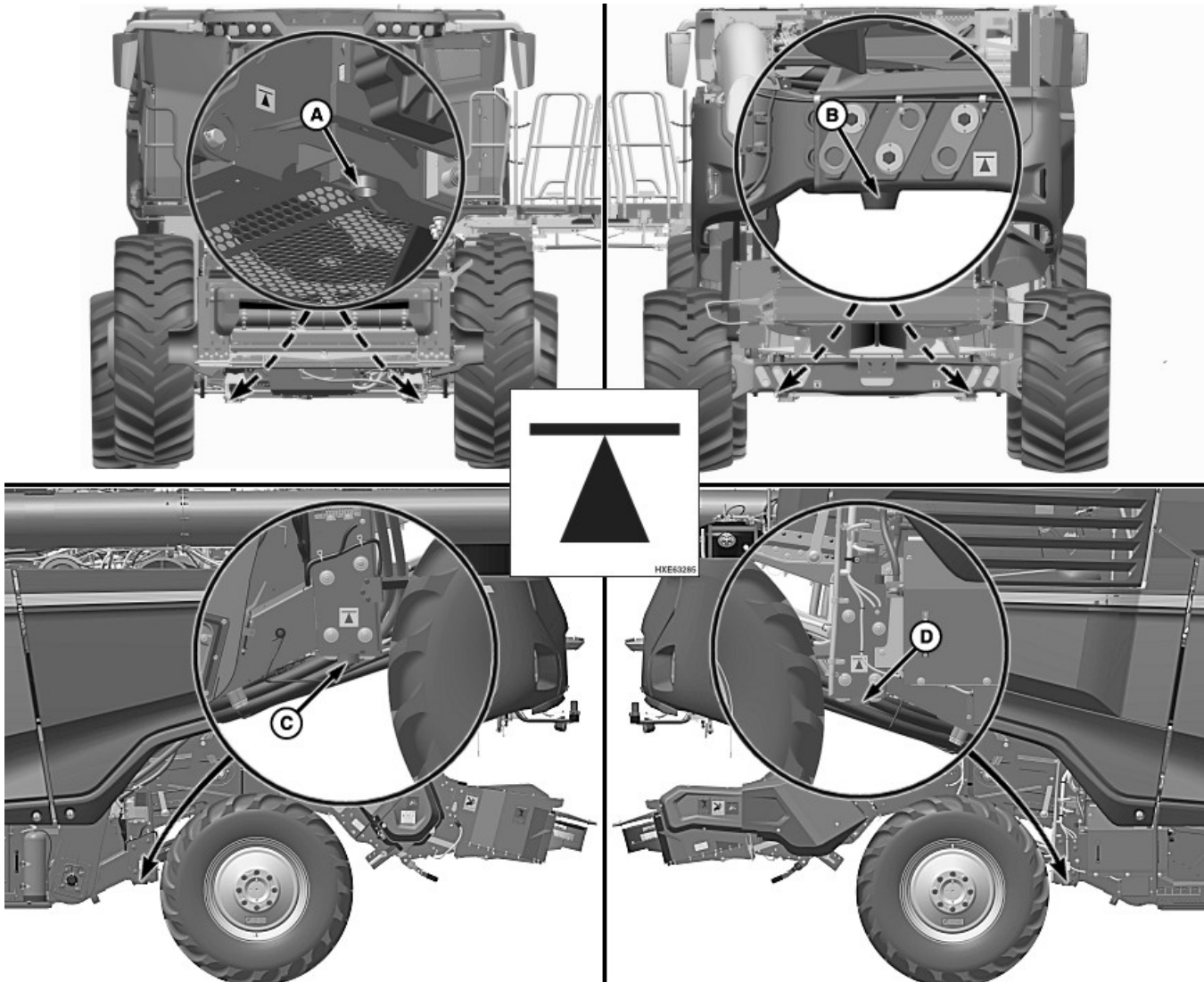
**CAUTION:** Always empty the grain tank before raising the machine.

Block both sides of the tires to prevent machine movement.

Jack point locations decal (A) is located on the cab ladder. Decal shows the correct locations for raising the machine using proper jacks.

MH69740,00008E4-19-21FEB20

## Jack Point Locations



A—Jack Point Location (front)  
B—Jack Point Location (rear)

C—Jack Point Location (left)  
D—Jack Point Location (right)

H128720—UN—30JAN20

**⚠ CAUTION:** Always empty the grain tank before raising the machine.

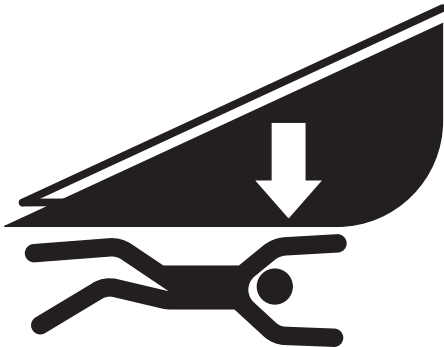
**Block both sides of the tires to prevent machine movement.**

*NOTE: Jack point locations are at the front and the rear of the machine and on the left-hand and right-hand side of the machine.*

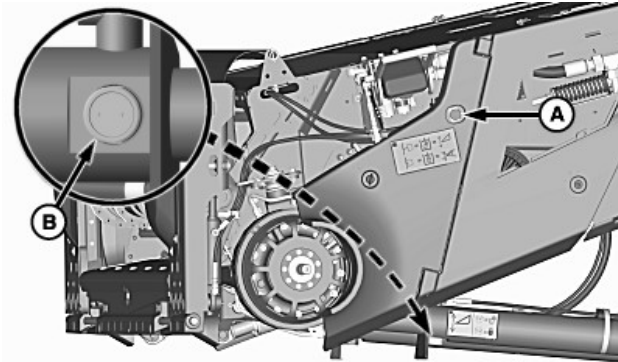
Raise the machine at approved jack point locations (A—D).

OUC6075,0004D82-19-21FEB20

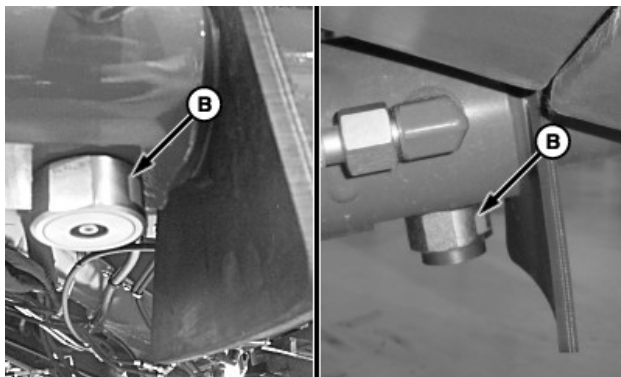
## Remove Front Wheels



H121063—UN—14MAR17



H126621—UN—27JAN20



H127632—UN—01OCT19

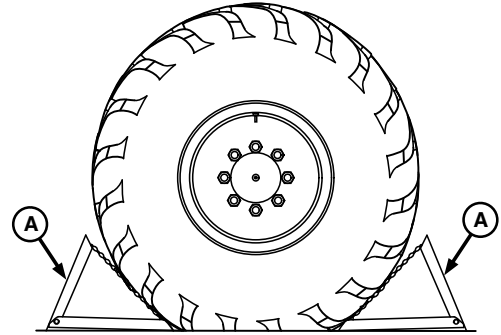
Locked/Unlocked

A—Lock Button  
B—Lock Indicator

1. Raise the feeder house and tilt the hydraulic feeder house fore/aft tilt frame as needed.

**NOTE:** When the feeder house lift cylinder lock button is pulled out, the safety lock indicator (B) may show red. Verify that the safety lock indicator is NOT red before going under the feeder house.

2. Push the feeder house safety lock button (A).
3. Shut OFF engine, set park brake, and remove key.

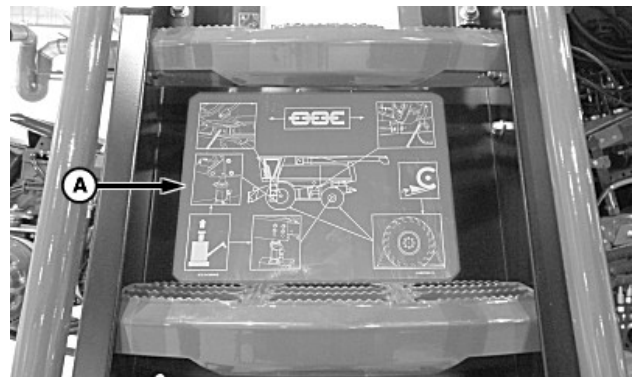


H118221—UN—18APR16

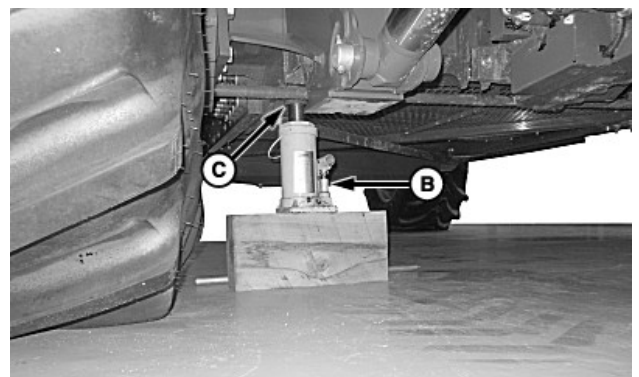
A—Block

**CAUTION:** Block both sides of tires to prevent movement while raising machine.

4. Block front and rear of tires as shown using blocks (A).
5. With front tires on ground, loosen wheel bolts with one full turn, but do not remove at this time.



H128575—UN—21JAN20



H127758—UN—10OCT19

A—Decal  
B—Jack  
C—Jack Point

**CAUTION:** Jack MUST have a minimum lifting capacity of 10 886 kg (24 000 lb).

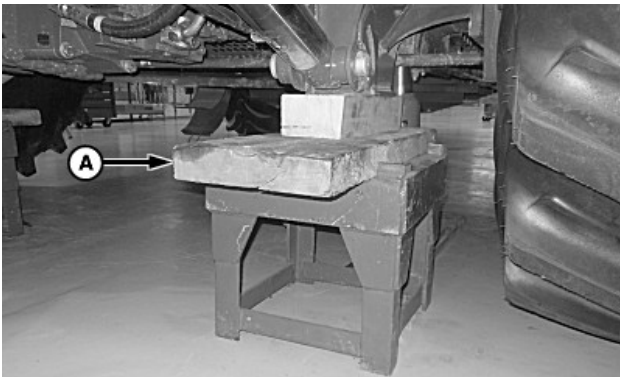
Do not raise machine at any location other than at the jack points.

Do not place objects between the jack and the jack point. They may cause machine instability. If the jack does not have enough travel length, place block on ground.

Wood blocks must be in good condition to support machine weight.

**NOTE:** Approved jack point locations can be found on decal (A) on the cab ladder.

6. Align jack (B) with the jack point (C) on the front axle and raise machine.



A—Solid Blocking

H127759—UN—10OCT19

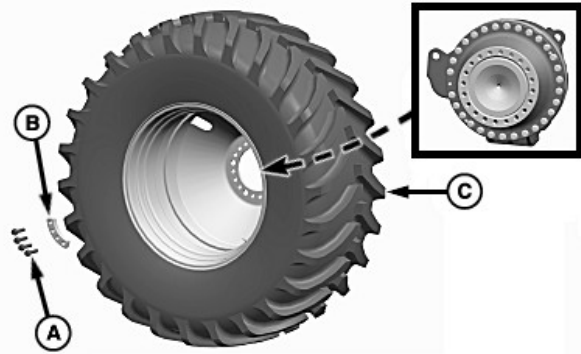
**CAUTION:** To help prevent personal injury caused by unexpected movement of the machine, be sure that machine is stable after blocking.

Do not support machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work on a machine that is supported solely by a jack.

Wood blocks must be in good condition to support machine weight.

Be sure that the front axle rests on solid blocking before attempting to remove wheels.

7. Position solid blocking (A) underneath the front axle. Lower machine onto solid blocking, making sure that no load shift is seen or felt.
8. **Single Wheel Configuration:**



H128054—UN—18NOV19

A—Wheel Bolt (20 used)  
B—Segmented Spacer (5 used)  
C—Wheel

**CAUTION:** Wheels are heavy and are difficult to handle. To avoid personal injury, two people are needed to remove the wheel.

- a. Remove **four** wheel bolts (A) and segmented spacer (B).
- b. Repeat steps as needed for remaining segment spacers and wheels bolts.
- c. Remove wheel (C) away from machine.
- d. Repeat steps as needed on the opposite side of the machine.

9. **Dual Wheel Configuration (Outer Wheel):**



H124224—UN—14MAY18

A—Wheel Bolt (20 used)  
B—Segmented Spacer (5 used)  
C—Socket Head Cap Screw (5 used)  
D—Oversized Hole (5 used)  
E—Outer Wheel Assembly

**CAUTION:** Wheels are heavy and are difficult to handle. When handling wheels, off-centered weight can suddenly shift, making wheel handling awkward and the wheel difficult to control. To avoid personal injury, two people are needed to remove the wheel.

- Remove **four** wheel bolts (A) and segmented spacer (B).
- Install **one** socket head cap screw (C) through the oversized hole (D) to retain inner wheel in place.

**CAUTION:** To avoid personal injury, socket head cap screws **MUST** be installed to prevent inner wheel from coming off when removing outer wheel.

- Repeat steps as needed for remaining segment spacers and wheels bolts.
- Remove outer wheel assembly (E) away from machine.
- Repeat steps as needed on the opposite side of the machine.

**IMPORTANT:** If machine must be transported without outer wheels in place, **5** socket head cap screws and **15** wheel bolts **MUST** be installed and tightened to specification before lowering front axle to ground. Segmented spacers are omitted for road transport, loading, and unloading.

#### 10. Dual Wheel Configuration (Inner Wheel):



A—Socket Head Cap Screw (5 used)  
B—Inner Wheel Assembly

H124225—UN—14MAY18

- Remove socket head cap screws (A).

- Remove inner wheel assembly (B) away from machine.
- Repeat steps as needed on the opposite side of the machine.

#### 11. Dual Wheel Configuration (710 Duals):



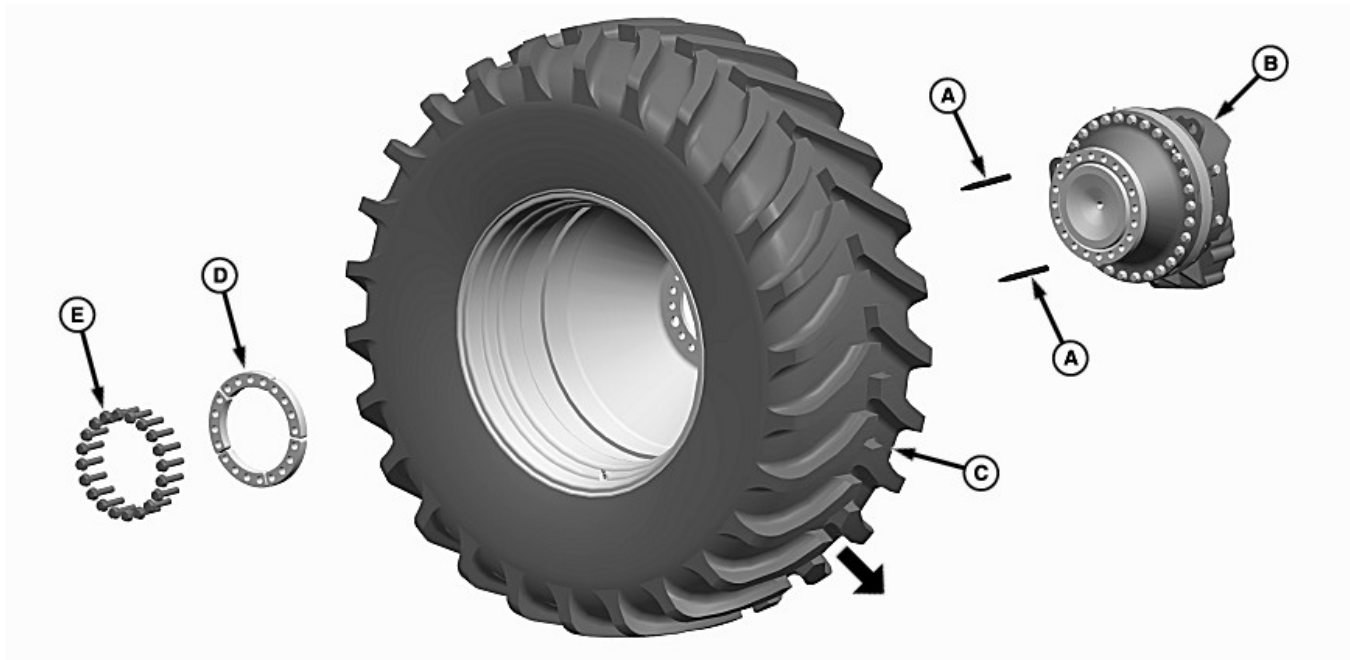
H132497—UN—25NOV20

A—Wheel Bolt (20 used)  
B—Segmented Spacer (5 used)

- Remove wheel bolts (A) and segmented spacers (B).
- Remove the inner and outer wheel assembly together.
- Repeat steps as needed on the opposite side of the machine.

MH69740,00008E0-19-25NOV20

## Install Front Wheels



H128066—UN—19NOV19

A—Pilot Stud (2 used)  
B—Drive Hub  
C—Wheel

D—Segmented Spacer (5 used)  
E—Wheel Bolt (20 used)

### 1. Single Wheel Configuration:

**CAUTION:** Wheels are heavy and are difficult to handle. To avoid personal injury, two people are needed to install the wheel.

*NOTE: Pilot Stud HXE16110 is recommended to help guide wheels into position.*

- Install pilot studs (A) in top and bottom holes of the drive hub (B). Stud threads must bottom out in holes.

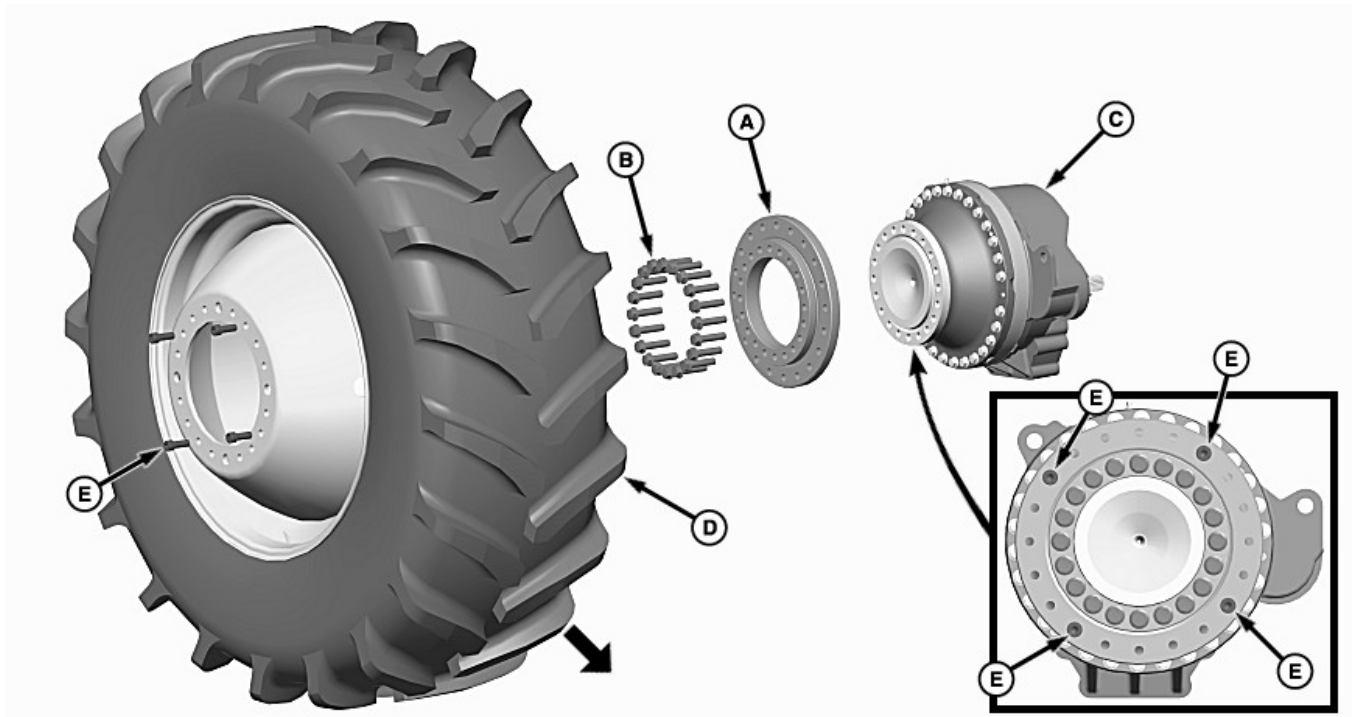
**IMPORTANT:** Install tire as directed or machine will NOT be drivable.

- Position the wheel (C) so the tire cleats point towards the front and downward.
- Align holes in the rim with pilot studs.
- Install wheel onto the drive hub.

**IMPORTANT:** Start wheel bolts by hand to help prevent damage to bolts.

- Install segmented spacers (D) and retain with wheel bolts (E).

**IMPORTANT:** Install all wheel bolts and segmented spacers BEFORE lowering front axle to ground.



H128077—UN—19NOV19

A—Wheel Spacer  
B—Cap Screw (20 used)  
C—Drive Hub

D—Wheel  
E—Socket Head Cap Screw (4 used)

## 2. Dual Wheel Configuration (Inner Wheel) (710 Duals):

**CAUTION:** Wheels are heavy and are difficult to handle. When handling wheels, off-centered weight can suddenly shift, making wheel handling awkward and the wheel difficult to control. To avoid personal injury, two people are needed to install the wheel.

**NOTE:** Pilot stud HXE16110 is recommended to help guide wheels into position.

- Install wheel spacer (A) using cap screws (B) onto the drive hub (C).
- Tighten cap screws to specification.

### Specification

Cap Screw—Torque (dry). . . . . 710 N·m  
(524 lb·ft)

**IMPORTANT:** Install tire as directed or machine will NOT be drivable.

- Position the wheel (D) so the tire cleats point towards the front and downward.
- Install wheel onto the drive hub.
- Install socket head cap screws (E) so that they are equally spaced from each other.
- Tighten socket head cap screws to specification using an M17 hex bit socket.

### Specification

Socket Head Cap  
Screws—Torque (dry). . . . . 450 N·m  
(332 lb·ft)

**IMPORTANT:** If machine must be transported without outer wheels in place, 4 socket head cap screws and 16 wheel bolts MUST be installed and tightened to specification before lowering front axle to ground. Segmented spacers are omitted for road transport, loading, and unloading.



H128078—UN—19NOV19

A—Oversized Hole (5 used)  
B—Socket Head Cap Screw (4 used)  
C—Wheel

D—Segmented Spacer (5 used)  
E—Wheel Bolt (20 used)

### 3. Dual Wheel Configuration (Outer Wheel) (710 Duals):

**CAUTION:** Wheels are heavy and are difficult to handle. When handling wheels, off-centered weight can suddenly shift, making wheel handling awkward and the wheel difficult to control. To avoid personal injury, two people are needed to install the wheel.

**IMPORTANT:** Install tire as directed or machine will NOT be drivable.

- Position the wheel so the tire cleats point towards the front and downward.

**IMPORTANT:** Verify that the oversized holes are aligned with the socket head cap screws. Inner and outer rims must be flush with each other.

- Align oversized holes (A) with previously installed socket head cap screws (B).

- Install wheel (C) onto the drive hub.
- Remove **one** socket head cap screw through the oversized hole.
- Align **one** segmented spacer (D) with **four** rim holes.

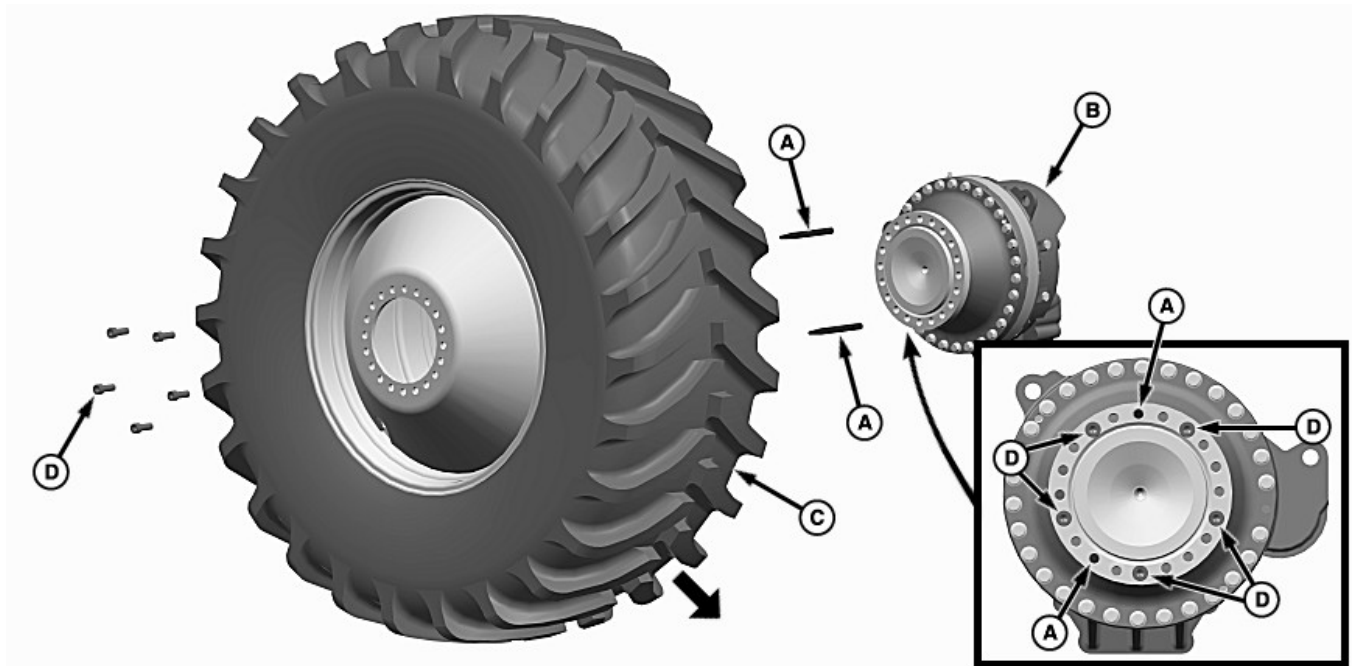
**IMPORTANT:** Start wheel bolts by hand to help prevent damage to bolts.

- Install **four** wheel bolts (E) through segmented spacer and into the rim holes.
- Repeat steps as needed for remaining segment spacers and wheels bolts.

**IMPORTANT:** Install all wheel bolts and segmented spacers **BEFORE** lowering front axle to ground.

**NOTE:** Retain socket head cap screws for future use when removing and installing wheels. Store the socket head cap screws in the toolbox.





H128073—UN—19NOV19

A—Pilot Stud (2 used)  
B—Drive Hub

C—Wheel  
D—Socket Head Cap Screw (5 used)

#### 4. Dual Wheel Configuration (Inner Wheel) (All Others):

**CAUTION:** Wheels are heavy and are difficult to handle. When handling wheels, off-centered weight can suddenly shift, making wheel handling awkward and the wheel difficult to control. To avoid personal injury, two people are needed to install the wheel.

**NOTE:** Pilot Stud HXE16110 is recommended to help guide wheels into position.

- Install pilot studs (A) in top and bottom holes of the drive hub (B). Stud threads must bottom out in holes.

**IMPORTANT:** Install tire as directed or machine will NOT be drivable.

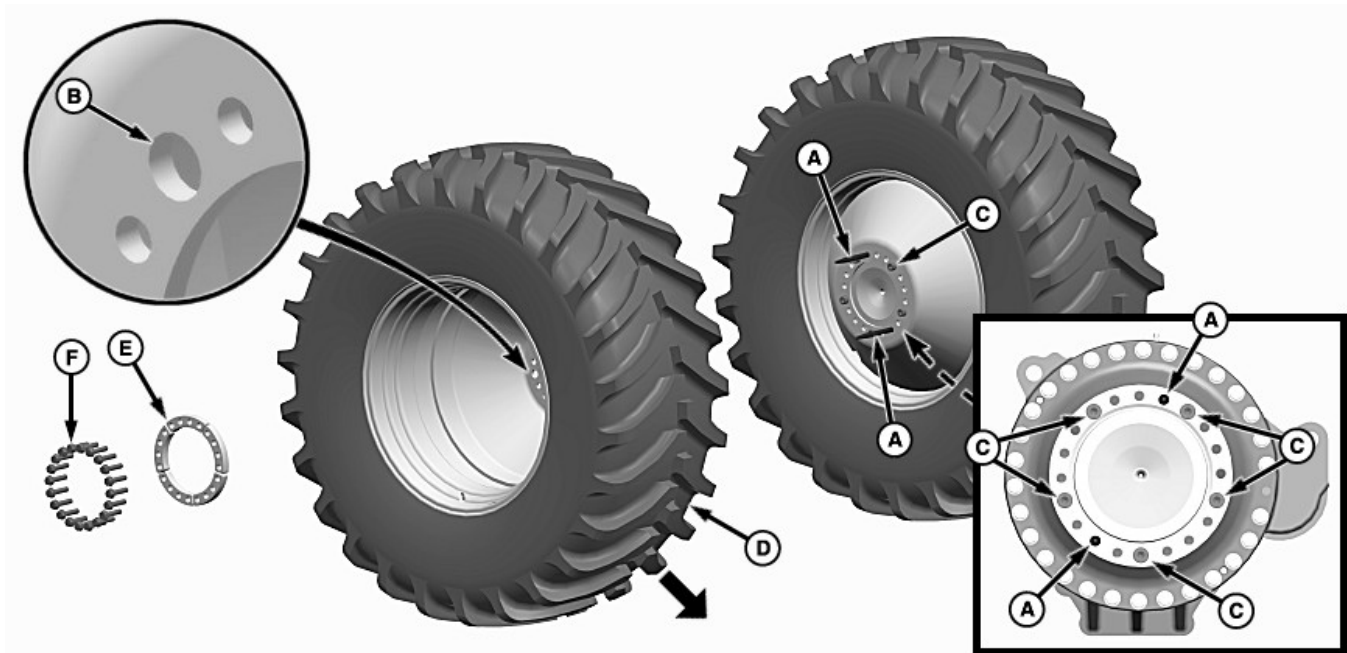
- Position the wheel (C) so the tire cleats point towards the front and downward.

- Align holes in the rim with pilot studs.
- Install wheel onto the drive hub.
- Install socket head cap screws (D) so that they are equally spaced from each other.
- Tighten socket head cap screws to specification using an M17 hex bit socket.

#### Specification

Socket Head Cap	
Screws—Torque (dry).	450 N·m (332 lb·ft)

**IMPORTANT:** If machine must be transported without outer wheels in place, 5 socket head cap screws and 15 wheel bolts MUST be installed and tightened to specification before lowering front axle to ground. Segmented spacers are omitted for road transport, loading, and unloading.



H128074—UN—19NOV19

A—Pilot Stud (2 used)  
B—Oversized Hole (5 used)  
C—Socket Head Cap Screw (5 used)

D—Wheel  
E—Segmented Spacer (5 used)  
F—Wheel Bolt (20 used)

##### 5. Dual Wheel Configuration (Outer Wheel) (All Others):

**CAUTION:** Wheels are heavy and are difficult to handle. When handling wheels, off-centered weight can suddenly shift, making wheel handling awkward and the wheel difficult to control. To avoid personal injury, two people are needed to install the wheel.

**IMPORTANT:** Install tire as directed or machine will NOT be drivable.

- Position the wheel so the tire cleats point towards the front and downward.
- Align holes in the rim with pilot studs (A).

**IMPORTANT:** Verify that the oversized holes are aligned with the socket head cap screws. Inner and outer rims must be flush with each other.

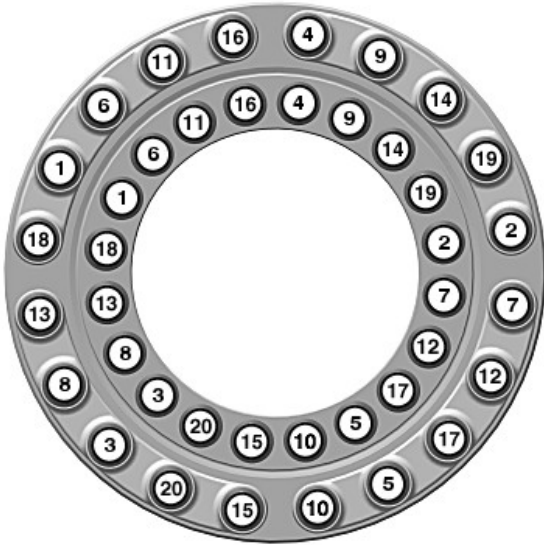
- Align oversized holes (B) with previously installed socket head cap screws (C).
- Install wheel (D) onto the drive hub.
- Remove **one** socket head cap screw through the oversized hole.
- Align **one** segmented spacer (E) with **four** rim holes.

**IMPORTANT:** Start wheel bolts by hand to help prevent damage to bolts.

- Install **four** wheel bolts (F) through segmented spacer and into the rim holes.
- Repeat steps as needed for remaining segment spacers and wheels bolts.

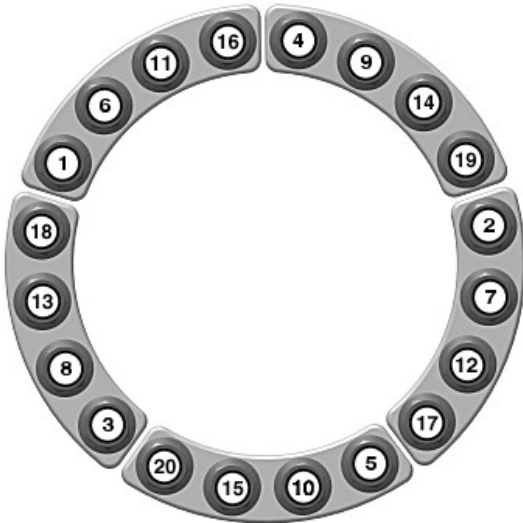
**IMPORTANT:** Install all wheel bolts and segmented spacers **BEFORE** lowering front axle to ground.

**NOTE:** Retain socket head cap screws for future use when removing and installing wheels. Store the socket head cap screws in the toolbox.



H127764—UN—10OCT19

710 Duals Only



H127763—UN—10OCT19

All Other Tire Options

6. Tighten wheel bolts to specification using a crisscross pattern.

**Specification**

Wheel Bolts—Torque (dry). . . . . 710 N·m  
(524 lb·ft)

7. Remove pilot studs and replace with wheel bolts.
8. Tighten remaining wheel bolts to specification.

**Specification**

Wheel Bolts—Torque (dry). . . . . 710 N·m  
(524 lb·ft)

9. Repeat steps on the opposite side of machine and lower to ground.

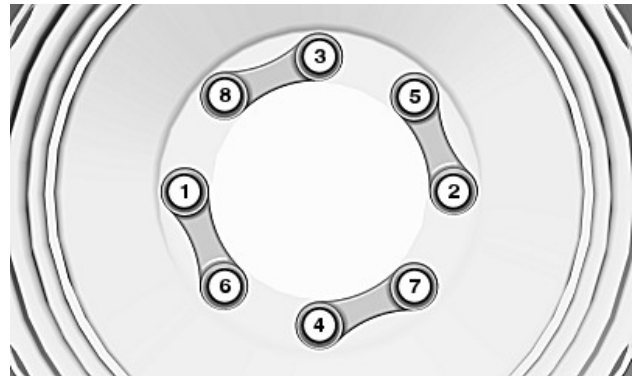
After the first hour of operation and again after every 10 hours of operation, torque wheel bolts to

specification until 50 hours of operation is complete. Torque wheel bolts every 100 hours thereafter.

10. Check tire pressure and inflate as needed. See Care and Service of Tires in this section for tire inflation pressure.

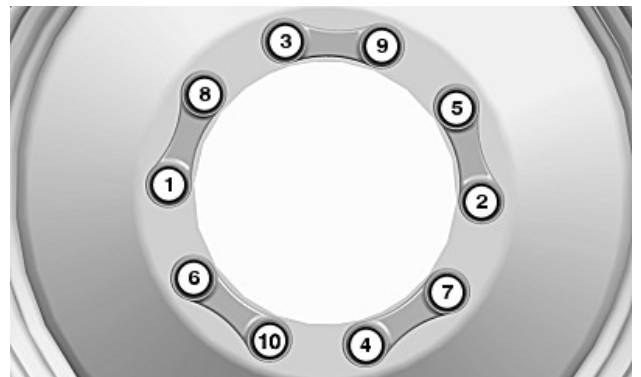
MH69740,00008E1-19-24NOV20

## Rear Wheel Bolt Torque



H128082—UN—20NOV19

Two-Wheel Drive



H128083—UN—20NOV19

Four-Wheel Drive

Each time a rear wheel is removed, torque wheel bolts to specification.

**Specification**

M22 Wheel Bolts—Torque. . . . . 710 N·m  
(524 lb·ft)

After the first hour of operation and again after every 10 hours of operation, torque wheel bolts to specification until 50 hours of operation is completed. Torque wheel bolts every 100 hours thereafter.

**NOTE:** Refer to decal on the tire for proper torque sequence.

MH69740,00008E3-19-20NOV19

## Using Liquid Weight



H128746—UN—31JAN20

**⚠ CAUTION:** Installing liquid weight (ballast) requires special equipment and training.

**IMPORTANT:** Cover rim completely with solution to avoid corrosion, but **NEVER** fill any tire more than 90% full. More solution would leave too little air space to absorb shocks. Damage to tire could occur.

A solution of water and calcium chloride provides a safe and economical ballast. Used properly, it will not damage tires, tubes, or rims.

Use calcium chloride to prevent water from freezing. A mixture of 1.6 kg (3-1/2 lb) of calcium chloride per 3.8 L (1 gal) will not freeze solid above -45°C (-50°F).

*NOTE: Use of alcohol as liquid ballast is not recommended. Calcium chloride solution is heavier and more economical.*

Fill tubeless tires at least to valve level (minimum 75% full). Less solution would expose part of rim, possibly causing corrosion. Tube-type tires may be filled to any level below 90%.

MH69740,000096B-19-21FEB20

## Ballast Requirements

*NOTE: Ballast requirements vary based on configuration.*

*Ballast requirements are based off standard Corn Pricing configuration, 133 L (35 gal) fuel in tank, and full grain tank. This may not reflect all scenarios.*

*Tires requiring fluid must be filled to 75%.*

Approximate Header Mass		1500— 3500 kg	3500— 4500 kg	4500— 5000 kg	5000— 5500 kg	5500— 6500 kg
		3300— 7700 lb	7700— 9900 lb	9900— 11 000 lb	11 000— 12 100 lb	12 100— 14 300 lb
Belt Pickup/Draper Heads		BP15	RD30F RD35F RD40F	HD35R RD45F 740X	HD40R HD40X HD45R	HD50R
Corn Heads		Not Applicable	C12R	C12F C16R C18R	Not Applicable	C16F C18F
Model	Configuration	Normal Slopes (Flat to 15%)				
X9 1000	Two-Wheel Drive	No	No	No	Yes	Yes
	Four-Wheel Drive					
X9 1100	Two-Wheel Drive	No	No	No	Yes	Yes
	Four-Wheel Drive					
Model	Configuration	Hilly Slopes (15% to 20%)				
X9 1000	Two-Wheel Drive	No	No	Yes	Yes	Yes
	Four-Wheel Drive					
X9 1100	Two-Wheel Drive	No	No	Yes	Yes	Yes
	Four-Wheel Drive					
No = Ballast not required for any size tires. Yes = Ballast required for all tire sizes. NR = Not Recommended. Configuration cannot be ballasted properly.						

# Transporting

## Driving Machine on Roads



Folding Button

H115016—UN—22MAR16

**CAUTION:** Avoid power line entanglement. Grain tank covers must be closed before transporting machine.

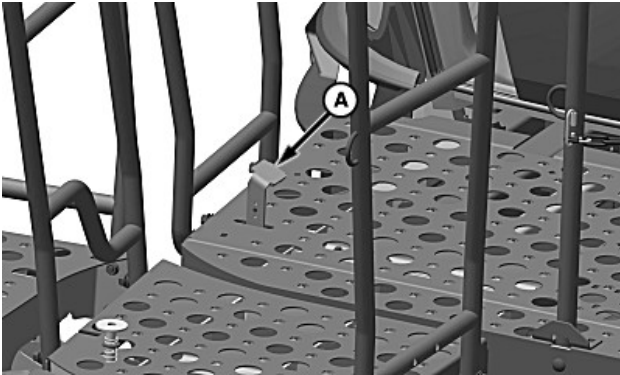
**IMPORTANT:** Verify that grain tank is unloaded before transporting machine on road.

Verify that folding unloading auger and folding grain tank covers are fully folded before driving machine.

1. Press folding button on navigation bar. See Folding Application Help or Operator's Station Help for further information.

The following items must be folded to the transport position:

- Unloading Auger
- Grain Tank Covers



H127794—UN—14OCT19

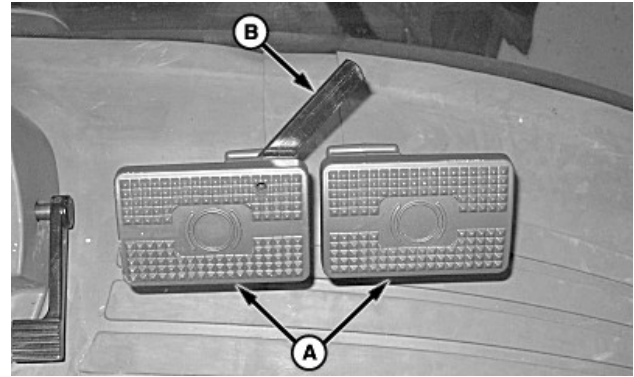
A—Pivot Lever

**CAUTION:** Swing ladder to the full forward position to reduce machine width and to orient marker/hazard light toward oncoming motorists.

**IMPORTANT:** Travel at a reasonable speed for road or field conditions. Never transport on the road with grain in the tank.

Follow local regulations for equipment size, lighting, and marking before driving on public roadways.

2. Use lever (A) to unlock ladder and swing fully forward.
3. Remove the radio antenna and place it in the manual storage location compartment located behind the operator's seat.



H96681—UN—01JUN10

A—Pedal  
B—Lock

4. Lock brake pedals together with lock (B) when driving on roads. Leave pedals (A) unlocked for field operation.

**CAUTION:** Use seat belt whenever operating machine or riding as an observer.

5. Fasten seat belt.

**CAUTION:** Sound horn before starting engine to clear people away from machine.

6. Sound horn and start engine. Use cold weather starting aid if needed.



H116348—UN—19DEC16

Header Raise/Lower Switch

**IMPORTANT:** Feeder house damage could result if the feeder house safety lock is not unlocked before transporting. Verify that the feeder house safety lock is unlocked before transporting the machine.

See feeder house safety lock in the feeder house section for further information.

7. Raise header with the header switch.



H117022—UN—28MAR16

Road Transport Disconnect

**NOTE:** After transporting machine, press road transport disconnect switch for 2 seconds, allowing indicator light to turn OFF and allowing desired switch functions to operate.

8. Engage road transport disconnect switch.



Hazard Light

H117885—UN—29MAR16

- CAUTION:** When transporting on a road or highway, marker/hazard lights and tail lights on both sides provide a warning to operators of vehicles approaching from the front and rear. These lights must be turned ON when driving machine on public roadways. Swing cab ladder fully forward to orient marker/hazard lights towards oncoming motorists. Do not operate marker/hazard lights if prohibited by law.

9. Turn beacon/hazard light switch ON for both daytime and nighttime road travel. Warning lights automatically operate when hazard lights are ON.



Road Light Switch

H127046—UN—26SEP19

10. Use the road light switch to turn ON the road lights for nighttime travel.

**NOTE:** Turn signal indicators on corner post display illuminate to indicate a turn.

11. Use turn signals as needed. They are not self-canceling.



Engine Speed (fast speed)

H117021—UN—28MAR16

12. Press engine speed switch for maximum engine speed.

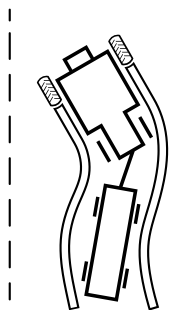
- CAUTION:** If transporting machine with header attached, travel at a reasonable speed to ensure adequate braking performance and control of machine.

13. Slowly move the multi-function lever forward or

rearward. When coming to the top of a hill, pull back on the multi-function lever before starting down the other side.

MH69740,00008E6-19-14MAY20

## Tow Loads Safely



H128674—UN—31JAN20

32 km/h (20 mph) Maximum Transport Speed while Towing

Stopping distance increases with speed and weight of towed loads and on slopes. Towed loads that are too heavy for the combine or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

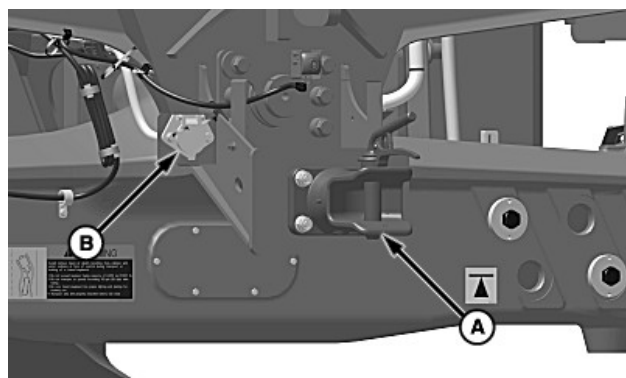
Do not exceed maximum towing capacity of 8000 kg (17 637 lb).

Do not transport at speed exceeding 32 km/h (20 mph) while towing.

Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and on inclines.

OOU6075,0004D81-19-20MAY20

## Manual Trailer Hitch—Attaching (Optional)



H128714—UN—29JAN20

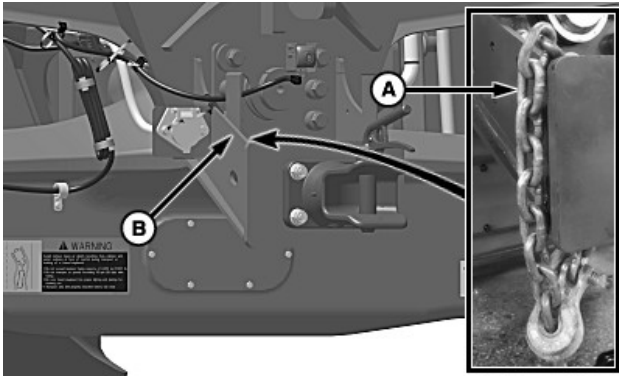
A—Hitch  
B—Electrical Connector

- CAUTION:** Shut OFF engine, set park brake, and remove key before hooking up trailer.

1. Fully raise the chopper.
2. Attach trailer to hitch (A) and secure with the trailer hitch pin.
3. Connect trailer electrical harness to electrical connector (B).

OUO6075,0004D71-19-16NOV20

## Use Safety Chain



H128716—UN—06FEB20

A—Safety Chain  
B—Hitch Bracket

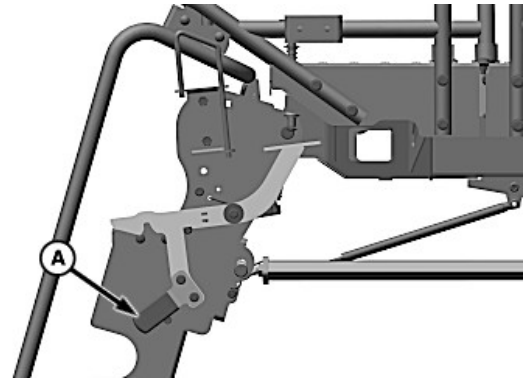
**CAUTION:** Avoid possible accident and injury by using a safety chain on towed equipment. Use a safety chain with a strength rating equal to or greater than the gross weight of equipment. Provide only enough slack in the chain to permit turning.

**IMPORTANT:** Never use safety chain for towing or possible damage to machine may result. Safety chain is provided only for transport.

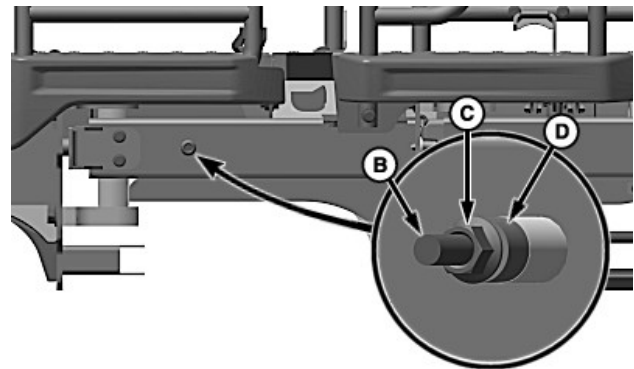
Route the safety chain (A) through the hitch bracket (B) as shown. Attach the chain back onto itself using the latch-style hook.

OUO6075,0004D84-19-21FEB20

## Transporting Machine on a Trailer



H129166—UN—26FEB20



H129167—UN—26FEB20

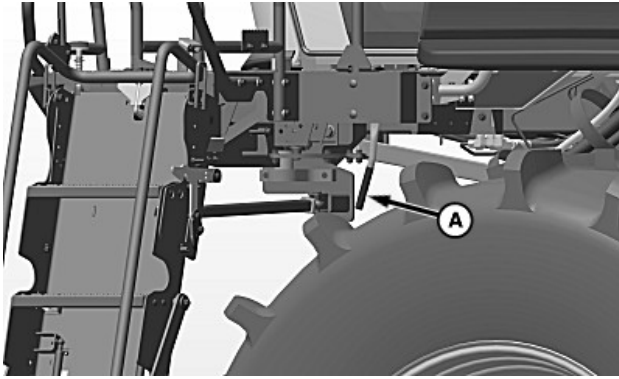
A—Handle  
B—Cap Screw  
C—Nut  
D—Spacer

**NOTE:** See *Driving Machine on Roads* earlier in this section for additional information that **MUST** be done before transporting machine on a trailer.

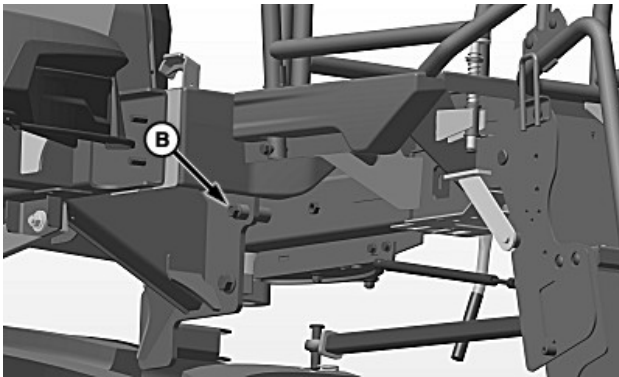
See *Ground Drive and Rear Axle* section for additional information that **MUST** be done when removing dual wheels (if equipped).

1. Remove header and outside dual wheels (if equipped).
2. Drive machine on trailer and move the multi-function lever to neutral position.
3. Lower the feeder house onto the trailer to allow the ladder landing to be swung to the transport position.
4. Shut OFF engine, set park brake, and remove key.
5. Remove the radio antenna and place it in the manual storage location compartment located behind the operator's seat.
6. **Single Tire Configuration:**
  - a. Turn handle (A) and fold the ladder up.
  - b. Remove cap screw (B), nut (C), and spacer (D) from storage location.





H129168—UN—03MAR20

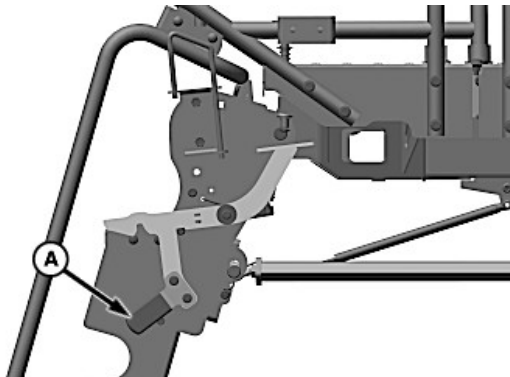


H129324—UN—03MAR20

A—Handle  
B—Cap Screw, Spacer, and Nut

- c. Push handle (A) and rotate the ladder forward.
- d. Install previously removed cap screw, spacer, and nut (B) through the ladder and landing assemblies.

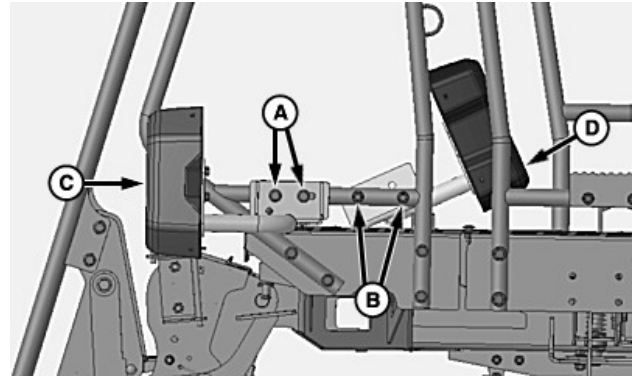
## 7. Dual Tire Configuration:



H129166—UN—26FEB20

A—Handle

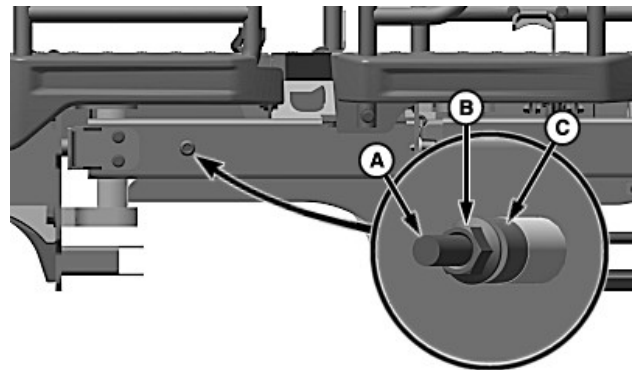
- a. Turn handle (A) and fold the ladder up.



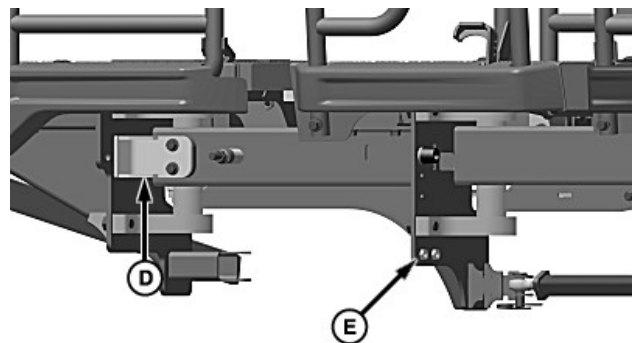
H129183—UN—27FEB20

A—Cap Screw and Nut (2 used)  
B—Cap Screw and Nut (2 used)  
C—Operating Position  
D—Shipping Position

- b. Remove cap screws and nuts (A) and cap screws and nuts (B).
- c. Remove light assembly from operating position (C) and install in shipping position (D).
- d. Secure light assembly in shipping position using previously removed cap screws and nuts.



H129173—UN—26FEB20

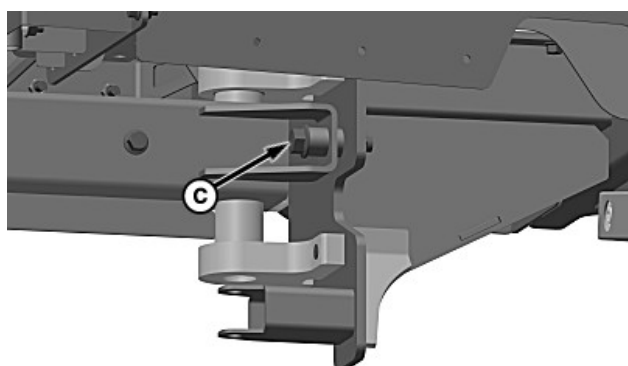
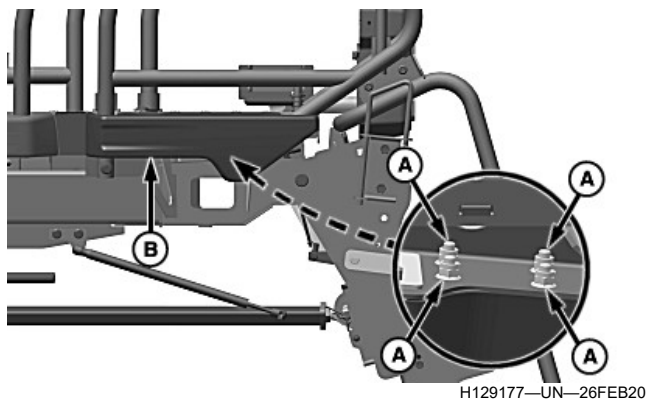


H129174—UN—26FEB20

A—Cap Screw  
B—Spacer  
C—Nut  
D—Bracket  
E—Storage Location

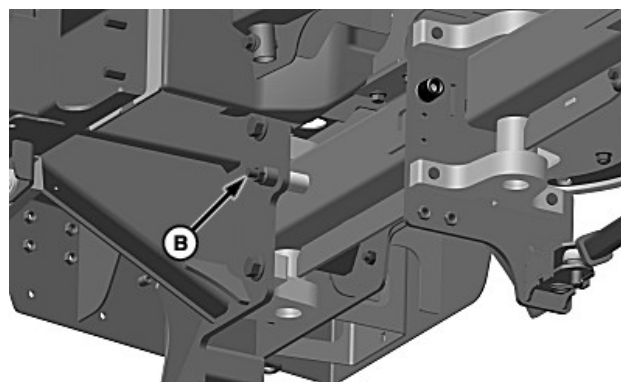
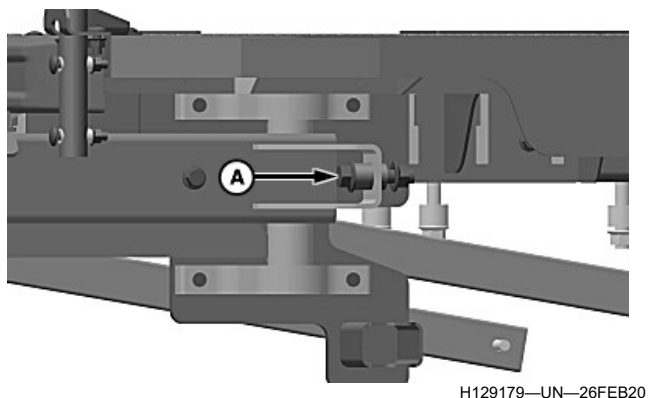
- e. Remove cap screw (A), spacer (B), and nut (C) from storage location.

- f. Remove bracket (D) and reinstall in storage location (E).



A—Nut (4 used)  
B—Fascia  
C—Cap Screw and Nut

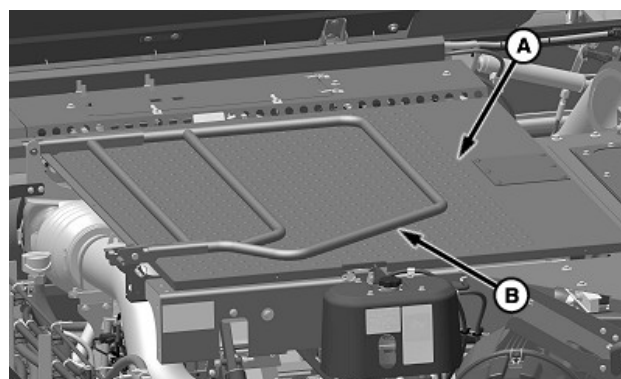
- g. Remove nuts (A) and fascia (B).  
h. Remove cap screw and nut (C).  
i. Rotate the ladder forward into the shipping position.



A—Cap Screw and Nut  
B—Cap Screw and Nut

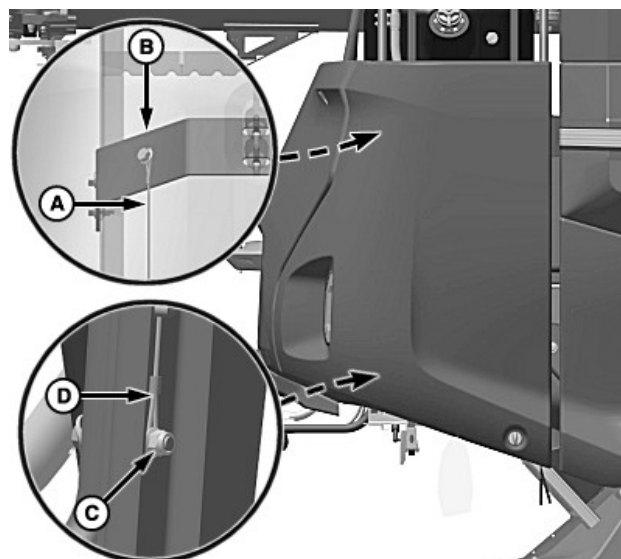
H129169—UN—26FEB20

- j. Install previously removed cap screw and nut (A).  
k. Install previously removed cap screw and nut (B).



A—Engine Access Cover  
B—Handrail

8. Lower engine access covers (A) and handrail (B) to lock covers into place.

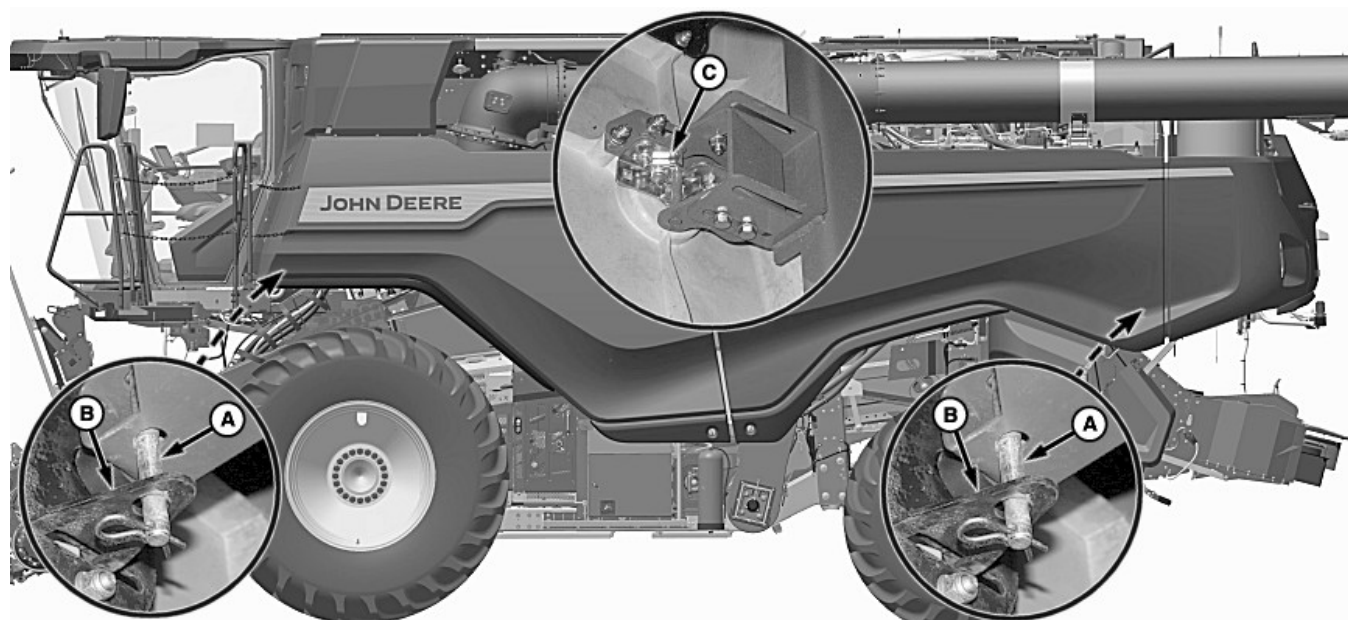


A—Cable

B—Upper Bracket  
C—Nut  
D—Cable

**NOTE:** Verify that the cable is secured around the upper bracket when not being used.

9. Unwrap the cable (A) from the upper bracket (B).



H128607—UN—23JAN20

A—Pin  
B—Locking Plate

13. Install pins (A) through locking plates (B) and retain with spring pins at front and rear corners of the left-hand gull wing doors. Repeat on the opposite side of the machine.
14. Use wire to tie the gull wing doors at latches (C). Repeat on the opposite side of the machine.



H128608—UN—23JAN20

A—Hazard Light

15. Swing the left-hand and right-hand hazard lights (A) rearward as shown.

10. Close the rear access door.
11. Remove the nut (C) from the ladder handrail.
12. Attach the opposite end of the cable (D) to the cap screw and retain with the previously removed nut.

C—Latch



H128552—UN—11JUN20

A—Slow-Moving Vehicle Emblem

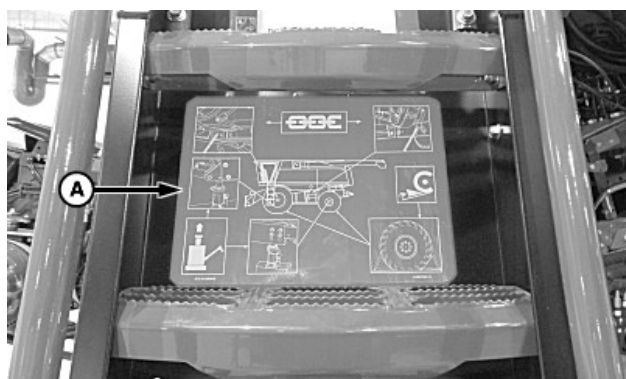
16. Cover up slow-moving vehicle emblem (A).

**IMPORTANT: Fasten machine to trailer with chains.**

17. Fasten machine to trailer with chains (see the machine tie-down locations decal on the cab ladder for tie-down information).

MH69740,0000939-19-10NOV20

## Machine Tie-Down Locations Decal



H128575—UN—21JAN20

A—Machine Tie-Down Locations Decal

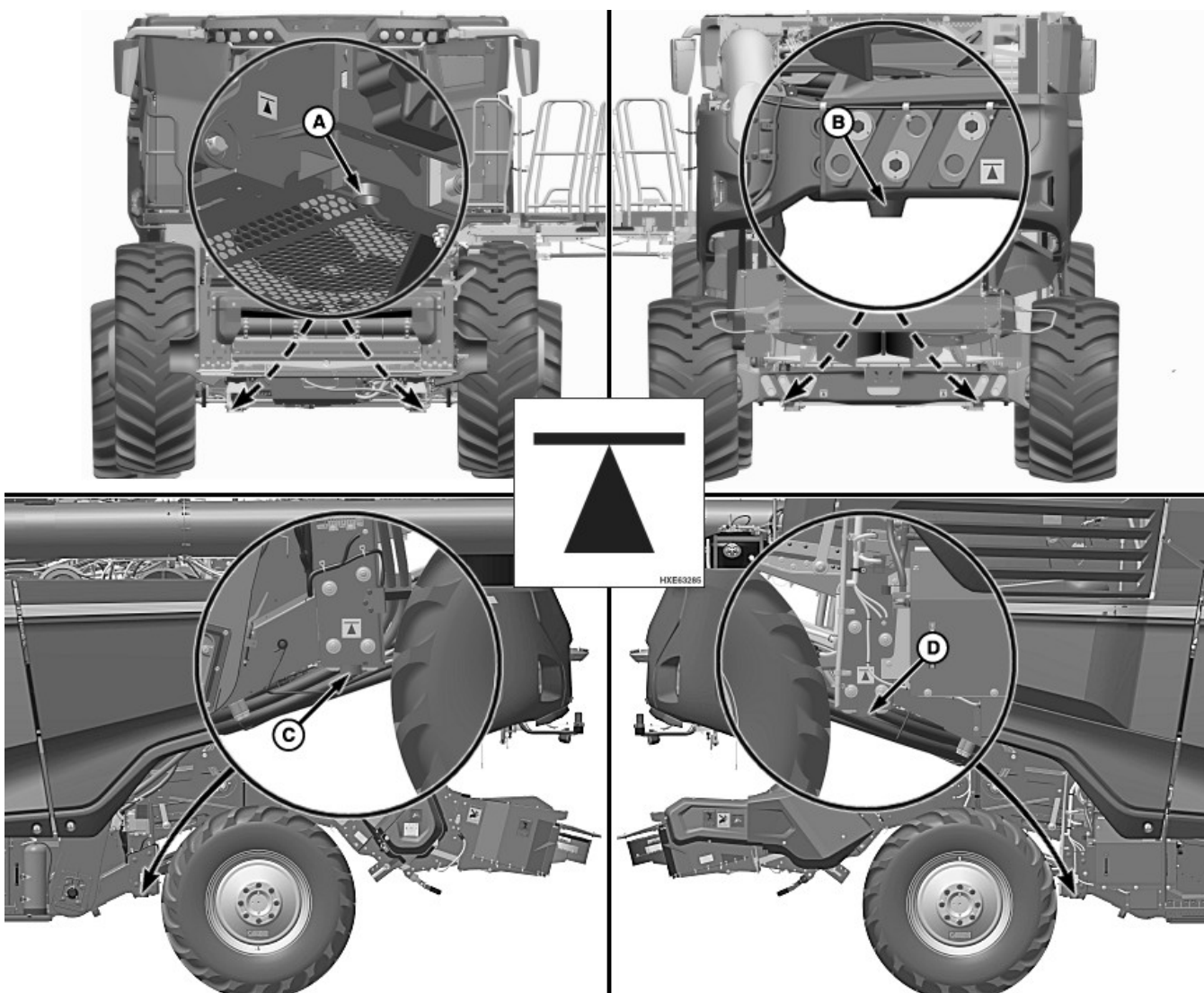
**CAUTION:** Always empty the grain tank before raising the machine.

**NOTE:** Machine tie-down locations are on both sides of the machine at the front and rear.

Machine tie-down locations decal (A) is located on the cab ladder. Decal shows the correct locations for fastening the machine with chains.

MH69740,00008EB-19-28APR20

## Jack Point Locations



A—Jack Point Location (front)  
B—Jack Point Location (rear)

C—Jack Point Location (left)  
D—Jack Point Location (right)

H128720—UN—30JAN20

**⚠ CAUTION:** Always empty the grain tank before raising the machine.  
**Block both sides of the tires to prevent machine movement.**

*NOTE: Jack point locations are at the front and the rear of the machine and on the left-hand and right-hand side of the machine.*

Raise the machine at approved jack point locations (A—D).

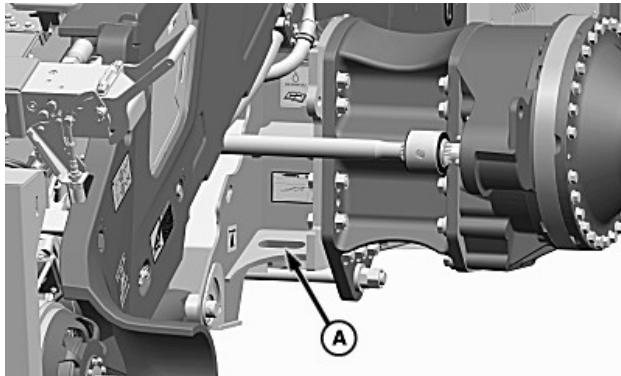
OUO6075,0004D82-19-21FEB20

**⚠ CAUTION:** Always use a suitable chain. Do not exceed the breaking strength. Do not mix a chain with tow straps or ropes. Energy stored in the towing device could break and cause serious bodily injury.

Secure the chain to hook (A) to pull out the machine. Do not use this hook for pulling a trailer.

MH69740,00008EA-19-21FEB20

## Front Tow Hook



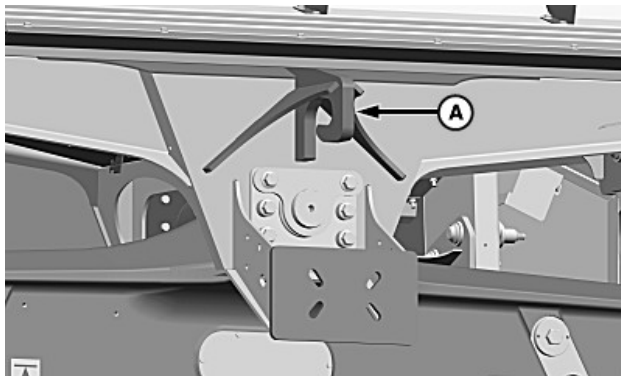
H127827—UN—15OCT19

**A—Hook**

If it is necessary to tow or pull machine out of the mud in a forward direction, attach a chain to hook (A) on the front axle. Be certain that the chain will not damage any hydraulic lines.

MH69740,00008E9-19-21FEB20

## Rear Tow Hook



H127828—UN—15OCT19

**A—Hook**

# Harvesting Hints

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## Operation at Low Temperatures

**IMPORTANT: When operating in cold temperatures, verify that proper grade diesel fuel is being used. Warmer grade diesel fuel will gel in fuel lines, fuel filters, and fuel tank. Fuel system requires servicing if diesel fuel gels. See Fuels and Lubricants section for further information.**

Combine functions can degrade in low temperatures where snow and ice are present. Special care **MUST** be taken to ensure that minimal snow is ingested in combine. If snow is ingested, areas such as chaffer, cleaning fan, separator concaves, and separator grates can become obstructed. Operation with these areas obstructed could cause machine damage and significant repairs or result in functional performance degradation. Consult your John Deere dealer prior to operating in cold temperatures.

OUO6075,0004574-19-31JAN17

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## Harvesting Tips

Adjust machine to crop being harvested and to field conditions.

Select a ground speed that does not overload machine. Engine must be at full rpm to keep separator at full speed. Select a ground speed for slower travel, but do not slow engine speed.

If the concave is set too close for the harvested crop, straw will be excessively ground up requiring more horsepower to thresh the crop.

If the concave is set too wide for the harvested crop, it will not be completely threshed.

After threshing clearance is adjusted properly, adjust separator speed to achieve maximum threshing with the least amount of crop damage. If crop damage does occur, reduce feed accelerator speed. Threshing clearance in these crops has very little effect on seed damage.

Crops such as edible beans and peas are easily cracked and can require the use of a slower feed accelerator drive. When harvesting edible beans and peas keep machine full to provide enough material to cushion the crop against cracking.

For potential improvements in straw quality consider that the following can help improve straw quality depending on conditions:

- Slowing feeder house chain speed
- Slowing feed accelerator speed
- Slowing rotor speed
- Opening concave
- Reducing threshing elements
- Installing round bar concaves

For improved performance in sidehill conditions, consider trying the following:

- Adjust the position of the angled dividers on the front step pan to improve shoe distribution.
- Install tall chaffer dividers (available from your John Deere dealer).
- Install separator grate covers (if equipped) to improve the chaff and grain distribution.

Each of these actions can improve the chaff and grain distribution to the cleaning shoe, resulting in improved performance in sidehill conditions.

When using a cutting platform, cut crop as high as possible without loss of low heads. Adjust reel position and speed for even feeding. Keep cutterbar in register and guards in alignment for clean cutting.

When harvesting corn, keep corn head only as low as necessary for ears. Keep it centered in the rows to prevent ear loss.

When using a belt pickup, keep windrow centered so material is fed evenly into the feeder house. Grain heads must be lying in one direction. Operate machine so heads are picked up first.

When harvesting soybeans with a row-crop head, keep header as low as possible. When harvesting crops such as milo or sunflowers, operate header just low enough to cut the heads from the stalks.

Adjust chaffer openings to pass grain or seed to the lower sieve in the first two-thirds of the chaffer without admitting too much coarse material.

Use as much air as possible without blowing over clean grain and seed. Heavy crops require more air than light seed crops.





















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

## Auto Header Control Combinations

A few common modes are shown below, but many combinations exist.

**NOTE:** Press and hold activation button 1, 2, or 3 on the multi-function lever for 2 seconds to enter desired modes into memory.

Auto Header Controls (Enabled Modes)	Activation Button 1	Activation Button 2	Activation Button 3
Height Resume	 Height Resume <span style="float: right;">H126436—UN—06JUN19</span>		
Height Resume   Height Sensing	 H126436—UN—06JUN19 Height Resume	 Height Sensing <span style="float: right;">H126437—UN—06JUN19</span>	
Height Resume   HydraFlex™ Height Sensing	 H126436—UN—06JUN19 Height Resume	 HydraFlex™ Height Sensing <span style="float: right;">H126437—UN—06JUN19</span>	
Height Resume   Height Sensing   HydraFlex™ Height Sensing <sup>a</sup>	 H126436—UN—06JUN19 Height Resume	 H126437—UN—06JUN19 Height Sensing	 H126437—UN—06JUN19 HydraFlex™ Height Sensing
Height Resume   Height Sensing   Active Header Float	 H126436—UN—06JUN19 Height Resume	 H126437—UN—06JUN19 Height Sensing	 H126447—UN—06JUN19 Active Header Float
Height Resume   HydraFlex™ Height Sensing   Active Header Float	 H126436—UN—06JUN19 Height Resume	 H126437—UN—06JUN19 HydraFlex™ Height Sensing	 H126447—UN—06JUN19 Active Header Float
Height Resume   Active Header Float	 Height Resume <span style="float: right;">H126436—UN—06JUN19</span>		 H126447—UN—06JUN19 Active Header Float
Height Sensing	 Height Sensing <span style="float: right;">H126437—UN—06JUN19</span>		
HydraFlex™ Height Sensing	 HydraFlex™ Height Sensing <span style="float: right;">H126437—UN—06JUN19</span>		
Height Sensing   HydraFlex™ Height Sensing <sup>a</sup>	 Height Sensing <span style="float: right;">H126437—UN—06JUN19</span>		 H126437—UN—06JUN19 HydraFlex™ Height Sensing

## Harvesting Hints

Auto Header Controls (Enabled Modes)	Activation Button 1	Activation Button 2	Activation Button 3
Height Sensing   HydraFlex™ Height Sensing   Active Header Float <sup>a</sup>	<div><div>H126437—UN—06JUN19</div><div>HydraFlex™ Height Sensing</div></div>	<div><div>H126447—UN—06JUN19</div><div>Active Header Float</div></div>	
Height Sensing   Active Header Float	<div><div>H126437—UN—06JUN19</div><div>Height Sensing</div></div>	<div><div>H126447—UN—06JUN19</div><div>Active Header Float</div></div>	
HydraFlex™ Height Sensing   Active Header Float	<div><div>H126437—UN—06JUN19</div><div>HydraFlex™ Height Sensing</div></div>	<div><div>H126447—UN—06JUN19</div><div>Active Header Float</div></div>	
Active Header Float	<div><div>H126447—UN—06JUN19</div><div>Active Header Float</div></div>		
Reel Position Resume	<div><div>H126448—UN—06JUN19</div><div>Reel Position Resume</div></div>		
Deck Plate Position Resume	<div><div>H126449—UN—06JUN19</div><div>Deck Plate Position Resume</div></div>		
Hydraulic Feeder House Fore/Aft Tilt	<div><div>H126450—UN—06JUN19</div><div>Hydraulic Feeder House Fore/Aft Tilt</div></div>		
Cutterbar Fore/Aft Position <sup>b</sup>	<div><div>H126451—UN—06JUN19</div><div>Cutterbar Fore/Aft Position</div></div>		
Auto Reel Speed	<div><div>H129440—UN—05MAR20</div><div>Auto Reel Speed</div></div>		
Auto Belt Speed	<div><div>H129441—UN—05MAR20</div><div>Auto Belt Speed</div></div>		

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<sup>a</sup>See your John Deere dealer to enable Height Sensing and HydraFlex Height Sensing. Requires RDF HydraFlex™ Drapers with auxiliary height sensors.

<sup>b</sup>European 700X Cutting Platforms with wide feeding channel.

OUC6075,0004DC4-19-12NOV20

## Change Tire Radius Code

If tires or final drives are changed from what was

originally shipped from the factory, it is necessary to recalibrate the system.

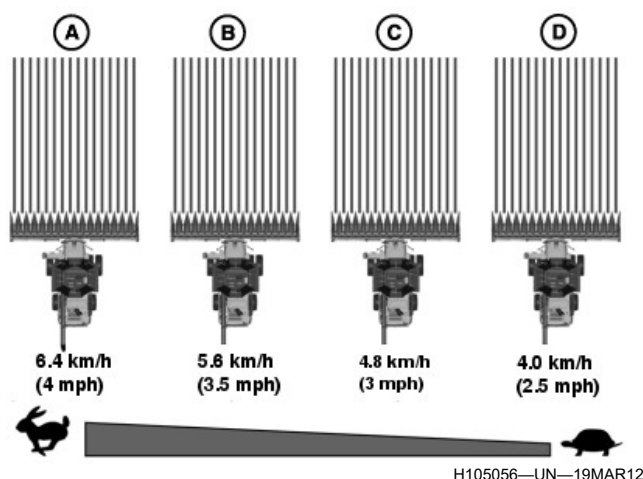


**IMPORTANT:** When changing drive wheels, tire radius may also change. POD control unit **MUST** be set to the new tire radius. See your John Deere dealer for further information on changing the tire codes.

**Failure to calibrate system results in inaccurate Harvest Monitor™ Yields.**

OUO6075,0004D88-19-12NOV20

## Single Point Yield Calibration Or Multi-Point Yield Calibration



- A—Load 1
- B—Load 2
- C—Load 3
- D—Load 4
- E—Minimum Flow
- F—Medium Flow
- G—Medium Flow
- H—Maximum Flow

**NOTE:** Varying machine ground speed is the best way to vary the flow rate.

The best way to keep the flow rate constant is to monitor the VisionTrak™ display and adjust machine ground speed accordingly.

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VisionTrak is a trademark of Deere & Company

## Single Point Yield Calibration

Single point yield calibration is performed when one or up to three calibration loads are collected.

This type of calibration is suggested when the harvested field has a fairly consistent yield and machine is operated at a constant ground speed with little flow variation.

To collect a calibration load, harvest approximately 2722 kg (6000 lb) at the maximum harvest speed.

Running one or two additional loads is not required, but it may allow the system to average the overall error.

## Multi-Point Yield Calibration

Multi-point yield calibration is used when the harvested field is expected to have varying yields or machine is operated at varying speeds with varying grain flows.

This type of calibration collects each calibration load at each expected flow condition.

For each calibration load, harvest approximately 2722 kg (6000 lb).

Run at least **four** calibration loads over various ground speeds (A—D) or at different cut widths to simulate four different flow rates (E—H).

OUO6075,000430B-19-16JUN16

# Crop Settings

## Alfalfa and Barley

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
\* Refer to Footnotes Description Page later in this section for more detailed information.*

	Alfalfa	Barley
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High	High
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High	High
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	720—1000	800—1150
Threshing Speed (Europe) (rpm) <b>(A)*</b>	720—1000	800—1150
Threshing Clearance (North America) (mm)	0—10	8—22 <b>(C)*</b>
Threshing Clearance (Europe) (mm)	0—10	12—25 <b>(C)*</b>
Concave Type (North America) <b>(C)*</b>	Small Wire	Small Wire
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	570—700	700—1030
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	10—20	12—19
Chaffer Clearance (Europe) (mm)	10—20	13—22
Sieve Clearance (North America) (mm)	1—4	6—11
Sieve Clearance (Europe) (mm)	1—4	6—14
Tailings System Concave Position	Grain	Grain
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	25	50
Chopper Speed	High	High

OUC06075,0004F43-19-12NOV20

## Canola (Dry) and Canola (Wet)

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
 \* Refer to Footnotes Description Page later in this section for more detailed information.

	Canola (Dry)	Canola (Wet)
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	22-Tooth	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High	High
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High	High
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	550—850	650—900
Threshing Speed (Europe) (rpm) <b>(A)*</b>	550—850	650—900
Threshing Clearance (North America) (mm)	15—35	10—30
Threshing Clearance (Europe) (mm)	15—35	10—30
Concave Type (North America) <b>(C)*</b>	Small Wire	Small Wire
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	570—800	570—770
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	11—19	11—19
Chaffer Clearance (Europe) (mm)	11—19	11—19
Sieve Clearance (North America) (mm)	3—7	3—7
Sieve Clearance (Europe) (mm)	3—7	3—7
Tailings System Concave Position	Corn	Grain
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	0	0
Chopper Speed	High	High

OUC6075,0004F44-19-12NOV20

## Chickpeas

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Chickpeas
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low
Feed Accelerator Wear Strips (North America)	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	300—450
Threshing Speed (Europe) (rpm) <b>(A)*</b>	300—450
Threshing Clearance (North America) (mm)	12—26
Threshing Clearance (Europe) (mm)	12—26
Concave Type (North America) <b>(C)*</b>	Round Bar or Large Wire
Concave Type (Europe) <b>(C)*</b>	Round Bar or Large Wire
Separator Grate Spacers	In Storage Position
Fan Speed (rpm)	850—1100
Front Chaffer Clearance (mm)	25
Chaffer Clearance (North America) (mm)	16—21
Chaffer Clearance (Europe) (mm)	16—21
Sieve Clearance (North America) (mm)	7—13
Sieve Clearance (Europe) (mm)	7—13
Tailings System Concave Position	Corn
Knife Bank Engagement	Allowed
Knife Bank Engagement Percentage	25
Chopper Speed	High

OUO6075,0004F45-19-12NOV20

## Corn (Dry) and Corn (Wet)

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
 \* Refer to Footnotes Description Page later in this section for more detailed information.

	Corn (Dry)	Corn (Wet)
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low <b>(B)*</b>	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low <b>(B)*</b>	Low
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	340—480	360—520
Threshing Speed (Europe) (rpm) <b>(A)*</b>	340—480	360—520
Threshing Clearance (North America) (mm)	25—40	27—42
Threshing Clearance (Europe) (mm)	25—40	27—42
Concave Type (North America) <b>(C)*</b>	Round Bar	Round Bar
Concave Type (Europe) <b>(C)*</b>	Round Bar	Round Bar
Separator Grate Spacers	Installed	Installed
Fan Speed (rpm)	1250—1430	1300—1430
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	15—26 (Deep-Tooth) 17—28 (General-Purpose)	16—24 (Deep-Tooth) 18—26 (General-Purpose)
Chaffer Clearance (Europe) (mm)	15—26 (Deep-Tooth) 17—28 (General-Purpose)	16—24 (Deep-Tooth) 18—26 (General-Purpose)
Sieve Clearance (North America) (mm)	11—16 (Deep-Tooth) 12—18 (General-Purpose)	12—17 (Deep-Tooth) 13—17 (General-Purpose)
Sieve Clearance (Europe) (mm)	11—16 (Deep-Tooth) 12—18 (General-Purpose)	12—17 (Deep-Tooth) 13—17 (General-Purpose)
Tailings System Concave Position	Corn	Corn
Knife Bank Engagement	Disengaged Only	Disengaged Only
Knife Bank Engagement Percentage	0	0
Chopper Speed	Low	Low

OUC06075,0004F46-19-12NOV20

## Corn Cob Mix and Edible Beans

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Corn Cob Mix (D)*	Edible Beans
Feeder House Drive Sprocket (North America) (A)*	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) (A)*	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) (A)* (F)*	Low	Low (B)*
Feed Accelerator Speed (Europe) (A)* (F)*	Low	Low (B)*
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) (A)*	500—700	370—520
Threshing Speed (Europe) (rpm) (A)*	500—700	370—520
Threshing Clearance (North America) (mm)	10—30	15—30
Threshing Clearance (Europe) (mm)	10—30	15—30
Concave Type (North America) (C)*	Large Wire (G)*	Round Bar or Large Wire
Concave Type (Europe) (C)*	Large Wire (G)*	Round Bar or Large Wire
Separator Grate Spacers	Either	In Storage Position
Fan Speed (rpm)	950—1420	800—1100
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	20—28 (Deep-Tooth)	14—19
Chaffer Clearance (Europe) (mm)	20—28 (Deep-Tooth)	14—19
Sieve Clearance (North America) (mm)	Removed	10—14
Sieve Clearance (Europe) (mm)	Removed	10—14
Tailings System Concave Position	Corn	Corn
Knife Bank Engagement	Disengaged Only	Allowed
Knife Bank Engagement Percentage	0	25
Chopper Speed	Low	High

OUC6075,0004F47-19-12NOV20

## Flax and Grass Seed

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
 \* Refer to Footnotes Description Page later in this section for more detailed information.

	Flax	Grass Seed
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	22-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High	High
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High	High
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	800—1200	450—750
Threshing Speed (Europe) (rpm) <b>(A)*</b>	800—1200	450—750
Threshing Clearance (North America) (mm)	0—10	12—25
Threshing Clearance (Europe) (mm)	0—10	12—25
Concave Type (North America) <b>(C)*</b>	Small Wire	Small Wire
Concave Type (Europe) <b>(C)*</b>	Small Wire	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	700—1050	350—600 <b>(E)*</b>
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	12—18	9—18
Chaffer Clearance (Europe) (mm)	12—18	9—18
Sieve Clearance (North America) (mm)	6—10	5—12
Sieve Clearance (Europe) (mm)	6—10	5—12
Tailings System Concave Position	Grain	Grain
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	25	25
Chopper Speed	High	High

OUC6075,0004F48-19-12NOV20

## Guar (Cluster Beans) and Lentils

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Guar (Cluster Beans)	Lentils
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low	Low
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	500—700	420—700
Threshing Speed (Europe) (rpm) <b>(A)*</b>	500—700	420—700
Threshing Clearance (North America) (mm)	10—15	7—20
Threshing Clearance (Europe) (mm)	10—15	7—20
Concave Type (North America) <b>(C)*</b>	Round Bar	Round Bar or Large Wire
Concave Type (Europe) <b>(C)*</b>	Round Bar	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	600—750	800—1000
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	10—12	12—18
Chaffer Clearance (Europe) (mm)	10—12	12—18
Sieve Clearance (North America) (mm)	4—6	3—10
Sieve Clearance (Europe) (mm)	4—6	3—10
Tailings System Concave Position	Corn	Corn
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	25	25
Chopper Speed	High	High

OUO6075,0004F49-19-12NOV20



## Lupins and Millet

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
 \* Refer to Footnotes Description Page later in this section for more detailed information.

	Lupins	Millet
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low	High
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low	High
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	420—700	420—650
Threshing Speed (Europe) (rpm) <b>(A)*</b>	420—700	420—650
Threshing Clearance (North America) (mm)	7—20	10—15
Threshing Clearance (Europe) (mm)	7—20	10—15
Concave Type (North America) <b>(C)*</b>	Round Bar or Large Wire	Small Wire
Concave Type (Europe) <b>(C)*</b>	Round Bar or Large Wire	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	800—1000	600—750
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	12—18	10—12
Chaffer Clearance (Europe) (mm)	12—18	10—12
Sieve Clearance (North America) (mm)	3—10	4—7
Sieve Clearance (Europe) (mm)	3—10	4—7
Tailings System Concave Position	Corn	Grain
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	25	25
Chopper Speed	High	High

OUO6075,0004F4A-19-12NOV20

## Mustard and Navy Beans

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Mustard	Navy Beans
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High	Low <b>(B)*</b>
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High	Low <b>(B)*</b>
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	720—1100	370—520
Threshing Speed (Europe) (rpm) <b>(A)*</b>	720—1100	370—520
Threshing Clearance (North America) (mm)	10—20	15—30
Threshing Clearance (Europe) (mm)	10—20	15—30
Concave Type (North America) <b>(C)*</b>	Small Wire	Round Bar
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire	Round Bar
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	620—800	800—1100
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	10—15	13—18
Chaffer Clearance (Europe) (mm)	10—15	13—18
Sieve Clearance (North America) (mm)	2—6	7—11
Sieve Clearance (Europe) (mm)	2—6	7—11
Tailings System Concave Position	Grain	Corn
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	25	25
Chopper Speed	High	High

## Oats and Peas

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
 \* Refer to Footnotes Description Page later in this section for more detailed information.

	Oats	Peas
Feeder House Drive Sprocket (North America) <b>(A)*</b>	22-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	22-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High	Low
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	720—1150	400—600
Threshing Speed (Europe) (rpm) <b>(A)*</b>	720—1150	400—600
Threshing Clearance (North America) (mm)	15—25	15—30
Threshing Clearance (Europe) (mm)	15—25	15—30
Concave Type (North America) <b>(C)*</b>	Small Wire	Round Bar or Large Wire
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire	Round Bar or Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	630—850	850—1050
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	16—21	16—22
Chaffer Clearance (Europe) (mm)	16—21	16—22
Sieve Clearance (North America) (mm)	7—13	8—12
Sieve Clearance (Europe) (mm)	8—14	8—12
Tailings System Concave Position	Grain	Corn
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	50	25
Chopper Speed	High	High

OUO6075,0004F4C-19-12NOV20

## Popcorn and Rape Seed (Dry)

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Popcorn	Rape Seed (Dry)
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low	Low
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	300—400	400—700
Threshing Speed (Europe) (rpm) <b>(A)*</b>	300—400	400—700
Threshing Clearance (North America) (mm)	15—30	20—40
Threshing Clearance (Europe) (mm)	15—30	20—40
Concave Type (North America) <b>(C)*</b>	Round Bar	Small Wire
Concave Type (Europe) <b>(C)*</b>	Round Bar	Small/Small/Large Wire
Separator Grate Spacers	Installed	In Storage Position
Fan Speed (rpm)	900—1100	570—800
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	14—18	13—22
Chaffer Clearance (Europe) (mm)	14—18	13—22
Sieve Clearance (North America) (mm)	7—13	3—8
Sieve Clearance (Europe) (mm)	7—13	3—8
Tailings System Concave Position	Corn	Corn
Knife Bank Engagement	Disengaged Only	Allowed
Knife Bank Engagement Percentage	0	0
Chopper Speed	Low	High

OUC6075,0004F4D-19-12NOV20

## Rape Seed (Green)

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Rape Seed (Green)
Feeder House Drive Sprocket (North America) <b>(A)*</b>	22-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High
Feed Accelerator Wear Strips (North America)	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	450—700
Threshing Speed (Europe) (rpm) <b>(A)*</b>	450—700
Threshing Clearance (North America) (mm)	20—40
Threshing Clearance (Europe) (mm)	20—40
Concave Type (North America) <b>(C)*</b>	Small Wire
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position
Fan Speed (rpm)	570—770
Front Chaffer Clearance (mm)	25
Chaffer Clearance (North America) (mm)	13—22
Chaffer Clearance (Europe) (mm)	13—22
Sieve Clearance (North America) (mm)	3—9
Sieve Clearance (Europe) (mm)	3—9
Tailings System Concave Position	Grain
Knife Bank Engagement	Allowed
Knife Bank Engagement Percentage	0
Chopper Speed	High

OUO6075,0004F4E-19-12NOV20

## Rye and Safflower

NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.

\* Refer to Footnotes Description Page later in this section for more detailed information.

	Rye	Safflower
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High	Low
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	850—1200	450—700
Threshing Speed (Europe) (rpm) <b>(A)*</b>	850—1200	450—700
Threshing Clearance (North America) (mm)	13—26	15—25
Threshing Clearance (Europe) (mm)	13—26	15—25
Concave Type (North America) <b>(C)*</b>	Small Wire	Small Wire
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	750—1100	700—950
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	15—18	13—17
Chaffer Clearance (Europe) (mm)	15—18	13—17
Sieve Clearance (North America) (mm)	6—10	4—7
Sieve Clearance (Europe) (mm)	6—10	4—7
Tailings System Concave Position	Grain	Corn
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	50	25
Chopper Speed	High	High

## Sorghum and Soybeans

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
\* Refer to Footnotes Description Page later in this section for more detailed information.*

	Sorghum	Soybeans
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	18-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low	Low
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low	Low
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	550—850	500—800
Threshing Speed (Europe) (rpm) <b>(A)*</b>	550—850	500—800
Threshing Clearance (North America) (mm)	10—25	12—30
Threshing Clearance (Europe) (mm)	10—25	12—30
Concave Type (North America) <b>(C)*</b>	Round Bar or Large Wire	Round Bar or Large Wire
Concave Type (Europe) <b>(C)*</b>	Round Bar or Large Wire	Round Bar or Large Wire
Separator Grate Spacers	In Storage Position	Either
Fan Speed (rpm)	900—1100	900—1150
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	13—18	13—21 (General-Purpose) 12—20 (Deep-Tooth)
Chaffer Clearance (Europe) (mm)	13—18	13—21 (General-Purpose) 12—20 (Deep-Tooth)
Sieve Clearance (North America) (mm)	5—9	6—13 (General-Purpose) 5—12 (Deep-Tooth)
Sieve Clearance (Europe) (mm)	5—9	6—13 (General-Purpose) 5—12 (Deep-Tooth)
Tailings System Concave Position	Corn	Corn
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	25	50
Chopper Speed	High	High

OUC6075,0004F50-19-12NOV20

## Sunflower and Triticale

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.*

*\* Refer to Footnotes Description Page later in this section for more detailed information.*

	Sunflower	Triticale
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	18-Tooth	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	Low	High
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	Low	High
Feed Accelerator Wear Strips (North America)	Serrated	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	300—400	850—1200
Threshing Speed (Europe) (rpm) <b>(A)*</b>	300—400	850—1200
Threshing Clearance (North America) (mm)	25—40	10—25
Threshing Clearance (Europe) (mm)	25—40	10—25
Concave Type (North America) <b>(C)*</b>	Round Bar or Large Wire	Small Wire
Concave Type (Europe) <b>(C)*</b>	Round Bar or Large Wire	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position	In Storage Position
Fan Speed (rpm)	650—850	750—1000
Front Chaffer Clearance (mm)	25	25
Chaffer Clearance (North America) (mm)	10—15	15—20
Chaffer Clearance (Europe) (mm)	10—15	15—20
Sieve Clearance (North America) (mm)	5—10	6—11
Sieve Clearance (Europe) (mm)	5—10	6—11
Tailings System Concave Position	Corn	Grain
Knife Bank Engagement	Allowed	Allowed
Knife Bank Engagement Percentage	0	50
Chopper Speed	High	High



## Wheat

*NOTE: Various crop settings shown are for average conditions. Varying crop and field conditions may require slightly different settings.  
\* Refer to Footnotes Description Page later in this section for more detailed information.*

	Wheat
Feeder House Drive Sprocket (North America) <b>(A)*</b>	18-Tooth
Feeder House Drive Sprocket (Europe) <b>(A)*</b>	22-Tooth
Feed Accelerator Speed (North America) <b>(A)* (F)*</b>	High
Feed Accelerator Speed (Europe) <b>(A)* (F)*</b>	High
Feed Accelerator Wear Strips (North America)	Serrated
Feed Accelerator Wear Strips (Europe)	Serrated
Threshing Speed (North America) (rpm) <b>(A)*</b>	900—1300
Threshing Speed (Europe) (rpm) <b>(A)*</b>	850—1250
Threshing Clearance (North America) (mm)	4—20
Threshing Clearance (Europe) (mm)	7—28
Concave Type (North America) <b>(C)*</b>	Small Wire
Concave Type (Europe) <b>(C)*</b>	Small/Small/Large Wire
Separator Grate Spacers	In Storage Position
Fan Speed (rpm)	820—1100
Front Chaffer Clearance (mm)	25
Chaffer Clearance (North America) (mm)	12—20
Chaffer Clearance (Europe) (mm)	14—23
Sieve Clearance (North America) (mm)	5—11
Sieve Clearance (Europe) (mm)	7—14
Tailings System Concave Position	Grain
Knife Bank Engagement	Allowed
Knife Bank Engagement Percentage	50
Chopper Speed	High

OUO6075,0004F52-19-12NOV20

## Footnotes Description Page

**(A)\*** For improved straw quality in dry crops and grain quality, use lower speed.

**(B)\*** For improved grain quality, use slow down kit to reach 320 rpm.

**(C)\*** For improvement in threshing, grain tank sample, and chaff load distribution in small grain, first install concave covers in the front concave. Extra covers can be added to other concaves as needed.

**(D)\*** Tailings sump cover recommended.

**(E)\*** Cleaning fan slow down kit may be required.

**(F)\*** For increased material handling, use high speed.

**(G)\*** Wires may be removed for increased cob capture.

OUO6075,0004C0A-19-12NOV20

## Concave Recommendations

Concave Type	Corn	Soybeans	Wheat Barely Small Grains	Popcorn Food Corn	Sorghum (Milo) Sunflowers (Confection)	Sunflowers (Oil)	Canola
Small Wire	NR	NR	Best	NR	NR	Average	Best
Large Wire	Good	Good	Good	NR	Best	Best	Good
Round Bar	Best	Best	Average	Best	Average	Best	Average

Best = Provides best level of performance.  
 Good = Provides a good level of performance.  
 Average = Provides an average level of performance.  
 NR = Not recommended.

OUO6075,0004C0B-19-11FEB20

## Power Shutdown Procedure

*NOTE: A power shutdown is used to determine the machine's performance in the threshing and separating areas by taking a "snapshot" of the material in the separator. This is valuable in determining where the losses behind the machine are generated and what adjustments can be made to correct the condition.*

*Verify that crop condition and material intake is similar for each shutdown.*

1. Locate engine speed indicator on corner post display and threshing speed readout on armrest display.
2. Lock brake pedals together.
3. Operate machine at optimized throughput levels in the desired crop.
4. Move steering wheel forward for free motion (both hands needed).
5. Press low idle engine speed switch on armrest.

*NOTE: The machine is designed to have a slower draw down of the engine rpm and more of a run-on for separator components.*

6. Lightly depress brake pedals (machine attempts to repower and downshifts changing the machine dynamics if brakes are fully depressed).



H128739—UN—31JAN20

Header Engage Switch/Separator Engage Switch

7. As engine speed drops and nears low idle speed (1200 rpm), **quickly disengage header engage switch and separator engage switch on armrest.**
8. Quickly move the multi-function lever to neutral position.
9. Allow engine to cool for a minute.



Key Switch

H127222—UN—26SEP19

10. Turn key switch to shut OFF engine, set park brake, and remove key.
11. Inspect for excessive grain damage, kernels left on the cobs, uneven distribution of material on the return pan and cleaning shoe, and free grain loss before making any adjustments.
12. Decide what adjustments are needed. Open threshing clearance and engage separator (avoids undue stress to cylinder drive area during cleanout).
13. Adjust machine to desired settings and continue harvesting.
14. Repeat this procedure and verify grain quality and losses behind machine.
15. Once acceptable loss levels are attained, calibrate VisionTrak™ Monitor and continue to harvest.

OUO6075,0004C0C-19-18NOV20

VisionTrak is a trademark of Deere &amp; Company

## Payable Moisture and Density Chart

Crop	Standard Moisture (%)	Crop Density (lbs/bushel)	Crop Density (kg/bushel)
Alfalfa	12.0	60	27
Barley	14.0	48	22
Barley (Winter) <sup>a</sup>	14.5	48	22
Barley (Spring) <sup>a</sup>	14.5	48	22
Canola	10.0	52	24
Chickpeas <sup>a</sup>	12.0	61	27
Corn (Dry or Wet)	15.0	56	25
Edible Beans	14.5	60	27
Flax	7.0	56	25
Grass Seeds	12.0	22	10
Lentils	10.5	60	27
Lupins <sup>a</sup>	12.0	53	24
Millet	11.0	50	23
Mustard	8.0	60	27
Navy Beans	14.5	62	28
Oats	14.0	32	15
Oats <sup>a</sup>	15.0	32	15
Peas	10.5	60	27
Peas <sup>a</sup>	12.0	60	27
Popcorn	14.0	60	27
Popcorn <sup>a</sup>	15.5	60	27
Rape Seed (Dry or Wet) <sup>a</sup>	10.0	52	24
Rice	14.0	45	20
Rye	14.0	56	25
Safflower	6.0	45	20
Sorghum	13.0	56	25
Soybeans	13.0	60	27
Sunflower	14.0	29	11
Sunflower <sup>a</sup>	9.0	20	11
Triticale <sup>a</sup>	14.5	58	26
Wheat (Spring)	13.0	60	27
Wheat (Winter)	13.0	60	27

<sup>a</sup>European crop listing only.

OOU6075,0000E89-19-22MAR12

## Standard Weights Chart

Unit	Weight (lb)	Weight (kg)
Barrels	162.0	73.5
Sacks	100.0	45.4
Hundred Weight	100.0	45.4
Pounds (lb)	1.0	0.454
Kilograms (kg)	2.204	1.0
Metric Tons	2204.0	1000.0
Tons	2000.0	907.0

OOU6075,0000435-19-15APR10

# Fire Prevention

## Recommended Fire Preventions

The machine must be inspected periodically throughout the harvest day. Buildup of crop material and other debris must be removed to ensure proper machine function and to reduce the risk of fire.

Regular and thorough cleaning of machine combined with other routine maintenance procedures listed in the Operator's Manual greatly reduces the risk of fire, chance of costly downtime, and improve machine performance.

Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always shut OFF engine, set park brake, and remove key.

Your machine is equipped with a general-purpose powder fire extinguisher and a pressurized liquid fire extinguisher. Extinguishers must be checked daily when entering or exiting the cab and when working around machine to ensure that they are in working condition. Fire extinguishers must be replaced or professionally serviced after any usage.

For further information, refer to Machine Cleanout section.

OUO6075,00042AA-19-15JUN16

## Fire Extinguisher Operation

Your machine is equipped with a general-purpose powder fire extinguisher and a pressurized liquid fire extinguisher. Extinguishers must be checked daily when entering or exiting the cab and when working around the machine to ensure that they are in working condition. Fire extinguishers must be replaced or professionally serviced after any usage.

### Fire Extinguisher Recommendations

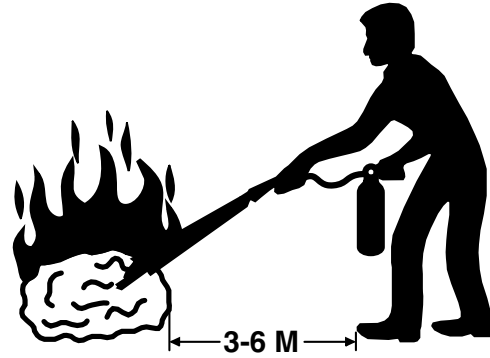
**IMPORTANT: Read label on extinguishers and become familiar with instructions and restrictions to use them.**

General-Purpose Powder Fire Extinguisher:

- Use the extinguisher for grease, oil, electrical, and chemical fires.

Pressurized Liquid Fire Extinguisher:

- Use the extinguisher on crop material buildup or crop debris fires.



H132365—UN—12NOV20

## Use of a Fire Extinguisher

The diagram shows the recommended method to extinguish a fire. Always aim the nozzle towards the base of fire.

The following are basic steps for the use of a fire extinguisher:

1. Remove fire extinguisher from the bracket and carry to area of fire.
2. Approach area of fire with wind to your back.
3. Pull safety pin from top of extinguisher.
4. Hold extinguisher upright by handles and aim hose at the **base** of flames.
5. Squeeze handles to discharge fire extinguisher.
6. Move nozzle back and forth, covering flames with a cloud of powder.

## Inspection Checklist

At least once per month, inspect fire extinguishers and ensure the following:

1. Are fire extinguishers positioned in designated location on the cab ladder landing and at the rear of machine?
2. Are there any obstructions to proper access or visibility?
3. Are operating instructions on nameplate legible and facing outward?
4. Are safety seals broken or missing?
5. Is extinguisher full? (Determines by weighing or "hefting")
6. Is there any physical damage, corrosion, leakage, or a clogged nozzle?
7. Are fire extinguisher bracket straps in good condition?
8. Are fire extinguisher bracket straps tight on the fire extinguisher?

When inspection of the fire extinguisher reveals a deficiency, extinguisher must be serviced or replaced.

OUO6075,0004F79-19-12NOV20

## Charge Liquid Fire Extinguisher (If Required)



H117901—UN—28MAR16

**NOTE:** Liquid fire extinguisher may be shipped uncharged. Prior to delivery of machine, the liquid fire extinguisher must be charged.

When an antifreeze charge is used to protect the extinguisher from freezing, the extinguisher requires a complete discharge and maintenance.

Fire extinguisher shown may vary depending on country requirements and fire extinguisher manufacturers.

**CAUTION:** Before attempting to recharge, ensure that extinguisher is completely depressurized.

1. Refer to information provided with the fire extinguisher to properly fill and charge.
2. Install fire extinguisher on the machine.

OJ06075,0004C96-19-12NOV20

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

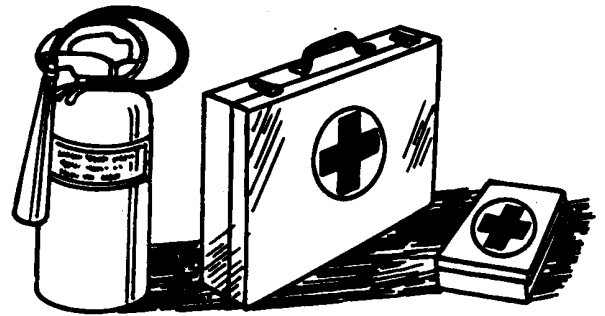
Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.

Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1-19-12OCT11

## Prepare for Emergencies



TS291—UN—15APR13

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

DX,FIRE2-19-03MAR93

## Handle Fuel Safely—Avoid Fires



TS202—UN—23AUG88

## Handle Starting Fluid Safely



TS1356—UN—18MAR92

Starting fluid is highly flammable.

Keep all sparks and flame away when using it. Keep starting fluid away from batteries and cables.

To prevent accidental discharge when storing the pressurized can, keep the cap on the container, and store in a cool, protected location.

Do not incinerate or puncture a starting fluid container.

Do not use starting fluid on an engine equipped with glow plugs or an air intake heater.

DX,FIRE3-19-14MAR14

## Remove Accumulated Crop Debris



TS227—UN—15APR13

The build up of chaff and crop debris in the engine compartment, on the engine, and near moving parts is a fire hazard. Check and clean these areas frequently. Before performing any inspection or service, shut off the engine, set the parking brake and remove the key.

HX,9010SA,B-19-23AUG97

## Fire Extinguishers



H92841—UN—16SEP08

General-Purpose Powder/Liquid Fire Extinguisher

**CAUTION:** Fire extinguishers must meet local government laws and regulations. The following extinguishers are required on the machine:

- A general-purpose powder fire extinguisher that is at least 4 kg (8.8 lb)
- A pressurized liquid fire extinguisher with minimum volume of 8 L (2.1 gal)

*NOTE: Fire extinguishers shown may vary depending on country requirements and fire extinguisher manufacturers.*

A general-purpose powder fire extinguisher and a pressurized liquid fire extinguisher with mounting brackets are installed on your machine.

Read label on extinguishers and become familiar with instructions on how to use and maintain them. Once extinguisher is discharged, no matter for how long, it must be recharged or replaced.

**IMPORTANT:** Pressurized liquid fire extinguisher must not be exposed to freezing temperatures unless protected with antifreeze. See instruction decal on extinguisher for further information.

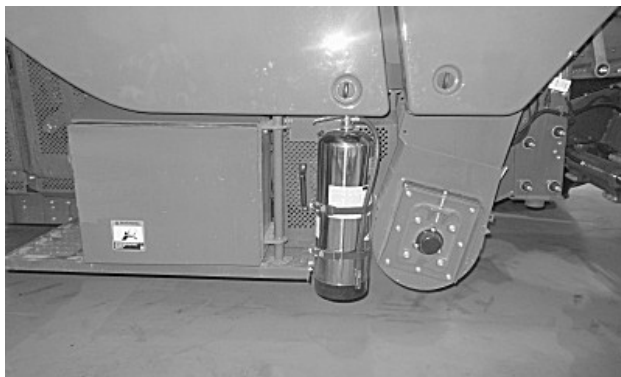
OUC6075,0004C94-19-12NOV20

## Fire Extinguisher Locations



H127415—UN—13SEP19

Fire Extinguisher Location (front)



H126583—UN—03JUL19

Fire Extinguisher Location (left-hand side)

**NOTE:** Fire extinguishers shown may vary depending on country requirements and fire extinguisher manufacturers.

A general-purpose powder fire extinguisher is behind the left-hand front service door.

A pressurized liquid fire extinguisher is on the left-hand side of the machine.

OOU6075,0004C95-19-04FEB20

## In Case of Fire



TS227—UN—15APR13

## ⚠ CAUTION: Avoid personal injury.

Stop machine immediately at the first sign of fire. Fire may be identified by the smell of smoke or sight of flames. Because fire grows and spreads rapidly, get off the machine immediately and move safely away from the fire. Do not return to the machine! The number one priority is safety.

Call the fire department. A portable fire extinguisher can put out a small fire or contain it until the fire department arrives; but portable extinguishers have limitations. Always put the safety of the operator and bystanders first. If attempting to extinguish a fire, keep your back to the wind with an unobstructed escape path so you can move away quickly if the fire cannot be extinguished.

Read the fire extinguisher instructions and become familiar with their location, parts, and operation before a fire starts. Local fire departments or fire equipment distributors may offer fire extinguisher training and recommendations.

If your extinguisher does not have instructions, follow these general guidelines:

1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you, and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

DX,FIRE4-19-22AUG13

## Cleaning Engine Compartment



H132263—UN—05NOV20



**CAUTION:** Do not clean engine or engine compartment with engine running. Dirt, oil, chaff, and crop debris in engine compartment and on engine is a fire hazard. Direction of wind, type of crop, and crop moisture content can all have an effect on where and how much chaff and debris accumulate. Check and clean this area frequently.

MH69740,0000919-19-12NOV20

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# Machine Cleanout

## General Cleaning Guidelines

Machine must be inspected periodically throughout the harvest day. Buildup of crop material and other debris must be removed to ensure proper machine function and to reduce the risk of fire. Frequency of inspections and cleanings vary depending on a number of factors, including operating conditions, machine settings, crop conditions, operating speeds, and weather conditions. Inspections and cleanings may be required multiple times throughout the harvest day, particularly in dry, hot, and windy conditions. Wet crop conditions can also pose a fire risk under some circumstances.

**IMPORTANT: Regular and thorough cleaning of machine combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire, chance of costly downtime, and improve machine performance.**

**Crop material and other debris can accumulate in various areas. Direction of wind, type of crop, and crop moisture content can all impact where and how much crop material and debris can accumulate. Be aware of harvest conditions and adjust your cleaning schedule to ensure proper machine function and to reduce the risk of fire. Inspect and clean these areas as needed throughout the harvest day.**

Harvesting certain crops can cause special issues. Some crops are very "sticky" and it is often more difficult to clean the machine when harvesting these crops. Examples of these crops include, but are not limited to sunflower, canola, and safflower. Take special care in cleaning the machine when harvesting these types of crops.

Always follow all safety procedures posted on the machine and in the Operator's Manual. Before carrying out any inspection or cleaning, always shut OFF engine, set park brake, and remove key.

OUO6075,0004EF7-19-08SEP20

## Quick Response (QR) Code



English QR Code

H132245—UN—04NOV20

At the top of the Cleaning Guide is a Quick Response (QR) code that links to a short instructional Cleaning Guide video. Access content from the QR code by downloading a QR scanner application to your smart

phone. Open the App and aim your phone's camera at the code to connect to the media.

OUO6075,0004EF8-19-03NOV20

## Cleaning Out Machine (Periodic Cleanout)

The photographs in this section show areas of the machine that require regular inspection and cleaning. While there are other areas that require regular cleaning, frequent attention to these areas provides the greatest impact on fire prevention.

Some of these photographs show accumulations of crop material and other debris prior to cleaning. This type of accumulation is not normal; it was allowed for illustrative purposes only.

**IMPORTANT: These areas may require more frequent cleaning, even multiple times per day, depending on harvest conditions. Be aware of harvest conditions and adjust your cleaning schedule to ensure proper machine function and to reduce the risk of fire.**

**Other areas not covered in this section may also collect crop debris and MUST be cleaned periodically for machine function and appearance. Thoroughly inspect the entire machine on a regular basis throughout the harvest season.**

Before carrying out any inspection or cleaning, always shut OFF engine, set park brake, and remove key.

Thoroughly clean machine from top to bottom with compressed air. First, clean all areas accessible from the engine deck. Panels or covers may need to be removed or opened to access areas for cleaning. Start with engine compartment and work outwards and counterclockwise to other areas around engine compartment, floor underneath engine, top rear of rotor, and rear deck, including areas around exhaust aftertreatment enclosure (if equipped). Once top areas of machine are clean, proceed to cleaning areas accessible from the ground level.

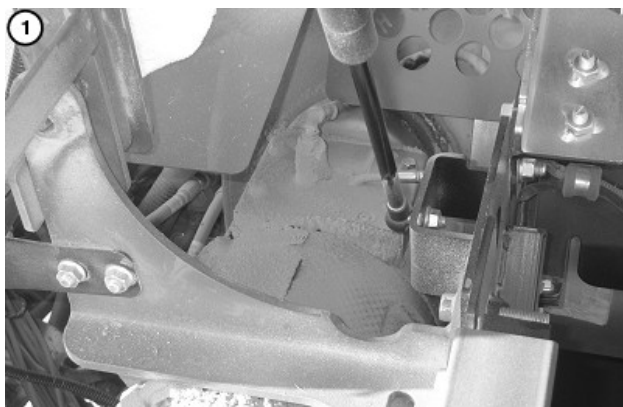
From the ground level, clean rear underside of fuel tank area and top of the rear tailboard of the residue disposal system. Once the cleaning from the ground level is finished, recheck engine compartment for any crop debris that could have blown in from the ground level cleaning.

*NOTE: Some shields were removed for photo clarity.*

## Engine Compartment



H131259—UN—24AUG20



H131261—UN—24AUG20



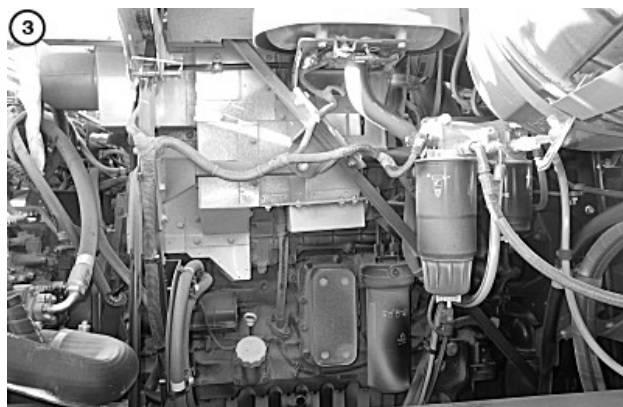
H132152—UN—29OCT20

(1) — Engine, Aftertreatment, and Exhaust Outlet Areas

## Engine Compartment



H131262—UN—24AUG20

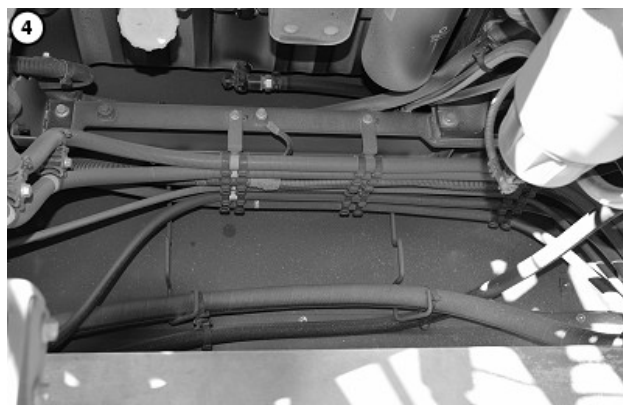


H131263—UN—24AUG20

(2) — Side of Engine

(3) — Around Engine

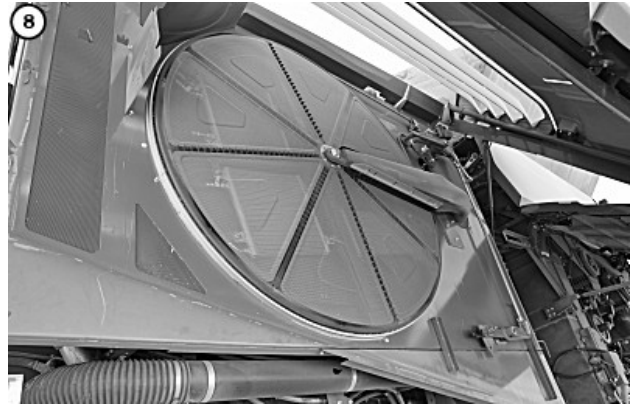
## Engine Compartment



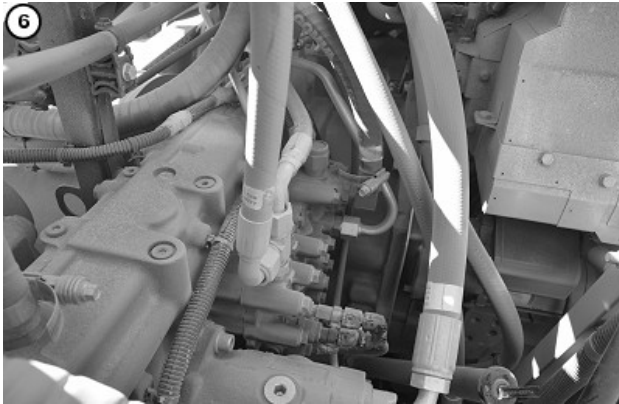
H131264—UN—24AUG20



H131265—UN—24AUG20



H131268—UN—24AUG20



H131266—UN—24AUG20

- (4) — Underneath Engine
- (5) — Top Rear of Rotors and Areas around Rotor Drives
- (6) — Top of Main Engine Gear Case

#### Engine Compartment



H131267—UN—24AUG20

- (7) — On Top of Fuel Tank
- (8) — Engine Cooling Package

#### Ground Accessible



H131395—UN—08SEP20



H105229—UN—19APR12

- (1) — On Top of Tailboard or Spreader
- (2) — Areas around Bearings and Bearing Guards (various locations)

Ground Accessible



H131396—UN—08SEP20



H131270—UN—08SEP20

Battery Box and Fuse Center



H131398—UN—08SEP20

**IMPORTANT:** Lubrication decals show the different locations of grease points around the machine. Follow lubrication times provided on decals and refer to hour intervals listed in Lubrication and Maintenance section for further information.

Bearing failures or overheating can result in a fire. To reduce bearing failures or overheating, always refer to lubrication decals on machine.

(3) — Rear Axle

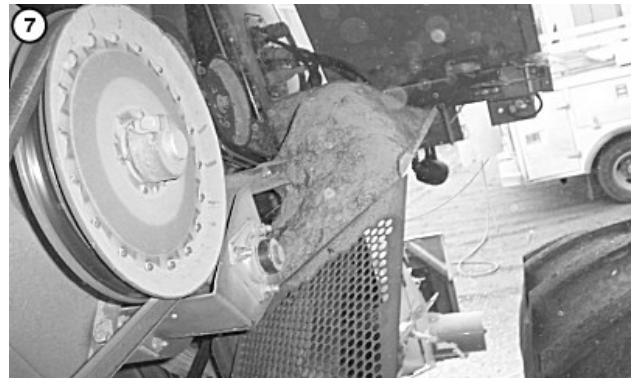
(4) — Battery Box and Fuse Center Areas

(5) — Clean Grain Elevator Drives

Ground Accessible



H131271—UN—08SEP20



H131399—UN—08SEP20

(6) — Right Side Platform Area

(7) — Right Side Debris Shields

Ground Accessible



H131400—UN—08SEP20

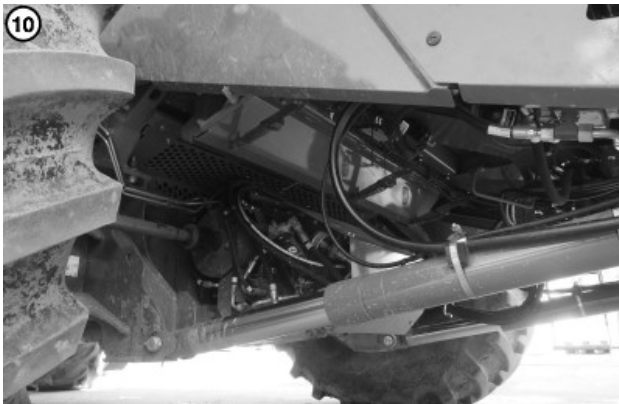


H131272—UN—08SEP20

(8) — Right Side Feeder House Shields

(9) — Left Side Feeder House Shields

**Ground Accessible**



H128914—UN—08SEP20

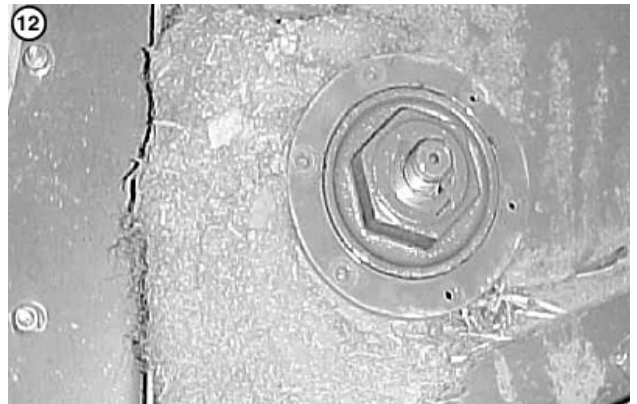


H131273—UN—08SEP20

(10) — Transmission and Stone Trap

(11) — Left Side Platform Area

**Ground Accessible**



H128916—UN—08SEP20



H131274—UN—08SEP20

(12) — Discharge Beater Drives

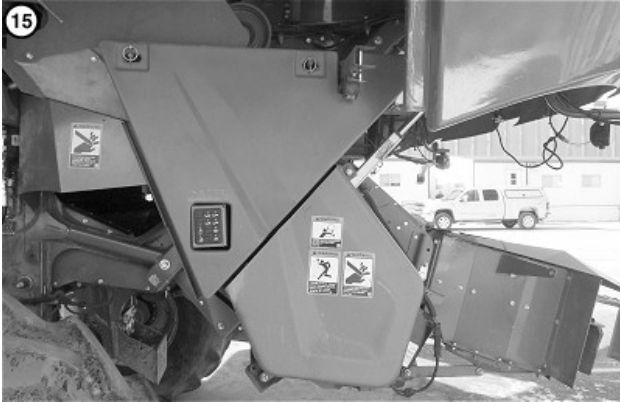
(13) — Area behind Cleaning Fan Shield

**Ground Accessible**



H128922—UN—08SEP20

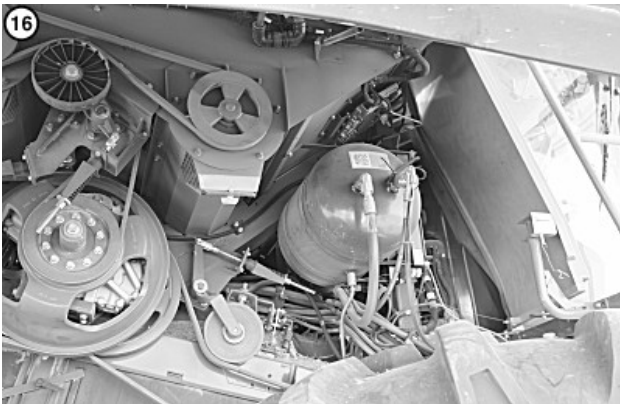




H128923—UN—08SEP20

- (14) — Left Side Sheet Areas  
 (15) — Residue Disposal Drives

**Ground Accessible**



H131275—UN—08SEP20



H131276—UN—08SEP20

- (16) — Area behind Cab  
 (17) — Around and behind Rotor Covers (both sides)

OOU6075,0004D97-19-29OCT20

**Cleaning Out Machine (Annual Cleanout and Specialty Crops)**



Key Switch



Horn

**CAUTION:** To prevent injury, never clean machine with engine running and separator engaged. Shut OFF engine, set park brake, and remove key.

The following instructions are recommended when cleaning out machine for certified seed crops or when transporting machine between states.

**CAUTION:** Block header safely so it does not move. Lower reel safety stops.

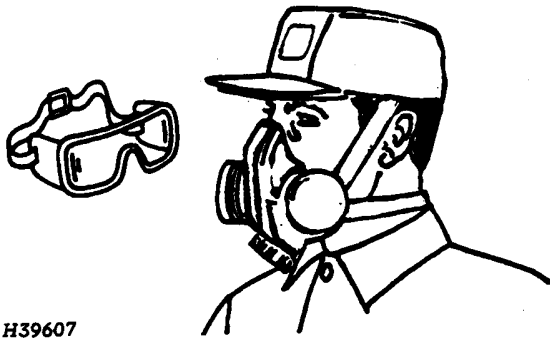
1. Remove header from the machine.
2. Drive machine over end rows or bumps to jar and shake dirt loose.
3. Shut OFF engine, set park brake, and remove key.
4. Open or remove all doors and drain holes.

**CAUTION:** Sound the horn to clear everyone from area. Stay clear of machine when discharging chaff.

5. Turn the key switch to start engine.
6. Engage separator until the chaff stops coming out rear of machine.
7. Lower engine rpm to slow speed and engage separator several times. Running the separator at slow speed removes dirt from inside the rotor.

**CAUTION:** Keep bystanders clear of machine when discharging chaff.

8. Move throttle to high rpm and run for a few minutes. Repeat cycle until chaff no longer comes out of the rear of machine.



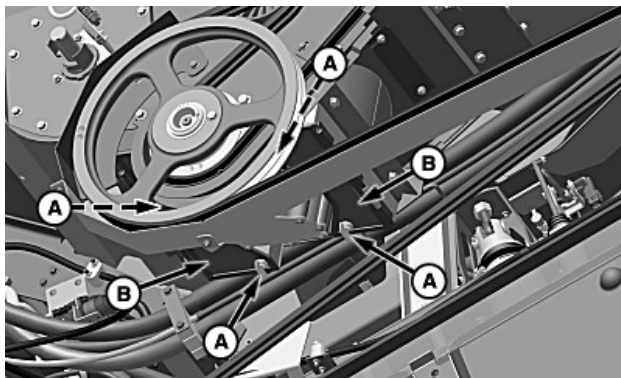
H39607

H39607—UN—11OCT88

**CAUTION:** Shut OFF engine, set park brake, remove key, block wheels, and engage feeder house safety lock.

When working with compressed air in dusty conditions, wear goggles and dust mask for personal protection.

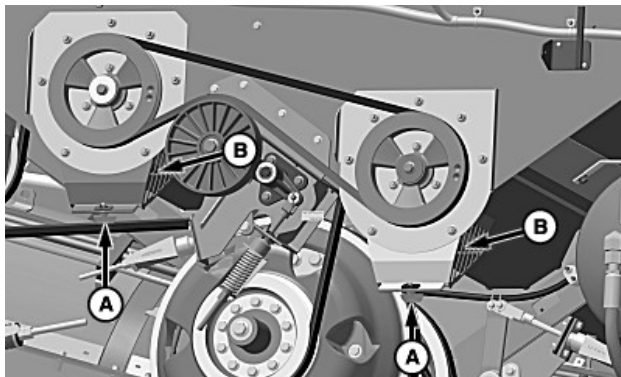
9. Start at the top of the machine and work down.



H128385—UN—23DEC19

A—Latch (4 used)  
B—Cleanout Door (2 used)

10. Turn latches (A) and open cleanout doors (B) on the left-hand side of the machine.



H128386—UN—23DEC19

A—Latch (2 used)  
B—Cleanout Door (2 used)

11. Release latches (A) and open cleanout doors (B) on the right-hand end of both grain tank cross augers.

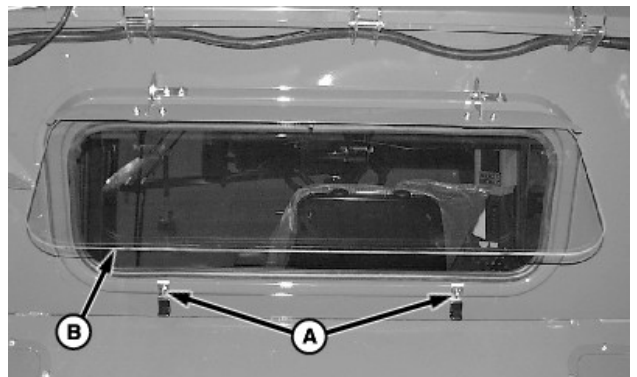
12. Clean grain from under the grain tank cross augers.
13. Clean grain from the edges of the unloading auger sump to the bottom. Grain must be cleaned out from the doors while standing on ground.



H127636—UN—01OCT19

14. Press folding button on navigation bar. See Folding Application Help or Operator's Station Help for further information on folding and unfolding of the grain tank loading auger.

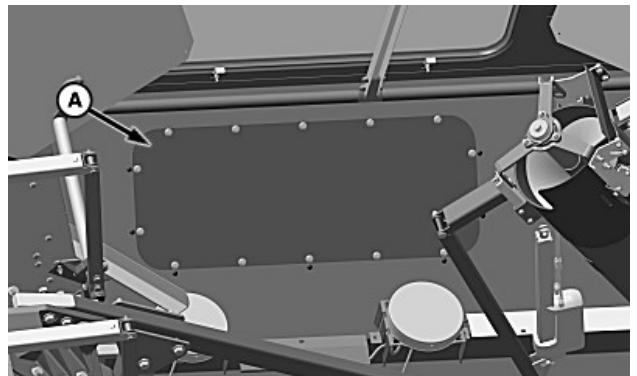
15. Clean top area and down into the clean grain elevator to the clean elevator chain. Clean all sides.



H76204—UN—28APR03

A—Clamp (2 used)  
B—Grain Tank Window

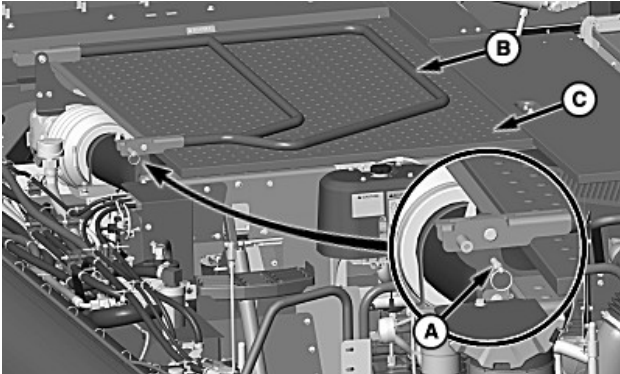
16. Loosen clamps (A) and swing grain tank window (B) up.
17. Clean out the areas behind the cab, around the primary countershaft, and over separator.



H128759—UN—03FEB20

**A—Access Door**

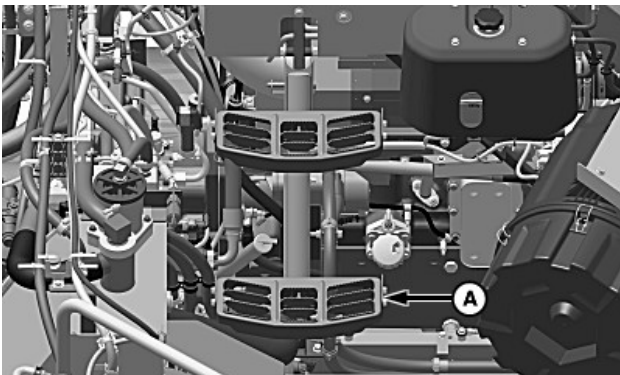
18. Remove access door (A).
19. Clean out material around the multi-speed feeder house drive gear case (if equipped).



H128387—UN—02JAN20

- A—Lockout Pin**  
**B—Handrail**  
**C—Engine Access Cover**

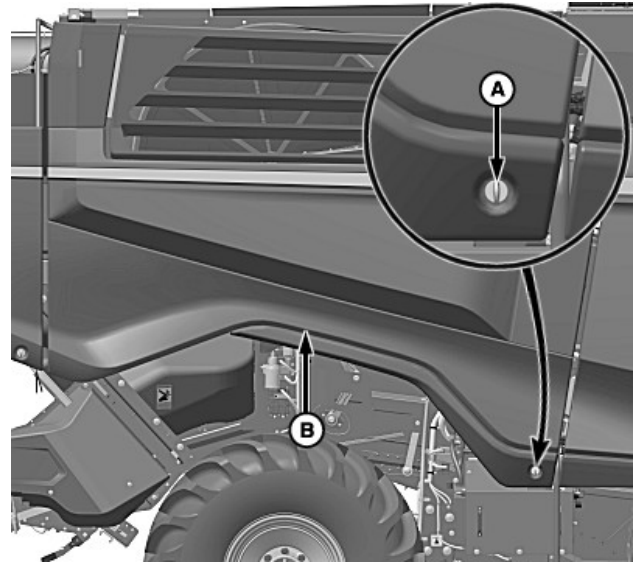
20. Pull lockout pin (A) and rotate handrail (B) up until handrail locks into place.
21. Open engine access cover (C) and clean the top side of the engine compartment area and around the separator (front side of the engine).
22. Clean entire engine compartment area, especially under engine.
23. Wipe up any oil or grease found on engine area.



H127165—UN—14FEB20

**A—Ladder**

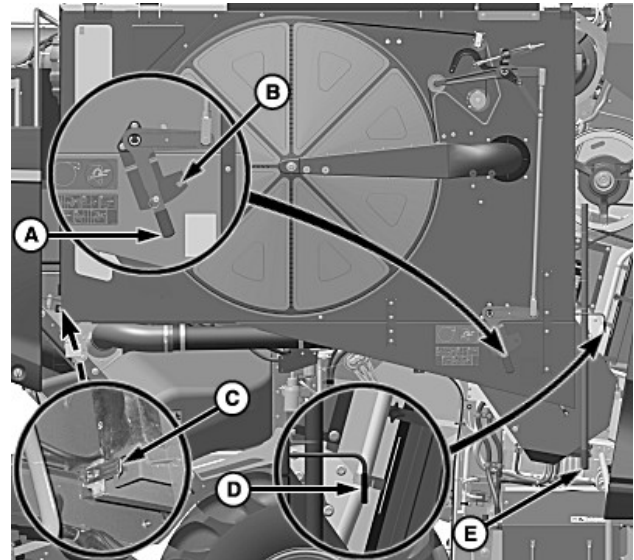
24. Lift ladder (A) up to access the rear side of the engine compartment area.
25. Clean rear side of engine compartment area.
26. Clean entire engine compartment area, especially under engine.
27. Wipe up any oil or grease found on engine area.



H128249—UN—02DEC19

- A—Latch**  
**B—Rear Gull Wing Door**

28. Turn latch (A) and pull out on the rear gull wing door (B) to raise.



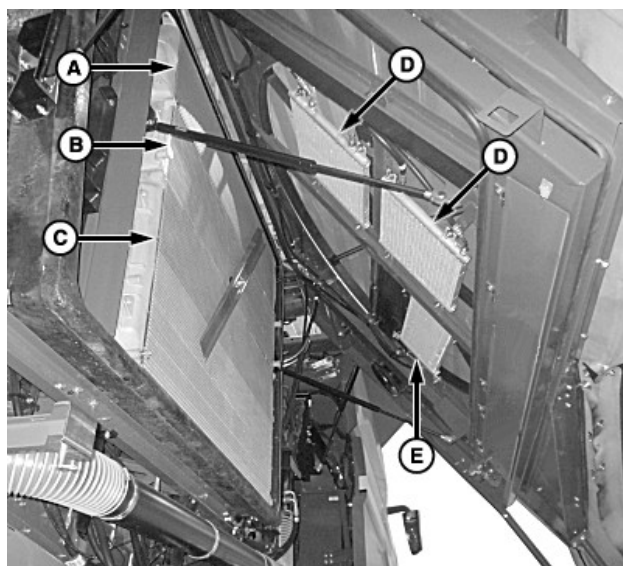
H132264—UN—12NOV20

- A—Handle**  
**B—Notch**  
**C—Latch**  
**D—Handle**  
**E—Handle**

**IMPORTANT: To prevent damage to the rotary screen belt and other components, the rotary screen belt must be detensioned before opening the rotary screen door.**

29. To detension the rotary screen belt, move handle (A) to notch (B).
30. Release latch (C) and pull handle (D) to the right.
31. Use handle (E) to open and raise rotary screen door.





H132323—UN—10NOV20

- A—Charge Air Cooler  
B—Oil Cooler  
C—Radiator  
D—Condenser  
E—Fuel Cooler

**CAUTION:** Possible injury or death to you or others can occur from falling. Use a ladder or equivalent with an appropriate load rating to access location when cleaning. Do not attempt to access the location from the tire.

**NOTE:** Clean areas out with compressed air, blowing from inside out.

It is recommended to use an air hose that has a 2 m (6 ft) wand (end).

32. Check the rotary screen daily to be certain that it turns freely.
33. Clean the rotary screen with a brush and compressed air when dirt and chaff build up on or behind screen.

**IMPORTANT:** To prevent damage to fins, reduce high-pressure washer or pressurized air when cleaning coolers. To avoid bending the fins, direct the water or air straight through the fins. Use a fin comb to straighten bent fins. Bent fins decrease cooler performance.

34. Clean the following areas from inside out:

- Charge air cooler (A)
- Oil cooler (B)
- Radiator (C)

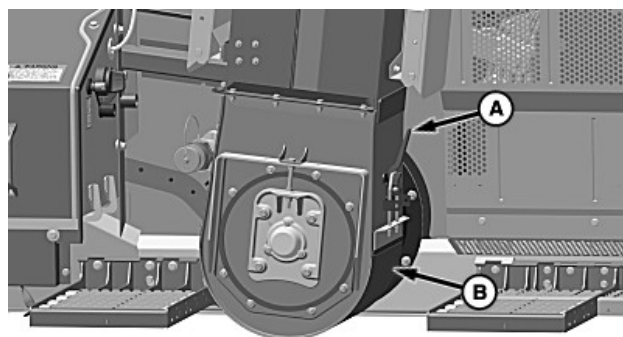
35. Clean the following areas on the rotary screen door from inside out:

- Condensers (D)
- Fuel cooler (E)

36. Check the area at the bottom of the rotary screen door for chaff buildup and clean if necessary.

37. Close and latch the rotary screen door with the handles.

38. To tension the rotary screen belt, move handle from the bottom notch to the top notch.

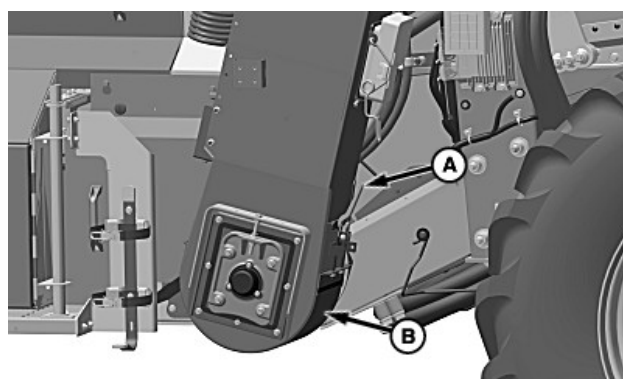


H128388—UN—03JAN20

- A—Handle  
B—Clean Grain Elevator Door

39. Use handle (A) to open the clean grain elevator door (B).

40. Remove material as needed and clean the sides of the elevator.

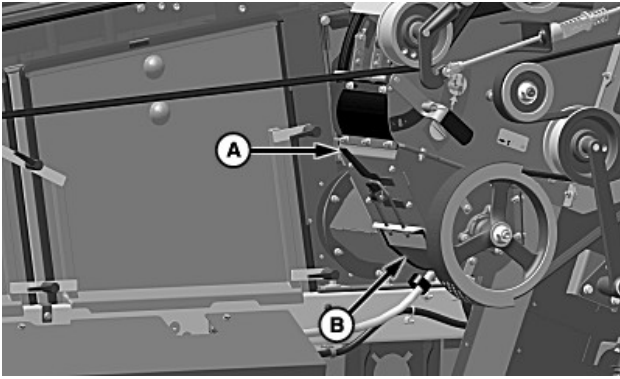


H128389—UN—03JAN20

- A—Handle  
B—Tailings System Elevator Door

41. Use handle (A) to open the tailings system elevator door (B).

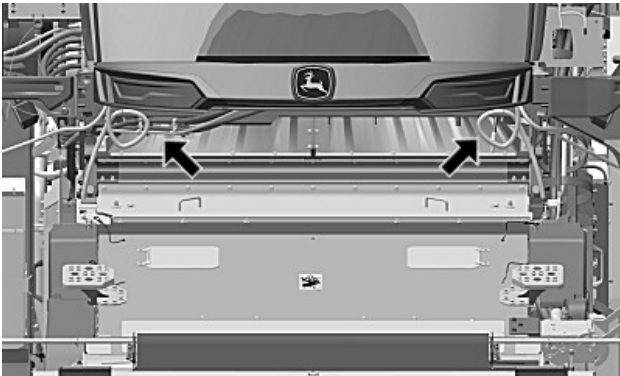
42. Remove material as needed and clean the sides of the elevator.



H128390—UN—17FEB20

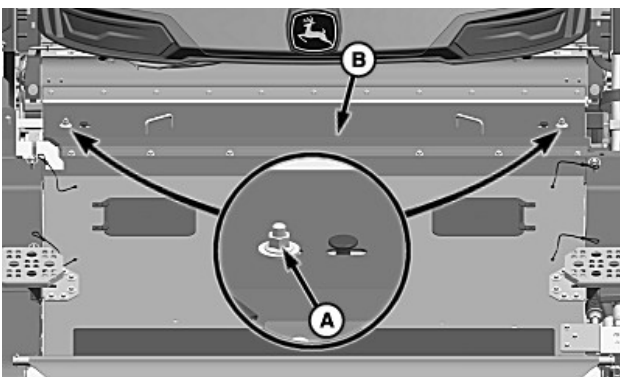
**A—Handle**  
**B—Tailings System Auger Door**

43. Use handle (A) to open the tailings system auger door (B).
44. Remove material as needed and clean the sides of the elevator.

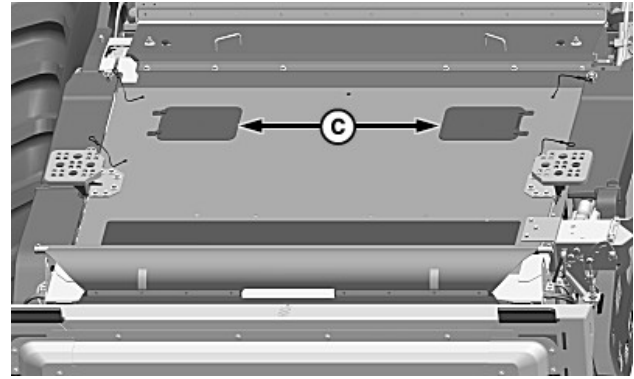


H128428—UN—07JAN20

45. Clean out chaff between separator and sides of machine.



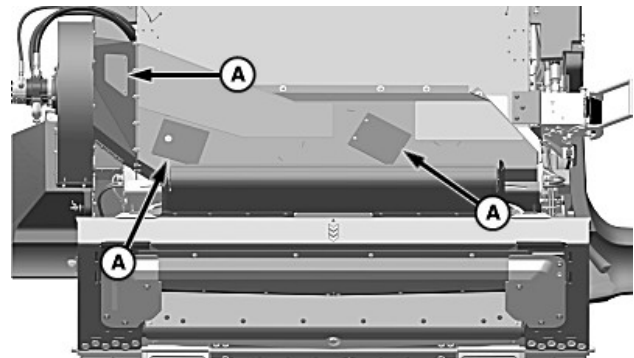
H128026—UN—14NOV19



H128027—UN—14NOV19

**A—Nut**  
**B—Feeder House Door**  
**C—Feeder House Door**

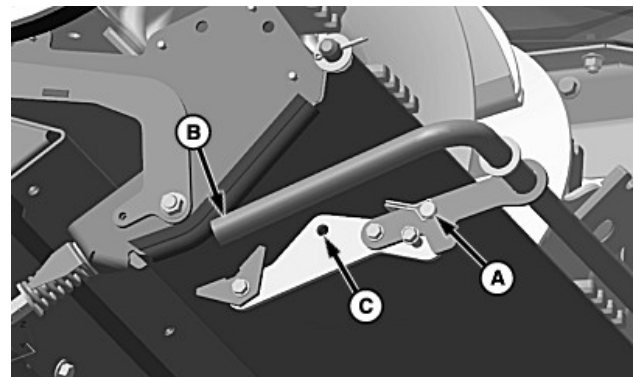
46. Loosen nuts (A) on each side of the feeder house door and push nuts towards center of the feeder house.
47. Pull door forward to remove.
48. Clean feeder house through top doors (B) and (C).
49. Lift conveyor chain and let chain snap back several times while cleaning.



H130617—UN—17AUG20

**A—Inspection Door (2 used)**

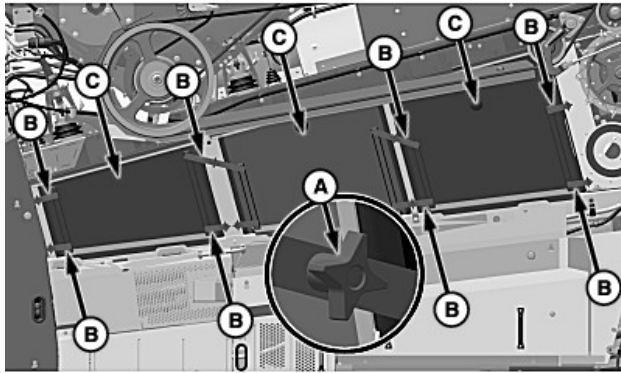
50. Open inspection doors (A) and clean the dust fan system.



H129023—UN—17FEB20

**A—Quick-Lock Pin**  
**B—Lever**  
**C—Hole**

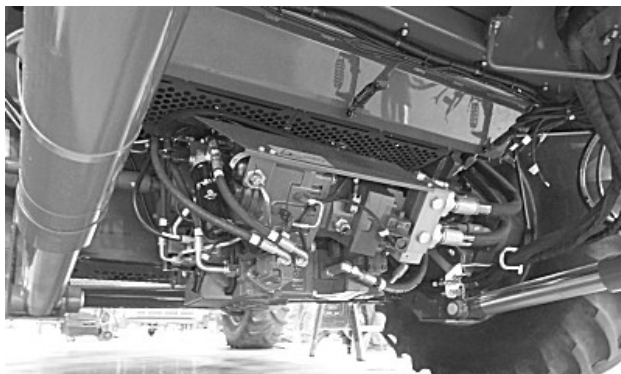
51. Remove quick-lock pin (A) and move lever (B) down to open the stone trap.
52. Install the quick-lock pin into hole (C) to lock the stone trap in the open position.
53. Clean out the stone trap area.
54. Move the lever up to close the stone trap. Retain with the quick-lock pin.



H132198—UN—02NOV20

**A—Knob (8 used)**  
**B—Latch (9 used)**  
**C—Separator Cover (3 used)**

55. Turn knobs (A) counterclockwise to loosen.
56. Turn latches (B) and remove separator covers (C). Use a scraper to loosen material, and clean out through the sides of the machine.



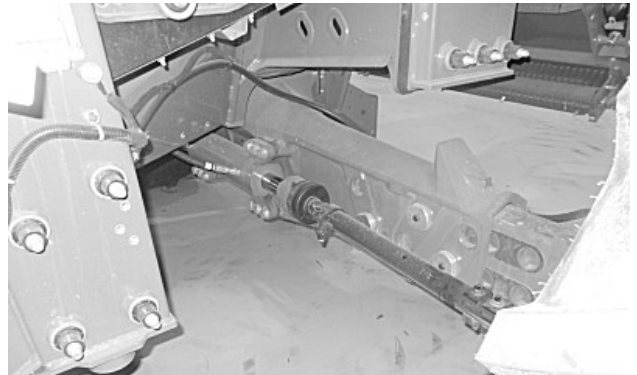
H128430—UN—07JAN20

57. Clean off top of axle and transmission.



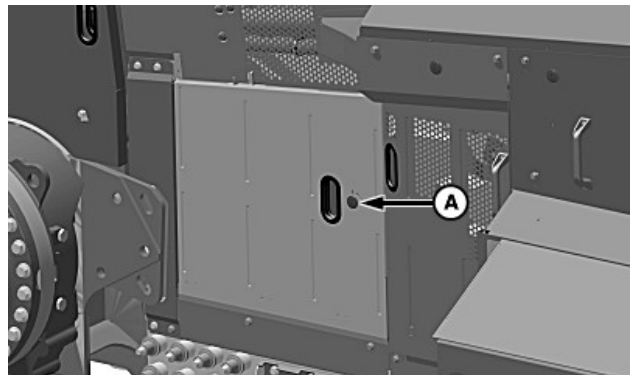
H128431—UN—07JAN20

58. Open sieve and chaffer as far as possible and clean.



H128432—UN—07JAN20

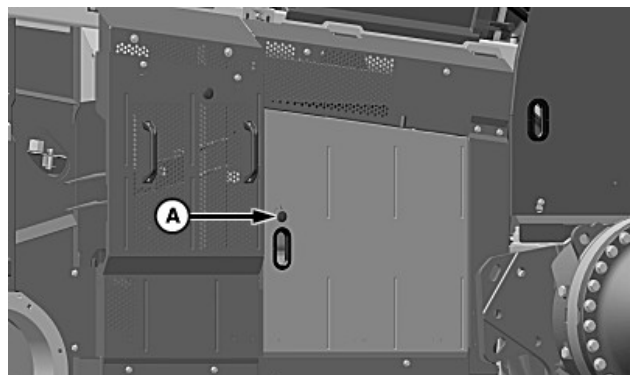
59. Clean rear axle area.



H126771—UN—27FEB20

**A—Latch**

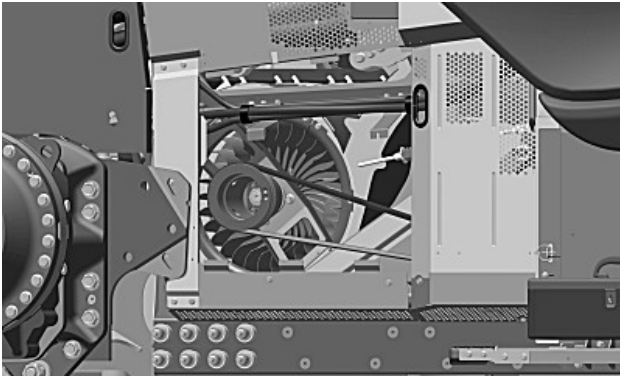
60. Turn latch (A) to unlock the shield
61. Lift the shield upward and remove.
62. Clean out the area.



H126774—UN—27FEB20

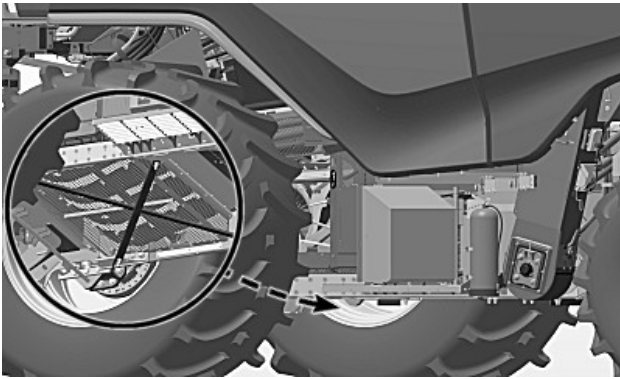
**A—Latch**

63. Turn latch (A) to unlock the shield.
64. Lift the shield upward and remove.
65. Clean out the area.



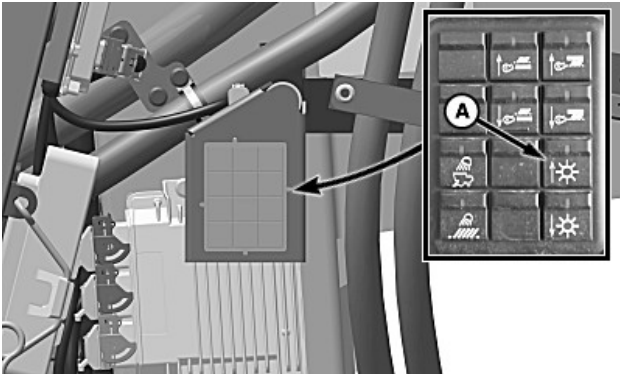
H132486—UN—19NOV20

66. Clean area around the fan.



H129392—UN—04MAR20

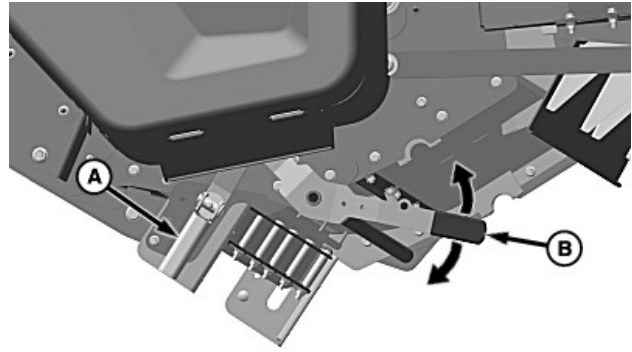
67. Clean the area under the fan.



H129162—UN—25FEB20

A—Switch

68. Raise the chopper with switch (A).

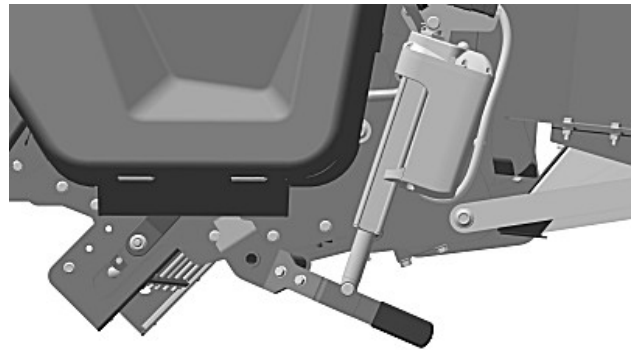


H128298—UN—05DEC19

Manual Knife Bank

A—Latch  
B—Handle

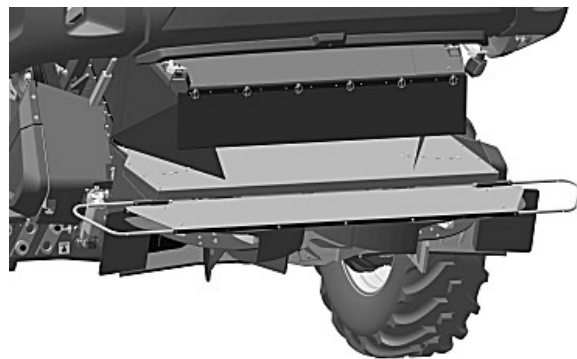
69. **Manual Knife:** Open latch (A) on the chopper. Move the adjustment handle (B) to disengage the knife bank and clean the chopper.



H128433—UN—07JAN20

Remote Knife Bank

70. **Remote Knife:** Disengage the knife bank. See Residue Management Application Help or Operator's Station Help for further information. Clean the chopper.



H128371—UN—12DEC19

71. Clean chaff from the spreader hood area.

72. Install all the previously removed shields and close

all the previously opened doors before operating the machine.

MH69740,00008ED-19-19NOV20

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# Fuels and Lubricants

## Handle Fuel Safely—Avoid Fires



TS202—UN—23AUG88

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.

Use only an approved fuel container for transporting flammable liquids.

Never fill fuel container in pickup truck with plastic bed liner. Always place fuel container on ground before refueling. Touch fuel container with fuel dispenser nozzle before removing can lid. Keep fuel dispenser nozzle in contact with fuel container inlet when filling.

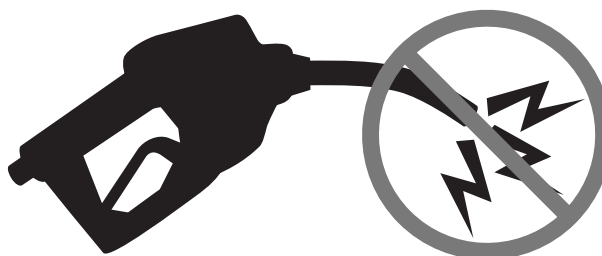
Do not store fuel container where there is an open flame, spark, or pilot light such as within a water heater or other appliance.

DX,FIRE1-19-12OCT11

## Avoid Static Electricity Risk When Refueling



RG22142—UN—17MAR14



RG21992—UN—21AUG13

The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

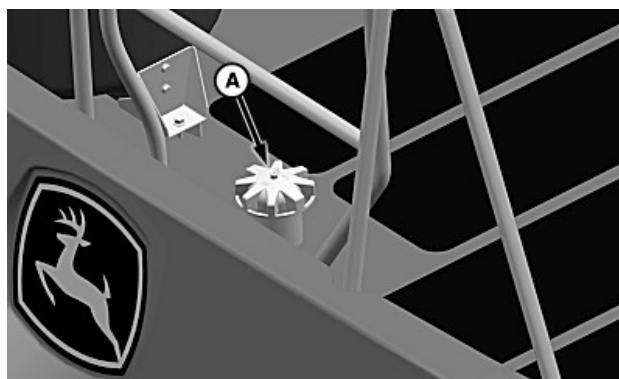
Refineries may have treated the fuel with a static dissipating additive. However, there are many factors that can reduce the effectiveness of the additive over time.

Static charges can build up in ULSD fuel while it is flowing through fuel delivery systems. Static electricity discharge when combustible vapors are present could result in a fire or explosion.

Therefore, it is important to ensure that the entire system used to refuel your machine (fuel supply tank, transfer pump, transfer hose, nozzle, and others) is properly grounded and bonded. Consult with your fuel or fuel system supplier to ensure that the delivery system is in compliance with fueling standards for proper grounding and bonding practices.

DX,FUEL,STATIC,ELEC-19-12JUL13

## Fuel Tank—Filling



H128180—UN—25NOV19

A—Fuel Tank

**CAUTION:** Handle fuel carefully. Do not refuel machine while smoking. Shut OFF engine, set park brake, and remove key before filling fuel tank.

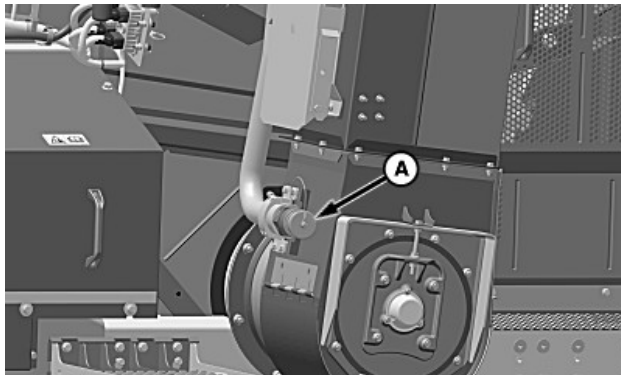
**Do not overfill fuel tank. Bodily injury can result from fuel splash back. Leakage can result from expansion of fuel. If fuel tank is too full and left in direct sunlight, or the temperature is allowed to get too hot, fuel tank will overflow.**

**IMPORTANT: Final Tier 4/Stage V Engines: Use ONLY ultra low sulfur diesel fuel. See Diesel Fuel and Biodiesel Fuel in this section for further information.**

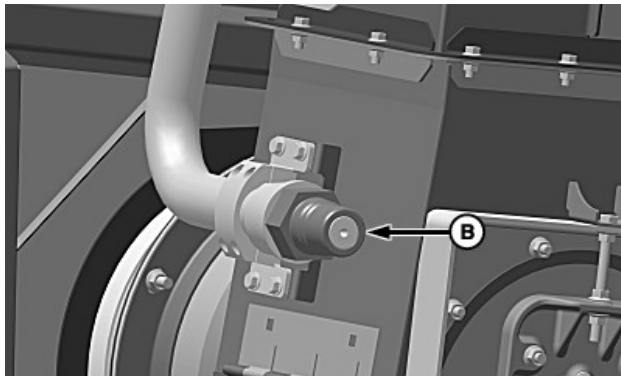
Fill fuel tank (A) at end of each day. This prevents condensation in the fuel tank as moist air cools.

OUO6075,0004D01-19-12NOV20

## Fast Fill Fuel System (If Equipped)



H128599—UN—22JAN20



H128600—UN—22JAN20

A—Cap  
B—Receiver

**CAUTION:** Handle fuel carefully. Do not refuel machine while smoking. Shut OFF engine, set park brake, and remove key before filling.

1. Remove the cap (A).
2. Remove the cap from the nozzle.

**IMPORTANT:** Verify that the receiver and the nozzle are clean and free of contaminants before connecting.

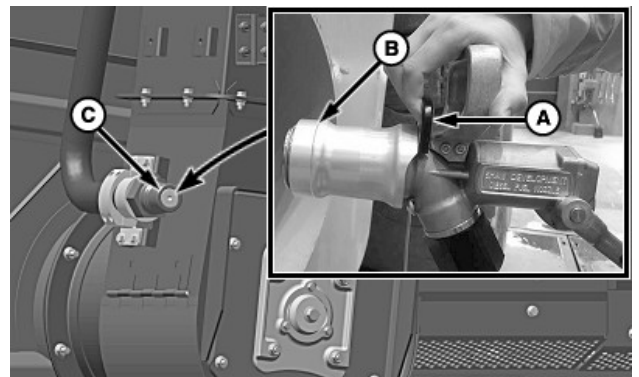
3. Clean the receiver (B).



H129063—UN—19FEB20

A—Lever

4. Verify that the lever (A) on the nozzle is in the down position before connecting.



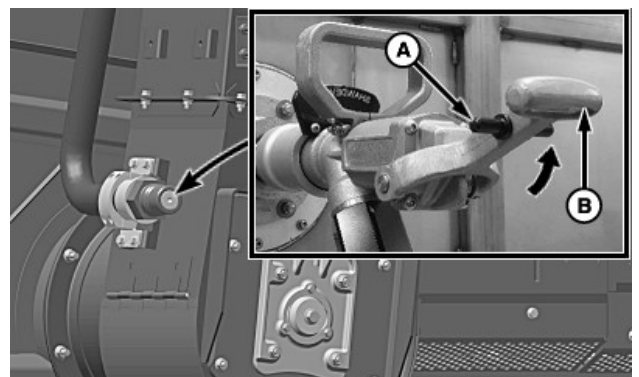
H129064—UN—19FEB20

A—Handle  
B—Nozzle Coupler  
C—Receiver

5. Pull back on the handle (A).

**IMPORTANT:** The nozzle coupler locks when released. Verify that the nozzle coupler is locked before fueling by pulling on the nozzle.

6. Attach nozzle coupler (B) to receiver (C).

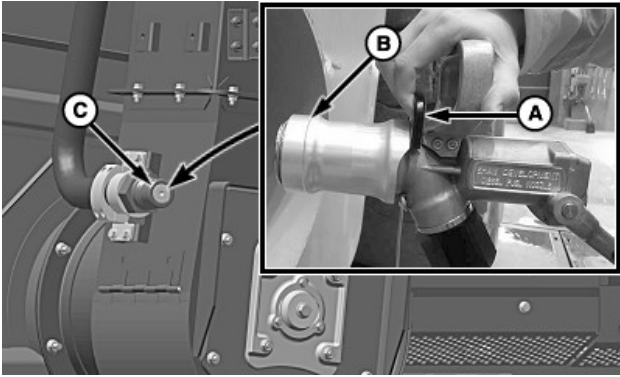


H129065—UN—19FEB20

A—Release Lock  
B—Lever



7. Pull back on the release lock (A) and lift the lever (B) to start fueling.



H129064—UN—19FEB20

A—Handle  
B—Nozzle Coupler  
C—Receiver

**IMPORTANT:** When the fuel tank is full, the lever lowers to the closed position. Push the lever down to lock in the closed position.

8. Pull back on the handle (A) to release the nozzle coupler (B) from the receiver (C).
9. Install the previously removed cap on the receiver and nozzle coupler.

MH69740,0000966-19-12NOV20

## Handling and Storing Diesel Fuel

**CAUTION:** Reduce the risk of fire. Handle fuel carefully. **DO NOT** fill the fuel tank when engine is running. **DO NOT** smoke while you fill the fuel tank or service the fuel system.

Fill the fuel tank at the end of each day's operation to prevent water condensation and freezing during cold weather.

Keep all storage tanks as full as practicable to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using BioDiesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your

fuel supplier or John Deere dealer for recommendations.

OUO6075,000163E-19-06SEP13

## Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590, ASTM D975, or EN 15940 is acceptable for use at all percentage mixture levels.

### Required Fuel Properties

In all cases, the fuel shall meet the following properties:

**Cetane number of 40 minimum.** Cetane number greater than 47 is preferred, especially for temperatures below  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or elevations above 1675 m (5500 ft.).

**Cloud Point** should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum  $10^{\circ}\text{C}$  ( $18^{\circ}\text{F}$ ) below the fuel cloud point.

**Fuel lubricity** should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

**Diesel fuel quality and sulfur content** must comply with all existing emissions regulations for the area in which the engine operates. **DO NOT** use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

**Materials** such as copper, lead, zinc, tin, brass and bronze should be avoided in fuel handling, distribution and storage equipment as these metals can catalyze fuel oxidation reactions which can lead to fuel system deposits and plugged fuel filters.

### E-Diesel fuel

**DO NOT** use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

**CAUTION:** Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.

**Sulfur Content for Interim Tier 4, Final Tier 4, Stage III A and B, Stage IV, and Stage V Engines Above 560 kW**

- Use **ONLY** diesel fuel with a maximum of 500 mg/kg (500 ppm) sulfur content.



### **Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V Engines**

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

### **Sulfur Content for Tier 3 and Stage III A Engines**

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

### **Sulfur Content for Tier 2 and Stage II Engines**

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.<sup>1</sup>
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

### **Sulfur Content for Other Engines**

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

**IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.**

**Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.**

DX,FUEL1-19-13JUL20

## **Biodiesel Fuel**

Biodiesel fuel is comprised of monoalkyl esters of long chain fatty acids derived from vegetable oils or animal fats. Biodiesel blends are biodiesel mixed with petroleum diesel fuel on a volume basis.

Before using fuel containing biodiesel, review the Biodiesel Use Requirements and Recommendations in this Operator's Manual.

Environmental laws and regulations can encourage or prohibit the use of biofuels. Operators should consult

with appropriate governmental authorities prior to using biofuels.

### **John Deere Stage V Engines Operating in the European Union**

Where the engine is to be operated within the Union on diesel or non-road gas-oil, a fuel with a FAME content not greater than 8% volume/volume (B8) shall be used.

### **John Deere Engines with Exhaust Filter Except Stage V Engines Operating in the European Union**

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

Biodiesel concentrations above B20 can harm the engine's emission control systems and should not be used. Risks include, but are not limited to, more frequent stationary regeneration, soot accumulation, and increased intervals for ash removal.

John Deere Fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B20, and are recommended when using lower biodiesel blends.

### **John Deere Engines Without Exhaust Filter**

Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751, EN 14214, or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

These John Deere engines can operate on biodiesel blends above B20 (up to 100% biodiesel). Operate at levels above B20 ONLY if the biodiesel is permitted by law and meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 might not fully comply with or be permitted by all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel.

John Deere fuel conditioners or equivalent, which contain detergent and dispersant additives, are required when using biodiesel blends from B10 to B100, and are recommended when using lower biodiesel blends.

### **Biodiesel Use Requirements and Recommendations**

The petroleum diesel portion of all biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standard.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: <http://www.bq9000.org>.

Biodiesel contains residual ash. Ash levels exceeding

<sup>1</sup> See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.

the maximums allowed in either ASTM D6751 or EN14214 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present).

The fuel filter can require more frequent replacement when using biodiesel fuel, particularly if switching from diesel. Check engine oil level daily prior to starting engine. A rising oil level can indicate fuel dilution of the engine oil. Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. Biodiesel blends above B20 must be used within 45 days from the date of biodiesel manufacture.

When using biodiesel blends up to B20, the following must be considered:

- Cold-weather flow degradation
- Stability and storage issues (moisture absorption, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines)
- Possible fuel leakage through seals and hoses (primarily an issue with older engines)
- Possible reduction of service life of engine components

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the specifications provided in this Operator's Manual.

Consult your John Deere dealer for John Deere fuel products to improve storage and performance with biodiesel fuels.

The following must also be considered if using biodiesel blends above B20:

- Possible coking or blocked injector nozzles, resulting in power loss and engine misfire if John Deere fuel additives and conditioners or equivalent containing detergent/dispersants are not used
- Possible crankcase oil dilution (requiring more frequent oil changes)
- Possible lacquering or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel handling, distribution, and storage equipment
- Possible reduction in water separator efficiency
- Possible damage to paint if exposed to biodiesel
- Possible corrosion of fuel injection equipment
- Possible elastomeric seal and gasket material degradation (primarily an issue with older engines)

- Possible high acid levels within fuel system
- Because biodiesel blends above B20 contain more ash, using blends above B20 can result in more rapid ash loading and require more frequent cleaning of the Exhaust Filter (if present)

**IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.**

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DX,FUEL7-19-13JAN18

## Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

**IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.**

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

## Lubricity of BioDiesel Fuel

Fuel lubricity can improve significantly with BioDiesel blends up to B20 (20% BioDiesel). Further increase in lubricity is limited for BioDiesel blends greater than B20.

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DX,FUEL5-19-07FEB14

## Supplemental Diesel Fuel Additives

Diesel fuel can be the source of performance or other operational problems for many reasons. Some causes include poor lubricity, contaminants, low cetane number, and a variety of properties that cause fuel system deposits. These and others are referenced in other sections of this Operator's Manual.

To optimize engine performance and reliability, closely follow recommendations on fuel quality, storage, and handling, which are found elsewhere in this Operator's Manual.

To further aid in maintaining performance and reliability of the engine's fuel system, John Deere has developed a family of fuel additive products for most global markets. The primary products include Fuel-Protect Diesel Fuel Conditioner (full feature conditioner in winter and summer formulas) and Fuel-Protect Keep Clean

(fuel injector deposit removal and prevention). Availability of these and other products varies by market. See your local John Deere dealer for availability and additional information about fuel additives that might be right for your needs.

DX,FUEL13-19-07FEB14

## Testing Diesel Fuel

A fuel analysis program can help to monitor the quality of diesel fuel. The fuel analysis can provide critical data such as calculated cetane index, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets ASTM D975 or equivalent specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

DX,FUEL6-19-13JAN18

## Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold-weather operation, a little extra care is necessary. The following information outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold-weather aids.

### Use Winter Grade Fuel

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold-weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

**Cloud point** is the temperature at which wax begins to form in the fuel. This wax causes fuel filters to plug.

**Pour point** is the lowest temperature at which movement of the fuel is observed.

*NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low-power complaints in cold-weather operation.*

### Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

### Ether

An ether port on the intake is available to aid cold weather starting.

**CAUTION:** Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

### Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

### Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

### Diesel Fuel Cold Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold-weather season. This generally extends operability to about 10°C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

**IMPORTANT:** Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.

### Biodiesel

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) or equivalent at 5°C (41°F) to treat biodiesel fuels during the cold-weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

### Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

## Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10-19-13JAN18

## Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines

In order to maintain the emissions performance of the engine, it is essential to use and refill DEF in accordance with the specification.

Diesel exhaust fluid (DEF) is a high purity liquid that is injected into the exhaust system of engines equipped with selective catalytic reduction (SCR) systems. Maintaining the purity of DEF is important to avoid malfunctions in the SCR system. Engines requiring DEF shall use a product that meets the requirements for aqueous urea solution 32 (AUS 32) according to ISO 22241-1.

The use of John Deere Diesel Exhaust Fluid is recommended. John Deere Diesel Exhaust Fluid is available at your John Deere dealer in a variety of package sizes to suit your operational needs.

If John Deere Diesel Exhaust Fluid is not available, use DEF that is certified by the American Petroleum Institute (API) Diesel Exhaust Fluid Certification Program or by the AdBlue™ Diesel Exhaust Fluid Certification Program. Look for the API certification symbol or the AdBlue™ name on the container.



RG30211—UN—08MAR18

In some cases, DEF is referred to by one or more of these names:

- Urea
- Aqueous Urea Solution 32
- AUS 32

*AdBlue is a trademark of VDA, the German Association of the Automotive Industry.*

- AdBlue™
- NOx Reduction Agent
- Catalyst Solution

DX,DEF-19-13JAN18

## Testing Diesel Exhaust Fluid (DEF)

**IMPORTANT: Using DEF with the correct concentration is critical to engine and aftertreatment system performance. Extended storage and other conditions can adversely alter the DEF concentration.**

If DEF quality is questionable, draw a sample out of the DEF tank or storage tank into a clear container. DEF must be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used. Drain tank, flush with distilled water and refill with new or good DEF. After refilling the tank, check the DEF concentration.

If the DEF passes the visual and smell test, check the DEF concentration with a handheld refractometer calibrated to measure DEF.

DEF concentration should be checked when the engine has been stored for extended periods, or if there is suspicion the engine or packaged DEF fluid has been contaminated with water.

Two approved tools are available through your John Deere dealer:

- JDG11594 Digital DEF Refractometer—A digital tool providing an easy to read concentration measurement
- JDG11684 DEF Refractometer—Low-cost alternative tool providing an analog reading

Follow instructions included with either tool to obtain the measurement.

The correct DEF concentration is 31.8—33.2% urea. If the DEF concentration is not within specification, drain the DEF tank, flush with distilled water and fill with new or good DEF. If packaged DEF is not within specification, dispose of DEF packages and replace with new or good DEF.

DX,DEF,TEST-19-13JUN13

## Storing Diesel Exhaust Fluid (DEF)

**⚠ CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.**

**Do not ingest DEF. In the event DEF is ingested, contact a physician immediately. Reference the Materials Safety Data Sheet (MSDS) for additional information.**

**IMPORTANT:** It is unlawful to tamper with or remove any component of the aftertreatment system. Do not use DEF that does not meet the required specifications or operate the engine with no DEF.

Never attempt to create DEF by mixing agricultural grade urea with water. Agricultural grade urea does not meet the necessary specifications and can damage the aftertreatment system.

Do not add any chemicals or additives to DEF in an effort to prevent freezing. Any chemicals or additives added to DEF can damage the aftertreatment system.

Never add water or any other fluid in place of, or in addition to DEF. Operating with a modified DEF or using an unapproved DEF can damage the aftertreatment system.

Storage information provided below is for reference and is to be used as a guideline only.

It is preferred to store DEF out of extreme ambient temperatures. DEF freezes at  $-11^{\circ}\text{C}$  ( $12^{\circ}\text{F}$ ). Exposure to temperatures greater than  $30^{\circ}\text{C}$  ( $86^{\circ}\text{F}$ ) can degrade DEF over time. Do not store DEF in direct sunlight.

Dedicated DEF storage containers must be sealed between uses to prevent evaporation and contamination. Containers made of polyethylene, polypropylene, or stainless steel are recommended to transport and store DEF.

Ideal conditions for storage of DEF are:

- Store at temperatures between  $-5^{\circ}\text{C}$  and  $30^{\circ}\text{C}$  ( $23^{\circ}\text{F}$  and  $86^{\circ}\text{F}$ )
- Store in dedicated containers sealed to avoid contamination and evaporation

Under these conditions, DEF is expected to remain useable for a minimum of 18 months. Storing DEF at higher temperatures can reduce its useful life by approximately 6 months for every  $5^{\circ}\text{C}$  ( $9^{\circ}\text{F}$ ) temperature above  $30^{\circ}\text{C}$  ( $86^{\circ}\text{F}$ ).

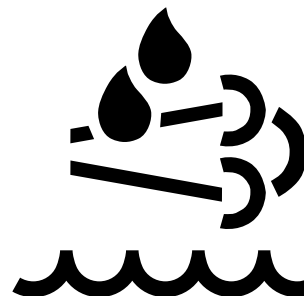
If unsure how long or under what conditions DEF has been stored, test DEF. See Testing Diesel Exhaust Fluid (DEF).

Long-term storage in the DEF tank (over 12 months) is not recommended. If long-term storage is necessary, test DEF prior to operating engine. See Testing Diesel Exhaust Fluid (DEF).

It is recommended to purchase DEF in quantities that will be consumed within 12 months.

DX,DEF,STORE-19-15JUL20

## Refilling Diesel Exhaust Fluid (DEF) Tank



TS1731—UN—23AUG13

**CAUTION:** Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

Do not ingest DEF. In the event DEF is ingested, contact a physician immediately. Reference the Materials Safety Data Sheet (MSDS) for additional information.

**IMPORTANT:** Use only distilled water to rinse components that are used to deliver DEF. Tap water can contaminate DEF. If distilled water is not available, rinse with clean tap water, then thoroughly rinse with ample amounts of DEF.

If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

If DEF is filled into engine fuel tank or other fluid compartment, do not operate engine until system is properly purged of DEF. Contact your John Deere dealer immediately to determine how to clean and purge the system.

Reasonable care should be taken when refilling the DEF tank. Ensure that the DEF tank cap area is free of debris before removing the cap. Seal containers of DEF between use to prevent contamination and evaporation.

Avoid splashing DEF and do not allow DEF to come into contact with skin, eyes, or mouth.

DEF is not harmful to handle, but DEF can be corrosive to materials such as steel, iron, zinc, nickel, copper, aluminum, and magnesium. Use suitable containers to transport and store DEF. Containers made of polyethylene, polypropylene, or stainless steel are recommended.

Avoid prolonged contact with skin. In case of accidental contact, wash skin immediately with soap and water.

Keep anything used to store or dispense DEF clean of dirt and dust. Wash and rinse containers or funnels thoroughly with distilled water to remove contaminants.

If an unapproved fluid, such as diesel fuel or coolant is added to the DEF tank, contact your John Deere dealer immediately to determine how to clean and purge the system.

If water has been added to the DEF tank, a tank cleaning is necessary. See Cleaning DEF Tank in this manual. After refilling the tank, check the DEF concentration. See Testing Diesel Exhaust Fluid (DEF).

The operator must maintain appropriate DEF levels at all times. Check the DEF level daily and refill the tank as needed. The filling port is identified by a blue colored cap embossed with the following DEF symbol.

DX,DEF,REFILL-19-15JUL20

## Disposal of Diesel Exhaust Fluid (DEF)

Although there is little issue with minor spillage of DEF on the ground, large amounts of DEF should be contained. If large spills occur, contact local environmental authorities for assistance with clean-up.

If a substantial quantity of DEF is not within specification, contact the DEF supplier for assistance with disposal. Do not dump substantial quantities of DEF onto the ground or send DEF to wastewater treatment facilities.

DX,DEF,DISPOSE-19-13JUN13

## Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

### Preferred Coolants

The following pre-mix engine coolants are preferred:

- John Deere COOL-GARD™ II
- John Deere COOL-GARD II PG

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II Pre-Mix	Freeze Protection Limit
COOL-GARD II 20/80	-9°C (16°F)
COOL-GARD II 30/70	-16°C (3°F)
COOL-GARD II 50/50	-37°C (-34°F)
COOL-GARD II 55/45	-45°C (-49°F)
COOL-GARD II PG 60/40	-49°C (-56°F)
COOL-GARD II 60/40	-52°C (-62°F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG when a non-toxic coolant formulation is required.

### Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

**IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.**

### Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

### Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is

recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

### Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.<sup>2</sup>

**IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.**

**Do not mix ethylene glycol and propylene glycol base coolants.**

**Do not use coolants that contain nitrites.**

DX,COOL3-19-25AUG20

### John Deere COOL-GARD™ II Coolant Extender

Some coolant additives gradually deplete during engine operation. For COOL-GARD™ II pre-mix and COOL-GARD II Concentrate, replenish coolant additives between drain intervals by adding COOL-GARD II Coolant Extender.

COOL-GARD II Coolant Extender should not be added unless indicated by COOL-GARD II Test Strips. These test strips provide a simple, effective method to check the freeze point, additive levels, and pH of your engine coolant.

Test the coolant solution at intervals of 12 months and whenever excessive coolant is lost through leaks or overheating.

**IMPORTANT: Do not use COOL-GARD II Test Strips with COOL-GARD II PG.**

COOL-GARD II Coolant Extender is a chemically matched additive system for use with all COOL-GARD II coolants. COOL-GARD II Coolant Extender is not intended for use with nitrite-containing coolants.

COOL-GARD is a trademark of Deere & Company

<sup>2</sup> Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.

**IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:**

- John Deere COOL-GARD II
- John Deere COOL-GARD II PG

The use of non-recommended supplemental coolant additives can result in additive drop-out, gelation of the coolant, or corrosion of cooling system components.

Add the recommended concentration of COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

DX,COOL16-19-15MAY13

### Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

**IMPORTANT: Water may be used as coolant in emergency situations only.**

**Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.**

**Drain cooling system and refill with recommended engine coolant as soon as possible.**

DX,COOL6-19-17FEB20

### Water Quality for Mixing with Coolant Concentrate

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total solids	<340 mg/L
Total dissolved hardness	<170 mg/L
pH	5.5—9.0

**IMPORTANT: Do not use bottled drinking water because it often contains higher concentrations of total dissolved solids.**

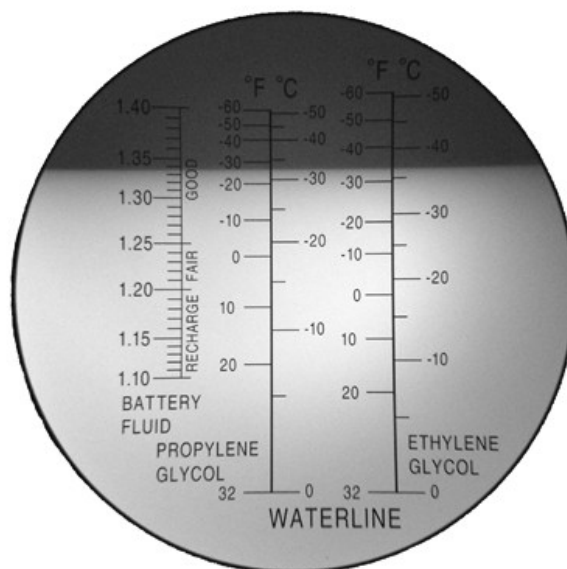
### Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	Freeze Protection Limit
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

DX,COOL19-19-13JAN18



TS1733—UN—04SEP13

Image with a Drop of 50/50 Coolant Placed on the Refractometer Window

### Testing Coolant Freeze Point



TS1732—UN—04SEP13

SERVICEGARD™ Part Number 75240

The use of a handheld coolant refractometer is the quickest, easiest, and most accurate method to determine coolant freeze point. This method is more accurate than a test strip or a float-type hydrometer which can produce poor results.

A coolant refractometer is available through your John Deere dealer under the SERVICEGARD™ tool program. Part number 75240 provides an economical solution to accurate freeze point determination in the field.

To use this tool:

1. Allow cooling system to cool to ambient temperatures.
2. Open radiator cap to expose coolant.
3. With the included dropper, collect a small coolant sample.
4. Open the lid of the refractometer, place one drop of coolant on the window and close the lid.
5. Look through the eyepiece and focus as necessary.
6. Record the listed freeze point for the type of coolant (ethylene glycol coolant or propylene glycol) being tested.

DX,COOL,TEST-19-13JUN13

### Diesel Engine Break-In Oil — Non-Emissions Certified and Certified Tier 1, Tier 2, Tier 3, Stage I, Stage II, and Stage III

New engines are filled at the factory with either John

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Deere Break-In™ or John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In™ or Break-In Plus™ Engine Oil, respectively, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

If John Deere Break-In™ Engine Oil is used during the initial operation of a new or rebuilt engine, change the oil and filter at a maximum of 100 hours.

If John Deere Break-In Plus™ Engine Oil is used, change the oil and filter at a minimum of 100 hours and a maximum equal to the interval specified for John Deere Plus-50™ II or Plus-50™ oil.

After engine overhaul, fill the engine with either John Deere Break-In™ or Break-In Plus™ Engine Oil.

If John Deere Break-In™ or Break-In Plus™ Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following and change the oil and filter at a maximum of 100 hours of operation:

- API Service Classification CE
- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

**IMPORTANT: Do not use Plus-50™ II, Plus-50™, or engine oils meeting any of the following for the initial break-in of a new or rebuilt engine:**

API CK-4	ACEA E9
API CJ-4	ACEA E7
API CI-4 PLUS	ACEA E6
API CI-4	ACEA E5
API CH-4	ACEA E4
API CG-4	ACEA E3
API CF-4	
API CF-2	
API CF	

**These oils do not allow the engine to break in properly.**

John Deere Break-In Plus™ Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II,

John Deere Plus-50™, or other diesel engine oil as recommended in this manual.

DX,ENOil4-19-02NOV16

## John Deere Break-In Plus™ Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V

New engines are filled at the factory with John Deere Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In Plus™ Engine Oil, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

During the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and maximum equal to the interval specified for John Deere Plus-50™ II oil.

After engine overhaul, fill the engine with John Deere Break-In Plus™ Engine Oil.

If John Deere Break-In Plus™ Engine Oil is not available, use an SAE 10W-30 viscosity grade diesel engine oil meeting one of the following:

- API Service Category CK-4
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

If one of these oils is used during the initial operation of a new or rebuilt engine, change the oil and filter between a minimum of 100 hours and a maximum of 250 hours.

**IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.**

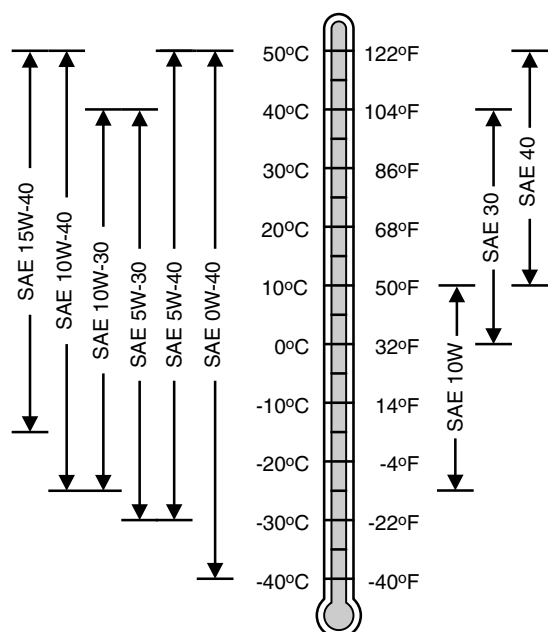
John Deere Break-In Plus™ Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual.

DX,ENOil16-19-13JAN18

*Break-In is a trademark of Deere & Company.  
Break-In Plus is a trademark of Deere & Company  
Plus-50 is a trademark of Deere & Company.*

## Diesel Engine Oil — Tier 3 and Stage IIIA



TS1743—UN—25APR19

Oil Viscosities for Air Temperature Ranges

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Use oil viscosity based on the expected air temperature range during the period between oil changes.

### John Deere Plus-50™ II oil is preferred.

John Deere Plus-50™ is also recommended.

John Deere Torq-Gard™ is also allowed.

Other oils may be used if they meet one or more of the following standards:

- API Service Category CK-4
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4

### Multi-viscosity diesel engine oils are preferred.

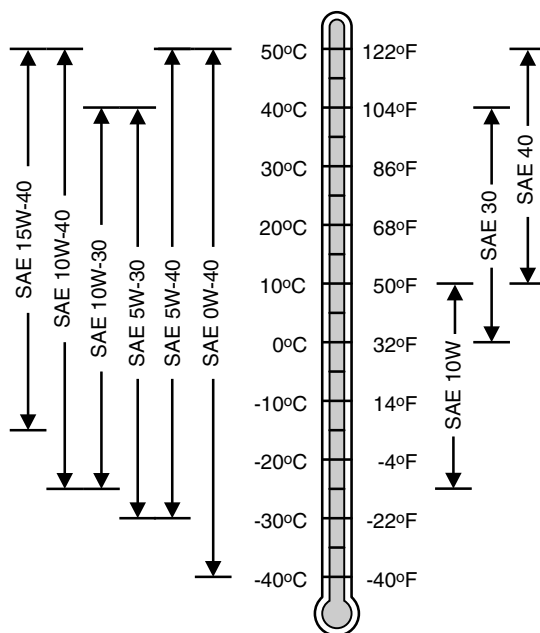
Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

*Plus-50 is a trademark of Deere & Company  
Torq-Gard is a trademark of Deere & Company*

DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

DX,ENOIL11-19-23APR19

## Diesel Engine Oil — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V



TS1743—UN—25APR19

Oil Viscosities for Air Temperature Ranges

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Use oil viscosity based on the expected air temperature range during the period between oil changes.

### John Deere Plus-50™ II is the recommended engine oil.

Extended service intervals may apply when John Deere Plus-50™ II engine oil is used. Refer to the engine oil drain interval table and consult your John Deere dealer for more information.

If John Deere Plus-50™ II engine oil is not available, engine oil meeting one or more of the following may be used:

- API Service Category CK-4
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

DO NOT use engine oil containing more than 1.0% sulfated ash, 0.12% phosphorus, or 0.4% sulfur.

**Multi-viscosity diesel engine oils are preferred.**

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

**IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 15 mg/kg (15 ppm).**

DX,ENOIL14-19-23APR19

**Diesel Engine Oil Service Interval for Operation at High Altitude**

To avoid excessive oil degradation and potential engine damage, reduce oil and filter service intervals to 50% of the original recommended values when operating engines at altitudes above **1675 m (5500 ft)**.

Oil analysis may allow longer service intervals.

Use only approved oil types.

Example of Original Hours	Corresponding High Altitude Hours
125	60
150	75
175	85
200	100
250	125
275	135
300	150
350	175
375	185
400	200
500	250

DX,ENOIL,SERV,HIALT-19-11NOV14

**Engine Oil and Filter Service Intervals — Tier 3 and Stage IIIA — PowerTech™ Plus Engines**

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

**Approved Oil Types:**

- “Plus-50 Oils” include John Deere Plus-50™ II and John Deere Plus-50™.
- “Other Oils” include John Deere Torq-Gard™, API CK-4, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, and ACEA E4.

*Plus-50 is a trademark of Deere & Company  
Torq-Gard is a trademark of Deere & Company*

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer or other qualified service provider for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

**Diesel fuel sulfur content** affects engine oil and filter service intervals.

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is **RECOMMENDED**
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) **REDUCES** the oil and filter change interval
- **BEFORE** using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer or qualified service provider
- **DO NOT** use diesel fuel with sulfur content greater than 10000 mg/kg (10000 ppm)

Engine Oil and Filter Service Intervals	
Fuel Sulfur	Less than 1000 mg/kg (1000 ppm)
Plus-50 Oils	375 hours
Other Oils	250 hours
Fuel Sulfur	1000—2000 mg/kg (1000—2000 ppm)
Plus-50 Oils	300 hours
Other Oils	200 hours
Fuel Sulfur	2000—10000 mg/kg (2000—10000 ppm)
Plus-50 Oils	Contact John Deere dealer
Other Oils	Contact John Deere dealer
Oil analysis may extend the service interval of “Other Oils” to a maximum not to exceed the interval of Plus-50 Oils. Oil analysis means taking a series of oil samples at 50-hour increments beyond the normal service interval until either the data indicates the end of useful oil life or the maximum service interval of John Deere Plus-50 oils is reached.	

**IMPORTANT: To avoid engine damage:**

- **Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20.** Oil analysis may allow longer service intervals.
- **Use only approved oil types.**

DX,ENOIL13,T3,PTP,100to119-19-13JAN18

**Engine Oil and Filter Service Intervals — Interim Tier 4, Final Tier 4, Stage IIIB, Stage IV, and Stage V Engines**

Failure to follow applicable oil standards and drain intervals can result in severe engine damage that might not be covered under warranty. Warranties, including

the emissions warranty, are not conditioned on the use of John Deere oils, parts, or service.

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel. Actual service intervals also depend on operation and maintenance practices.

#### Approved Oil Types:

- John Deere Plus-50™ II
- “Other Oils” include API CK-4, API CJ-4, ACEA E9, and ACEA E6

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer or other qualified service provider for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

**Diesel fuel sulfur content** affects engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals.

Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm) is **REQUIRED**.

**Engine operation at high altitude** decreases oil change intervals. See Diesel Engine Oil Service Interval for Operation at High Altitude for additional information.

**NOTE:** The 500 hour extended oil and filter change interval is only allowed if all of the following conditions are met:

- Use of diesel fuel with sulfur content less than 15 mg/kg (15 ppm)
- Use of John Deere Plus-50™ II oil
- Use of an approved John Deere oil filter

Engine Oil and Filter Service Intervals	
John Deere Plus-50™ II	500 hours
Other Oils	250 hours

Oil analysis may extend the service interval of “Other Oils” to a maximum not to exceed the interval of Plus-50™ II oils. Oil analysis means taking a series of oil samples at 50-hour increments beyond the normal service interval until either the data indicates the end of useful oil life or the maximum service interval of John Deere Plus-50 II oils is reached.

#### IMPORTANT: To avoid engine damage:

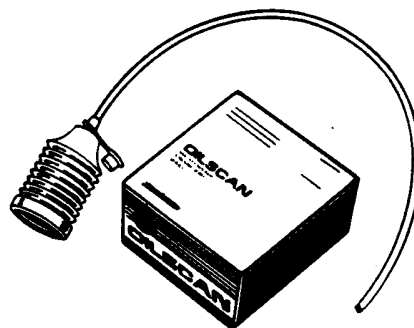
- **Reduce oil and filter service intervals by 50% when using biodiesel blends greater than B20. Oil analysis may allow longer service intervals.**

Plus-50 is a trademark of Deere & Company

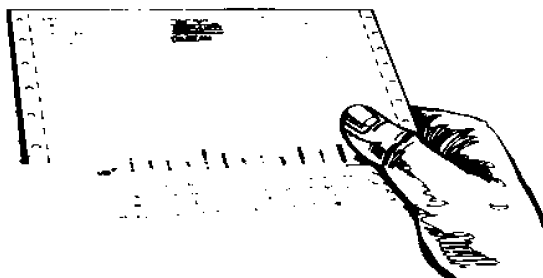
- **Use only approved oil types.**

DX,ENOIL15,IT4,120toMAX-19-13JAN18

#### Oilsan™ and CoolScan™



T6828AB—UN—15JUN89



T6829AB—UN—26AUG11

Oilsan™ and CoolScan™ are John Deere sampling programs to help you monitor machine performance and identify potential problems before they cause serious damage.

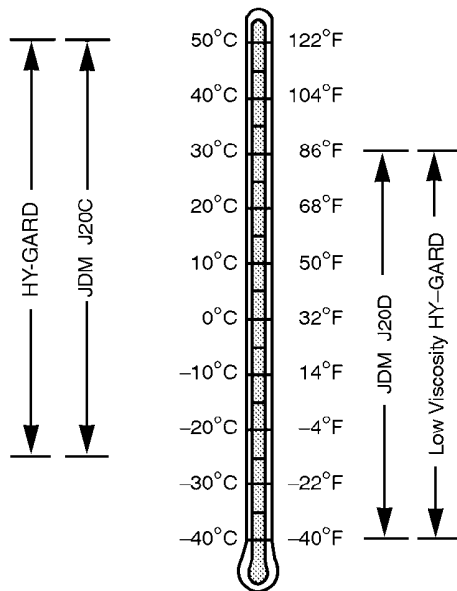
Oil and coolant samples should be taken from each system before its recommended change interval.

Check with your John Deere dealer for the availability of Oilsan™ and CoolScan™ kits.

DX,OILSCAN-19-13SEP11

Oilsan is a trademark of Deere & Company  
CoolScan is a trademark of Deere & Company

**ProDrive™ XL Transmission, Chopper Gear Case (Two-Speed), Hydrostatic Drive System, Main Hydraulic System, and Main Engine Gear Case Oils**



ZX1030848—UN—15SEP02

**NOTE:** Machine comes factory filled with John Deere Hy-Gard™.

Only the following oils are approved:

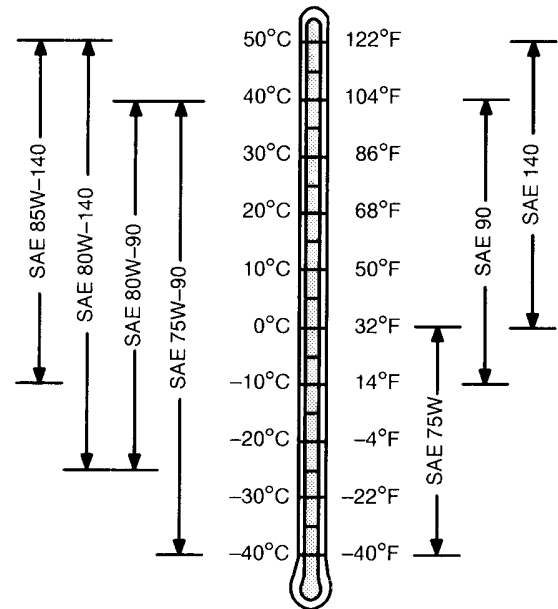
- John Deere Hy-Gard™
- Oils meeting John Deere Standard JDM J20C

**NOTE:** For usage in extremely low temperatures only the following may be substituted:

- Low Viscosity Hy-Gard™
- Oils meeting John Deere Standard JDM J20D

OQO6075,0004CFC-19-19NOV20

**Feed Accelerator Gear Case, Final Drives, Loading Auger Gear Case (Fixed and Pivoting), Spreader Gear Case, Cleaning Fan Variable Speed Driven Gear Case Oils**



TS1653—UN—14MAR96

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

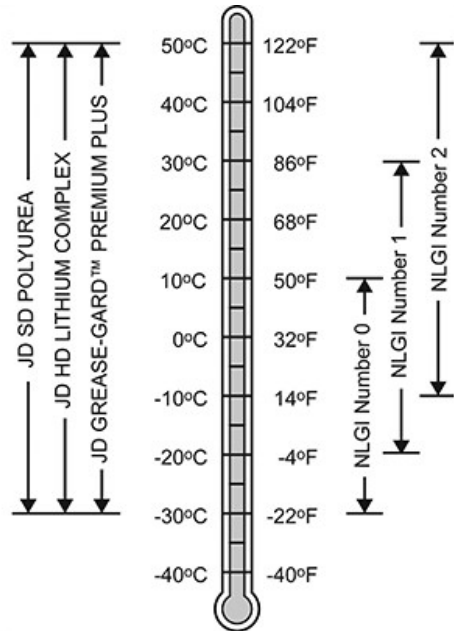
- John Deere GL-5 Gear Lubricant
- John Deere EXTREME-GARD™

Other oils may be used if they meet the following:

- API Service Category GL-5

OQO6075,0004CFD-19-19NOV20

## Multipurpose Extreme Pressure (EP) Grease



RG30199—UN—08MAR18

Greases for Air Temperature Ranges

**NOTE:** Use only John Deere Corn Head Grease where specified. See Maintenance section for further information.

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

### John Deere SD Polyurea Grease is preferred.

The following greases are also recommended:

- John Deere HD Lithium Complex Grease
- John Deere Grease-Gard™ Premium Plus
- John Deere Corn Head Grease (where specified)

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB
- ISO-L-X-BDHB 2 or DIN KP 2 N-10 Lithium Complex, Non-Synthetic Base Oil (100 to 220 mm<sup>2</sup>/s @ 40°C)

**IMPORTANT:** Some types of thickeners, base oils, and additives used in greases are not compatible with others. Mixing greases should be avoided. Consult your grease supplier before mixing different types of grease.

If grease fitting is missing, replace immediately. Clean fittings thoroughly before using grease gun.

## Corn Head Grease

**NOTE:** Use only John Deere Corn Head Grease where specified. See Maintenance section for further information.

John Deere Corn Head Grease is recommended.

You may also use SAE Multipurpose Grease with Extreme Pressure (EP) Performance and meeting NLGI Consistency Number 0.

**IMPORTANT:** If grease fitting is missing, replace immediately. Clean fittings thoroughly before using grease gun.

OUO6075,0004D00-19-25NOV19

## Oil Filters

Filtration of oils is critically important for proper operation and lubrication. John Deere brand oil filters have been designed and produced specifically for John Deere applications.

John Deere filters adhere to engineering specifications for quality of the filter media, filter efficiency rating, strength of the bond between the filter media and the element end cap, fatigue life of the canister (if applicable), and pressure capability of the filter seal. Non-John Deere branded oil filters might not meet these key John Deere specifications.

Always change oil filters regularly as specified in this manual.

DX,FILT1-19-11APR11

## Fuel Filters

The importance of fuel filtration cannot be overemphasized with modern fuel systems. The combination of increasingly restrictive emission regulations and more efficient engines requires fuel system to operate at much higher pressures. Higher pressures can only be achieved using fuel injection components with very close tolerances. These close manufacturing tolerances have significantly reduced capacities for debris and water.

John Deere brand fuel filters have been designed and produced specifically for John Deere engines.

To protect the engine from debris and water, always change engine fuel filters as specified in this manual.

DX,FILT2-19-14APR11

## Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require

OUO6075,0004CFF-19-25NOV19

Grease-Gard is a trademark of Deere & Company

lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your John Deere dealer to obtain information and recommendations.

Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to John Deere branded fluids or fluids that have been tested and/or approved for use in John Deere equipment.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

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DX,ALTER-19-13JAN18

## **Lubricant Storage**

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

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DX,LUBST-19-11APR11

## **Mixing of Lubricants**

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

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DX,LUBMIX-19-18MAR96

# Lubrication and Maintenance

## Service Interval—Setup or Clearing

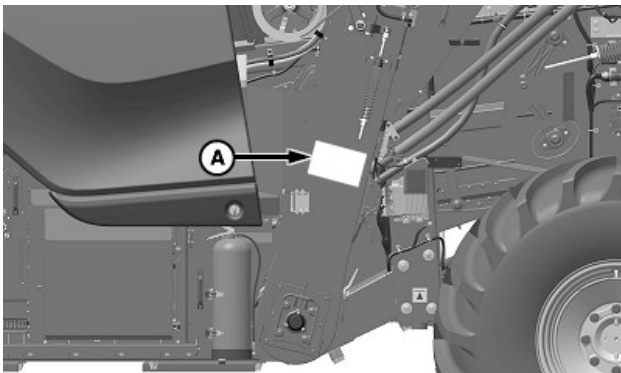
**CAUTION:** To prevent injury, never lubricate or service machine, header, or engine while it is running. Shut OFF engine, set park brake and remove key.

**IMPORTANT:** Service times are for average conditions. Service more often if machine is used in extreme conditions.

See Calibrations Application Help or Operator's Station Help for further information on setup or clearing service intervals.

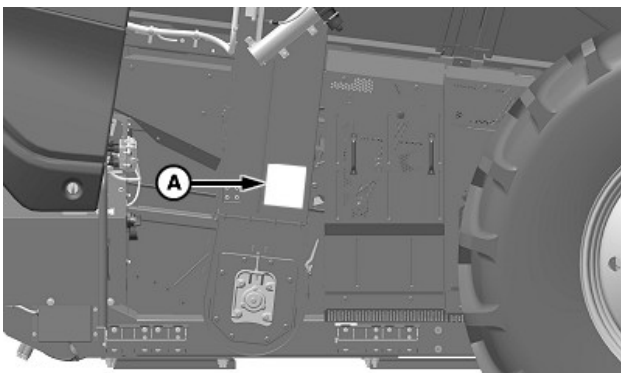
OUC6075,0004552-19-20DEC16

## Lubrication Decal Locations



H128275—UN—05DEC19

Left-Hand Lubrication Decal



H128276—UN—04DEC19

Right-Hand Lubrication Decal

### A—Lubrication Decals

Lubrication decals (A) show the different locations of grease points around the machine. Follow lubrication times provided on decals and refer to hour intervals listed in this section for further information.

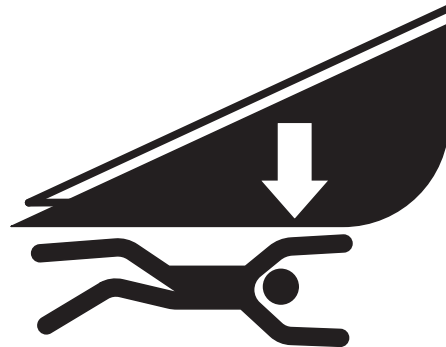
Bearing failures or overheating can result in a fire. To reduce bearing failures or overheating, follow hour intervals listed in this section for further information.

Crop material and other debris may accumulate around

bearings and bearing covers. Inspect and clean these areas periodically throughout the harvest day.

OUC6075,0004D05-19-04DEC19

## Working Underneath or Around Feeder House



H121063—UN—14MAR17

**CAUTION:** To prevent injury, after engaging the feeder house lock, support the feeder house with solid blocking before performing non-routine service or maintenance items underneath the feeder house or header.

See Feeder House Safety Lock in the Feeder House section for further information.

OUC6075,0004DBE-19-10JUN20

## Hydraulic Hose Replacement

Hydraulic hoses should be inspected frequently for leakage, kinking, cuts, cracks, abrasion, corrosion, exposed wire braid, or any other signs of wear or damage. Worn or damaged hose assemblies can fail during use and should be replaced immediately. See your John Deere dealer for replacement hoses.

**CAUTION:** If incorrectly rated hose is used, machine damage, injury or death could occur.

If hoses are to be fabricated, ensure that hoses are the same rating as one being replaced. See your John Deere dealer for correct hose rating replacements.

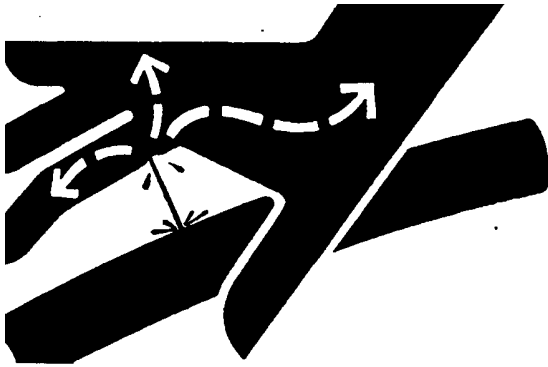
Incorrect hose length or routing can increase chance of hose wear or damage. Use old hose as guide for length and hose routing.

Incorrect fittings can damage mating parts or cause leaks. Make sure to use steel fittings approved for use with hose manufacture. Use correct size and thread type as replaced hose.

OUC6075,00043CC-19-12OCT16



## Hydraulic System Cleanliness



X9811—UN—23AUG88

**CAUTION:** Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.

### Cleanliness

If hydraulic system should be disconnected for service, protect ends of hoses, tubing, and ports of components from contamination with clean, lint-free towels or clean plastic bags.

Before installing any replacement hose, flush the inside with unused diesel fuel or unused commercial petroleum cleaning solvent for 10 seconds minimum. Do not use water, water soluble cleaners, or compressed air.

**IMPORTANT:** To prevent hydraulic system contamination, clean the hydraulic component surfaces with an electrical contact cleaner.

Open the multicoupler covers (header and combine) and clean the multicoupler surfaces of any dirt and debris.

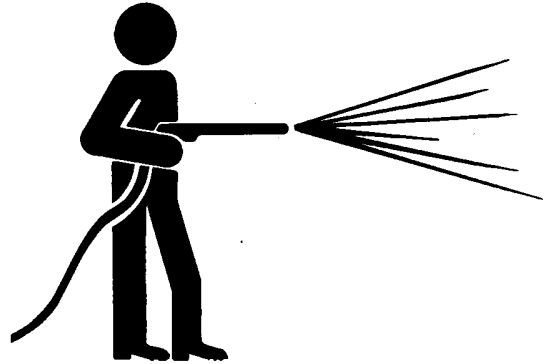
OUO6075,0004D98-19-07FEB20

## Accumulator Pressure

**NOTE:** Due to temperature differences, accumulator pressures can vary significantly and will need to be adjusted. See your John Deere dealer for further information.

OUO6075,00043CE-19-12OCT16

## Using High-Pressure Washers



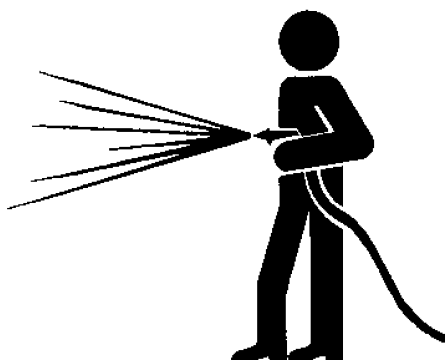
T6642EJ—UN—18OCT88

**IMPORTANT:** High-pressure washers are an effective means of cleaning the machine. To avoid damage to the machine, do not go closer to 1 m (39 in) and spray at an angle between 45—90 degrees when cleaning sealing surfaces, seals, and decals. Maximum pressure must not exceed 12 000 kPa (120 bar) (1740 psi).

Do not, under any circumstances, spray, or wash components (example; engine) with cold water when hot. Do not use rotary nozzles or water at temperatures over 50°C (122°F), and do not aim at seals. Always keep the water jet moving. Reduce pressure when using high-pressure washer to clean cooling units, bearings, and electronic/electrical equipment. Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulics seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Follow the instructions in the high-pressure washer operator's manual and manuals of attached equipment.

OUO6075,0004977-19-17MAY18

## Using Pressurized Air



RW56455—UN—30JUN97

**IMPORTANT:** Directing pressurized air at electronic/electrical components or connectors, may cause buildup of static electricity and product malfunctions.

OUO6075,0004976-19-17MAY18

## Important Considerations

**IMPORTANT:** Clean fittings before and after applying grease. Replace any damaged or missing fittings immediately.


Lubrication and maintenance intervals are listed in this section.


Locations and procedures are listed in the section for that interval.

OUO6075,00045A8-19-25JAN17

## Lubrication Symbols

**CAUTION:** Never lubricate or service machine while the engine is running.

 Lubricate with John Deere Multipurpose SD Polyurea Grease High Temperature/Extreme Pressure lubricant or an equal SAE Multipurpose High Temperature Grease with Extreme Pressure (EP) performance at hours shown on the symbol.

 Lubricate with John Deere SAE 30 oil or heavier oil at hourly intervals indicated on the symbols.

**IMPORTANT:** Recommended service intervals are for average conditions. Service more often if machine is operated under adverse conditions.

OUO6075,0004F7E-19-12NOV20

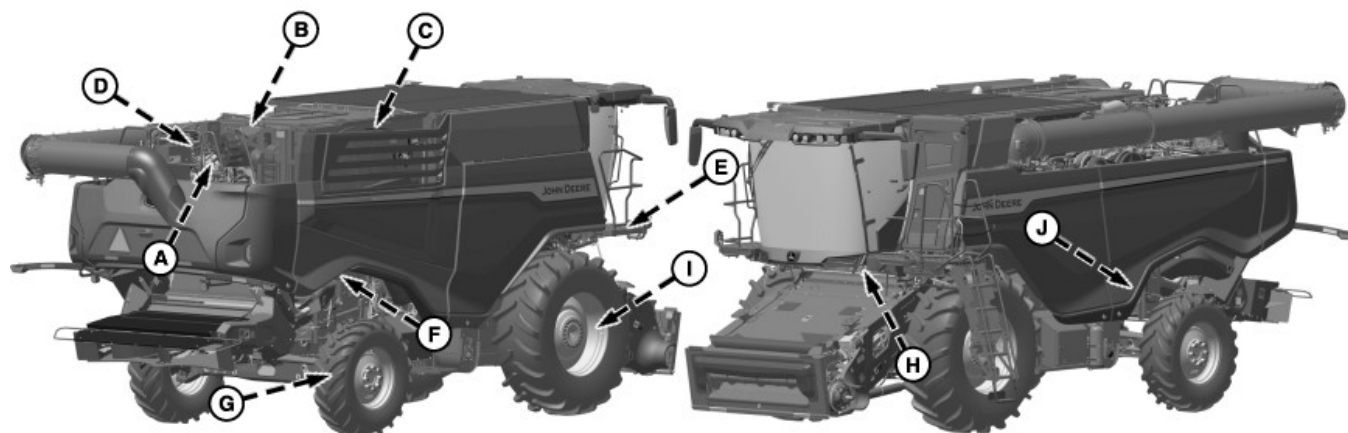
## Service Your Machine at Specified Intervals

Perform lubrication, checks, and adjustments at intervals specified in the following tables. Perform service on items at multiples of the original requirement. For example, at 1000 operating hours also service those items listed under every 500 operating hours, every 250 operating hours, every 100 operating hours, and every 25 operating hours or daily.

SS43267,00006D2-19-12AUG15

# Maintenance—Every 10 Hours

## Service Interval Chart—Every 10 Hours



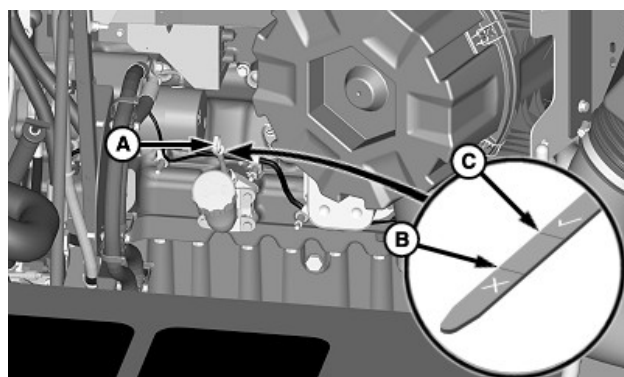
H128088—UN—07FEB20

Legend	Service	Every 10 Hours
A	Check Engine Oil Level	•
B	Check Engine Coolant Level	•
C	Clean Rotary Screen, Charge Air Cooler, Oil Cooler, Radiator, Condenser, and Fuel Cooler	•
D	Check Hydrostatic/Hydraulic Oil/Main Engine Gear Case Oil	•
E	Drain Water from Air Compressor Reservoir (If Equipped)	•
F	Inspect Fuel Precleaner Filter	•
G	Grease Two-Speed Four-Wheel Drive Motor Pivots (Muddy Conditions) Grease Two-Wheel Drive Spindle Bearings and Pivot Pins (Muddy Conditions)	•
H	Clean Air Conditioner Drain Hose	•
I	Check Stone Trap	•
J	ActiveVision™ Tailings System Camera (If Equipped)	•

ActiveVision is a trademark of Deere & Company

OUC6075,0004C0E-19-27FEB20

## Engine Oil Level



H128273—UN—03DEC19

A—Dipstick  
B—ADD Mark  
C—FULL Mark

**IMPORTANT:** It is vital to maintain the engine oil at correct levels to ensure a long service life. Check the engine oil level with the machine parked on level ground.

**NOTE:** Verify that the dipstick is pushed completely into the housing before removing to check the engine oil level.

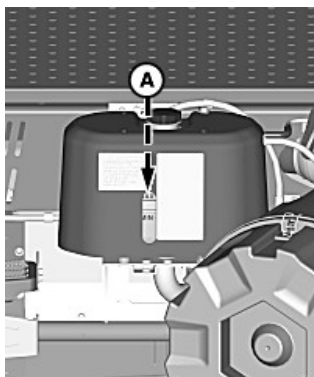
Check the engine oil level with dipstick (A) daily. Do not operate the engine when the oil level is below the "ADD" mark (B) on the dipstick.

1. Remove the dipstick and check the oil level.
2. The oil level should be between the "ADD" mark and the "FULL" mark (C) on the dipstick. If the oil level is

below the "ADD" mark, add oil as needed. See Fuels and Lubricants section for oil recommendations.

OOU6075,0004C0F-19-03DEC19

## Engine Coolant



H127158—UN—22AUG19

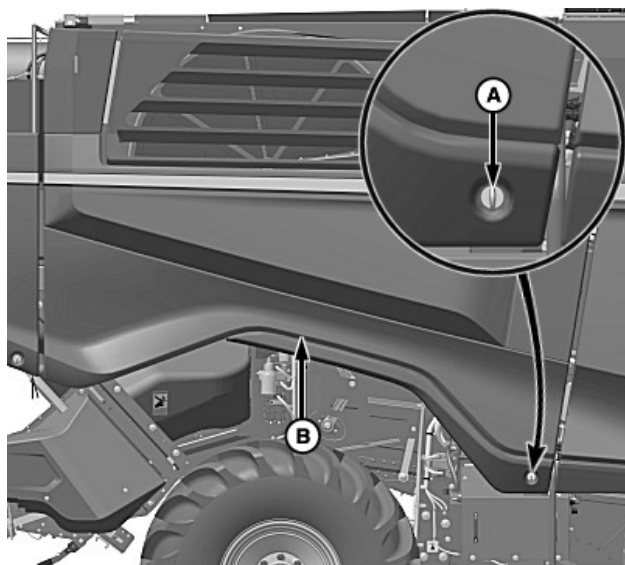
### A—Surge Tank

Coolant level must be between "Max Cold" and "Min Cold" lines. Add coolant as needed if coolant is below "Min Cold" line.

Check engine coolant level in the surge tank (A) with engine cold. Level must be up to "Max Cold" line.

OOU6075,0004C10-19-20SEP19

## Rotary Screen, Charge Air Cooler, Oil Cooler, Radiator, Condensers, and Fuel Cooler



H128249—UN—02DEC19

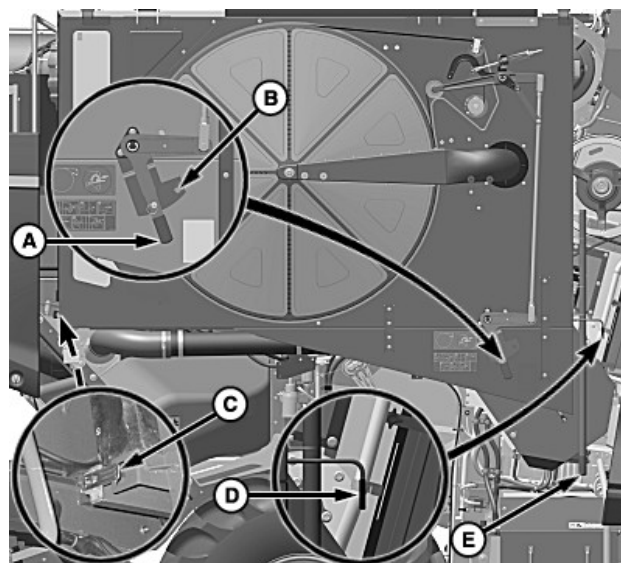
A—Latch  
B—Rear Gull Wing Door

**CAUTION:** Direction of wind, type of crop and its moisture content can all have an effect on where and how much chaff and debris accumulate in the cooling system.

- In heavy debris or windy conditions, clean the cooling system every 10 hours.
- In normal harvest conditions, clean the cooling system every 50 hours.

**Shut OFF engine, set park brake, and remove key.**

1. Turn latch (A) and pull out on the rear gull wing door (B) to raise.

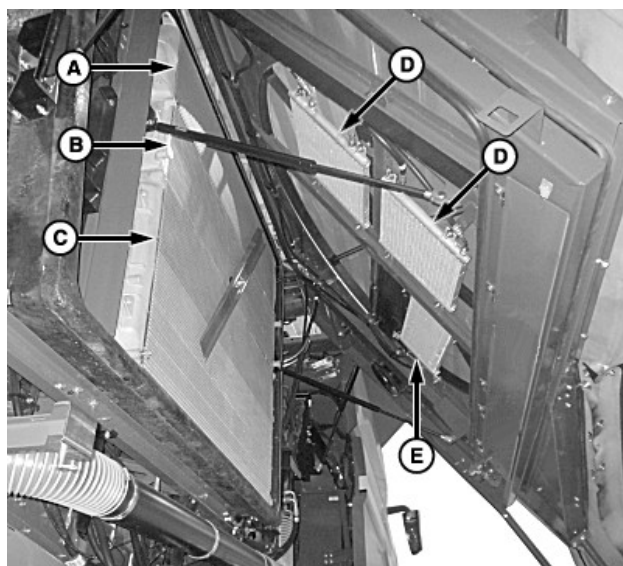


H132264—UN—12NOV20

A—Handle  
B—Notch  
C—Latch  
D—Handle  
E—Handle

**IMPORTANT:** To prevent damage to the rotary screen belt and other components, the rotary screen belt must be detensioned before opening the rotary screen door.

2. To detension the rotary screen belt, move handle (A) to notch (B).
3. Release latch (C) and pull handle (D) to the right.
4. Use handle (E) to open and raise rotary screen door.



H132323—UN—10NOV20

- A—Charge Air Cooler  
B—Oil Cooler  
C—Radiator  
D—Condenser  
E—Fuel Cooler

**CAUTION:** Possible injury or death to you or others can occur from falling. Use a ladder or equivalent with an appropriate load rating to access location when cleaning. Do not attempt to access the location from the tire.

**NOTE:** Clean areas out with compressed air, blowing from inside out.

*It is recommended to use an air hose that has a 2 m (6 ft) wand (end).*

5. Check the rotary screen daily to verify that it turns freely.
6. Clean the rotary screen with a brush and compressed air when dirt and chaff build up on or behind screen.

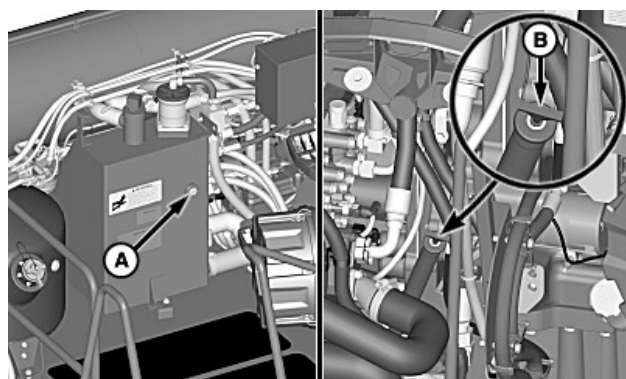
**IMPORTANT:** To prevent damage to fins, reduce high-pressure washer or pressurized air when cleaning coolers. To avoid bending the fins, direct the water or air straight through the fins. Use a fin comb to straighten bent fins. Bent fins decrease cooler performance.

7. Clean the following areas from inside out:
  - Charge air cooler (A)
  - Oil cooler (B)
  - Radiator (C)
8. Clean the following areas on the rotary screen door from inside out:
  - Condensers (D)
  - Fuel cooler (E)

9. Check the area at the bottom of the rotary screen door for chaff buildup and clean if necessary.
10. Close and latch the rotary screen door with the handles.
11. To tension the rotary screen belt, move handle from the bottom notch to the top notch.

OUO6075,0004C11-19-10NOV20

## Hydrostatic/Hydraulic Oil/Main Engine Gear Case Oil



H128253—UN—03DEC19

- A—Sight Glass  
B—Dipstick

**NOTE:** Check the hydrostatic/hydraulic/main engine gear case oil level with the header on the ground and all the cylinders retracted. Oil level must be visible through the sight glass (A) with the feeder house fully lowered. Do not add hydraulic oil at the hydraulic reservoir.

*Make all necessary oil level adjustments through the main engine gear case.*

1. Check the oil level with the header on the ground.
2. Shut OFF engine, set park brake, and remove key before checking the hydraulic oil level.
3. Inspect sight glass (A) oil level with the feeder house fully lowered.

### Oil level is above the sight glass:

1. Remove dipstick (B) and check oil level in the main engine gear case.
2. Add oil as needed through the dipstick tube until the oil level is at the FULL mark on the dipstick. See Fuels and Lubricants section for oil recommendations.

**Oil level is at or below the sight glass (low in the main engine gear case):**

**CAUTION:** Stop engine immediately if diagnostic trouble code is generated.

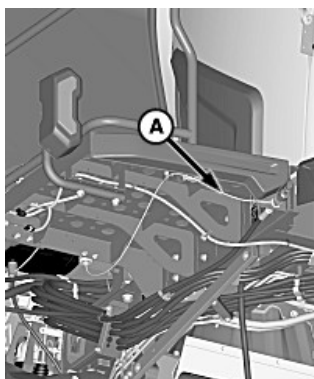
1. Remove dipstick (B) and check oil level in the main engine gear case.
2. Add oil as needed through the dipstick tube until the oil level is at the FULL mark on the dipstick. See Fuels and Lubricants section for oil recommendations.
3. Start the machine and run the engine for a maximum of 5 minutes.
4. Verify that the oil level covers the sight glass.
5. Remove dipstick and check oil level in the main engine gear case.
6. Add oil as needed through the dipstick tube until the oil level is at the FULL mark on the dipstick.

**Oil level is at or below the sight glass (high in the main engine gear case):**

1. Remove dipstick (B) and check oil level in the main engine gear case.
2. Start the machine and run the engine for a maximum of 5 minutes.
3. Verify that the oil level covers the sight glass.
4. Remove dipstick and check oil level in the main engine gear case.
5. Add oil as needed through the dipstick tube until the oil level is at the FULL mark on the dipstick. See Fuels and Lubricants section for oil recommendations.

OOU6075,0004D04-19-14MAY20

**Air Compressor Reservoir (If Equipped)**



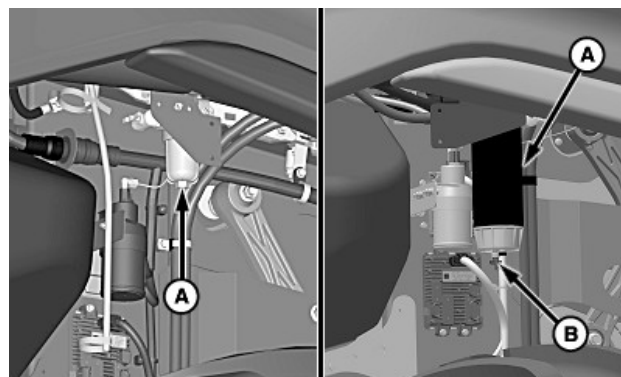
H127327—UN—05SEP19

**A—Cable**

Pull the cable (A) to drain the water from the air compressor reservoir.

OOU6075,0004C14-19-20SEP19

**Fuel Precleaner Filter**



H132343—UN—11NOV20

Style A / Style B

**A—Fuel Precleaner Filter  
B—Drain**

**CAUTION:** Shut OFF engine, set park brake, and remove key before performing maintenance work on fuel filters.

Depending on the machine option, clean or drain fuel precleaner.

**Fuel Precleaner (Style A)**

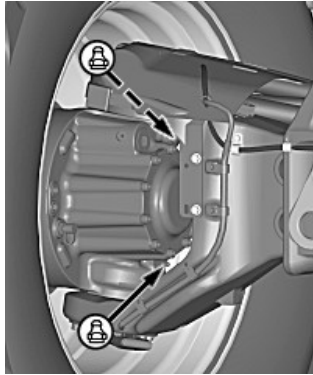
1. Close valve on the fuel precleaner.
2. Inspect the fuel precleaner filter (A) for buildup and clean as necessary.
3. Open the valve on the fuel precleaner to fill.

**Fuel Precleaner (Heavy-Duty Option) (Style B)**

1. Close valve on the fuel precleaner.
2. Inspect the fuel precleaner filter (A).
3. Open drain (B) to inspect the fuel system for water in the fuel precleaner filter.
4. Open the valve on the fuel precleaner to fill.

OOU6075,0004C15-19-11NOV20

## Two-Speed Four-Wheel Drive Motor Pivots (Muddy Conditions)



H127235—UN—30AUG19

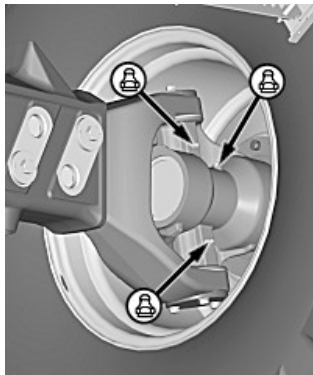
**NOTE:** When operating in mud and water, grease the motor pivots every 10 hours. In normal conditions, grease every 50 hours.

Grease the fittings until the grease purges from the top and bottom motor pivot seals.

Grease two fittings (both sides).

OOU6075,0004C16-19-27FEB20

## Two-Wheel Drive Spindle Bearings and Pivot Pins (Muddy Conditions)



H127234—UN—30AUG19

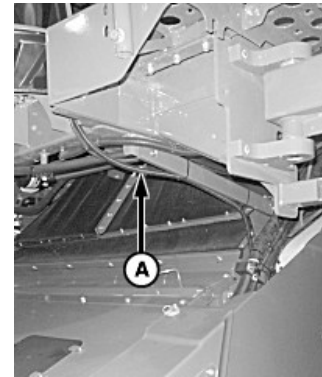
**NOTE:** When operating in mud and water, grease the rear axle spindle bearings and the motor pivots every 10 hours. In normal conditions, grease every 50 hours.

Grease the fittings until the grease purges from the top and bottom pivot seals.

Grease the fittings (both sides) every 10 hours when operating in mud and water.

OOU6075,0004C17-19-27FEB20

## Air Conditioner Drain Hose



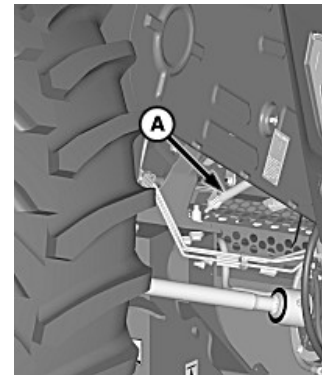
H127363—UN—10SEP19

### A—Drain Hose

Clean the air conditioner drain hose (A) on both sides of the cab.

OOU6075,0004C19-19-20SEP19

## Stone Trap



H127236—UN—30AUG19

### A—Lever

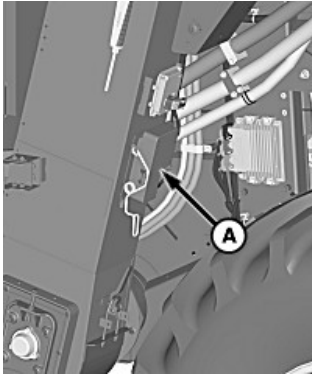
**NOTE:** The cleaning frequency varies depending on field conditions.

Clean out the stone trap more frequently if field conditions require.

1. Remove the quick-lock pin and dump the stone trap with lever (A).
2. Close the stone trap and retain with the quick-lock pin.

OOU6075,0004C1B-19-03DEC19

## ActiveVision™ Tailings System Camera (If Equipped)



H127326—UN—05SEP19

### A—ActiveVision™ Tailings System Camera

*NOTE: Clean the camera lens once per week or as needed. The lens debris indicator in the software alerts the operator when the camera lens needs cleaned, as system functionality may be reduced.*

*The cleaning frequency varies depending on several factors, including operating conditions, weather, and crop conditions. Clean the camera lens using a soft, moistened cloth.*

Open the latch and clean the ActiveVision™ tailings system camera (A).

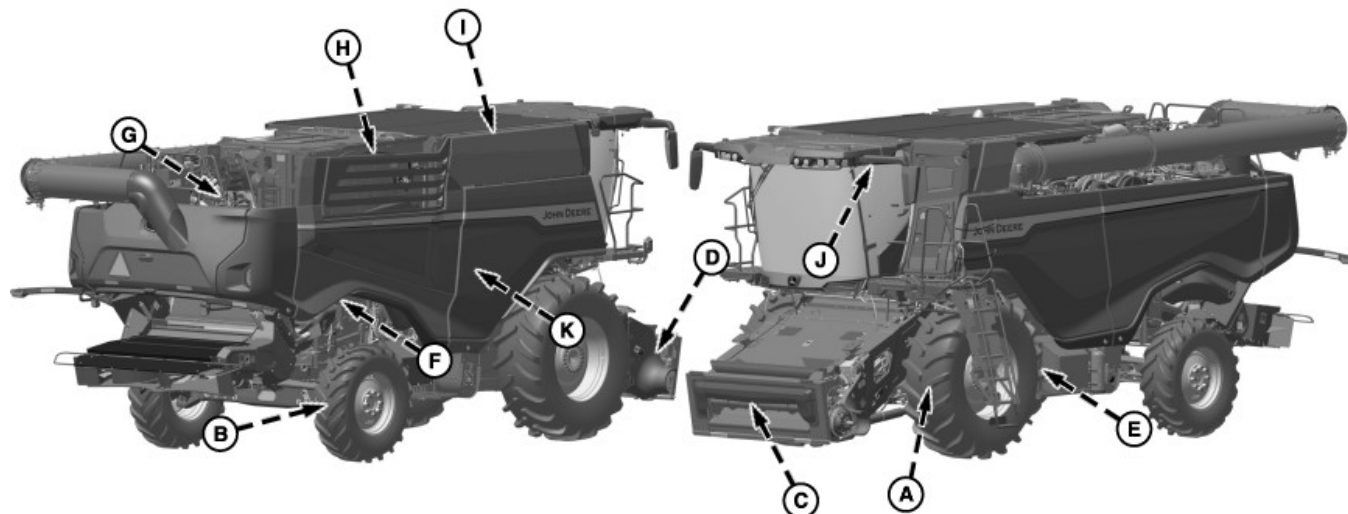
OUC6075,0004C1D-19-27FEB20

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# Maintenance—Every 50 Hours

## Service Interval Chart—Every 50 Hours



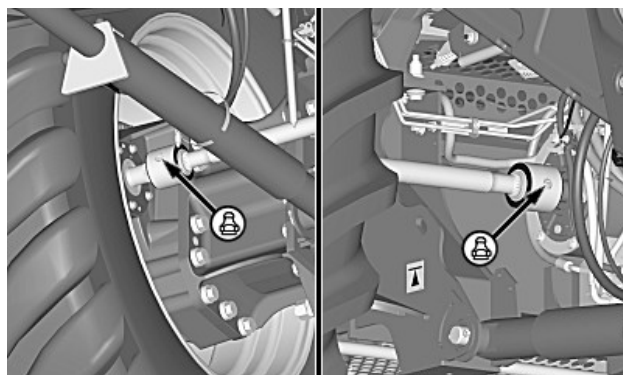
H132491—UN—19NOV20

Legend	Service	Every 50 Hours
A	Grease Driveshaft Couplers	•
B	Grease Two-Speed Four-Wheel Drive Motor Pivots (Normal Conditions) Grease Two-Wheel Drive Spindle Bearings and Pivot Pins (Normal Conditions)	•
C	Check/Clean Lateral Tilt Feeder House	•
D	Adjust Feeder House Conveyor Drive Chain Tension	•
E	Grease Cleaning Fan Variable Driven/Driver Sheaves (Severe Conditions)	•
F	Inspect Fuel Precleaner Filter	•
G	Check Water Separator Primary Fuel Filter	•
H	Check Rotary Screen, Charge Air Cooler, Oil Cooler, Radiator, Condensers, and Fuel Cooler	•
I	Check Mass Flow Sensor	•
J	Clean/Replace Cab Fresh Air Filter	•
K	Clean Moisture Sensor Clean Moisture Sensor Bypass Auger (If Required) Clean ActiveVision™ Clean Grain Elevator Camera (If Equipped)	•

ActiveVision is a trademark of Deere & Company

OJ06075,0004C1E-19-30NOV20

## Driveshaft Couplers

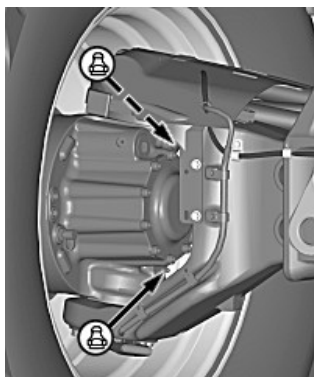


H127270—UN—04SEP19

1. Grease the driveshaft coupler fittings (both sides) until the grease purges from the splines.
2. Clean the excess grease that purged from the splines.

OJ06075,0004C5A-19-27FEB20

## Two-Speed Four-Wheel Drive Motor Pivots (Normal Conditions)



H127235—UN—30AUG19

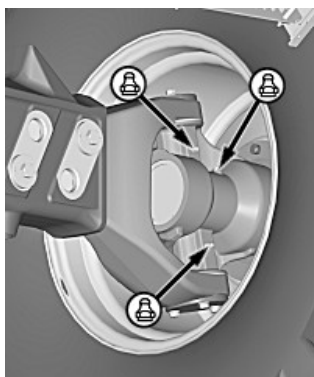
**NOTE:** When operating in mud and water, grease the motor pivots every 10 hours. In normal conditions, grease every 50 hours.

Grease the fittings until the grease purges from the top and bottom motor pivot seals.

Grease two fittings (both sides).

OUC6075,0004C1F-19-27FEB20

## Two-Wheel Drive Spindle Bearings and Pivot Pins (Normal Conditions)



H127234—UN—30AUG19

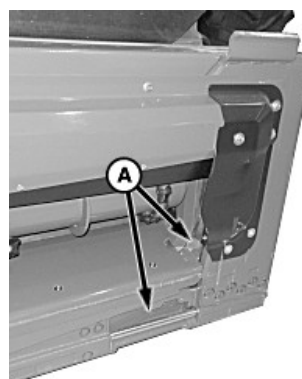
**NOTE:** When operating in mud and water, grease the rear axle spindle bearings and the motor pivots every 10 hours. In normal conditions, grease every 50 hours.

Grease the fittings until the grease purges from the top and bottom pivot seals.

Grease the fittings (both sides) every 10 hours when operating in mud and water.

OUC6075,0004C20-19-27FEB20

## Lateral Tilt Feeder House



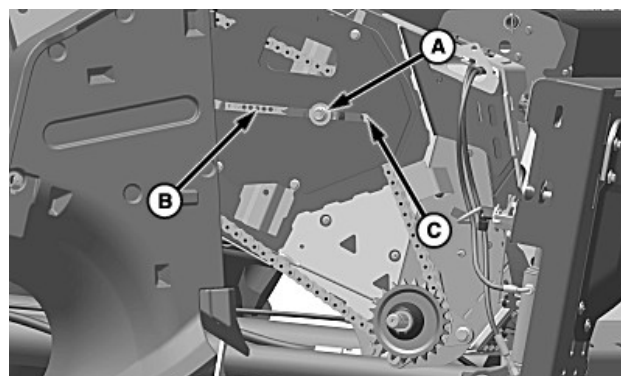
H127364—UN—02DEC19

### A—Cleanout Areas

Check cleanout areas (A) on both sides of the feeder house for packed material, which could prevent the header from tilting. Clean out if necessary.

OUC6075,0004C25-19-27FEB20

## Feeder House Conveyor Drive Chain



H132490—UN—19NOV20

A—Nut  
B—Holes  
C—Slot

It is normal for the feeder house conveyor drive chain to stretch over time.

1. Loosen nut (A) on sprocket.

**NOTE:** When servicing chain, check sprockets for wear.

Do not overtighten the feeder conveyor drive chain.

2. Use pry bar in the holes (B) on the inside plate to move the sprocket forward.
3. Tighten nut to specification.

### Specification

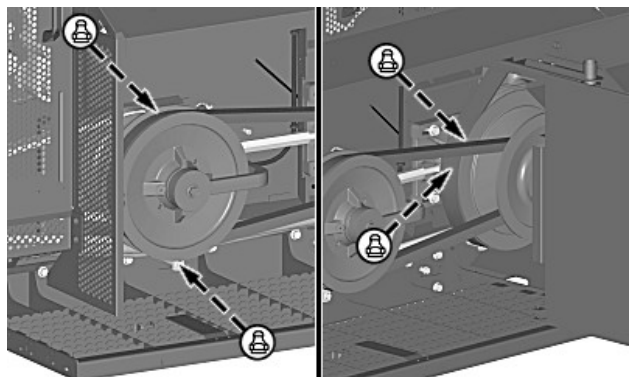
Nut—Torque. . . . . 303 N·m  
(224 lb·ft)

When the sprocket reaches the end of slot (C), replace the feeder house conveyor drive chain. See

Feeder House Conveyor Drive Chain—Replacing in the Feeder House section for further information.

OOU6075,0004F8A-19-19NOV20

## Cleaning Fan Variable Speed Driven/Driver Sheaves (Severe Conditions)



H127250—UN—03SEP19

Driven Sheaves / Driver Sheaves

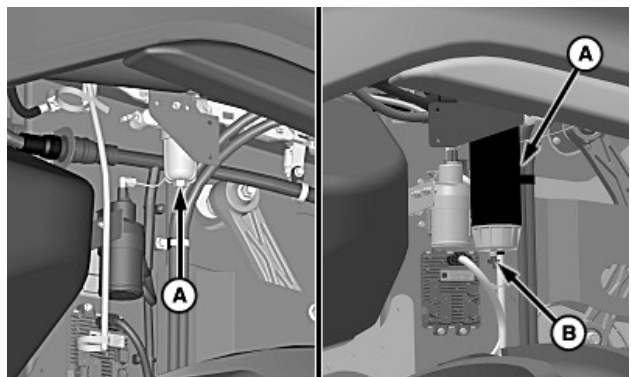
**IMPORTANT:** To prevent damage to the cleaning fan variable speed driven/driver sheaves, do not over grease. Pump 10 shots of grease into each fitting.

*NOTE:* When operating consistently in hilly conditions, grease the cleaning fan variable speed driven/driver sheaves every 50 hours. In normal conditions, grease every 100 hours.

Close the sheaves (high speed) before greasing. Cycle the fan speed to distribute the grease if operated at constant speed all the time.

OOU6075,0004C28-19-22NOV19

## Fuel Precleaner Filter



H132343—UN—11NOV20

Style A / Style B

A—Fuel Precleaner Filter  
B—Drain

**CAUTION:** Shut OFF engine, set park brake, and remove key before performing maintenance work on fuel filters.

Depending on the machine option, clean or drain fuel precleaner.

### Fuel Precleaner (Style A)

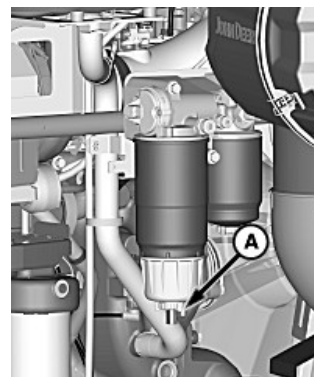
1. Visually check the fuel precleaner filter (A) and clean if buildup is visible on the screen.
2. Close the valve on the fuel precleaner.
3. Remove the fuel precleaner filter and clean the screen.
4. Install the screen and filter.
5. Open the valve on the fuel precleaner to fill.

### Fuel Precleaner (Heavy-Duty Option) (Style B)

1. Close valve on the fuel precleaner.
2. Inspect the fuel precleaner filter (A).
3. Open drain (B) to inspect the fuel system for water in the fuel precleaner filter.
4. Open the valve on the fuel precleaner to fill.

OOU6075,0004C29-19-11NOV20

## Water Separator Primary Fuel Filter



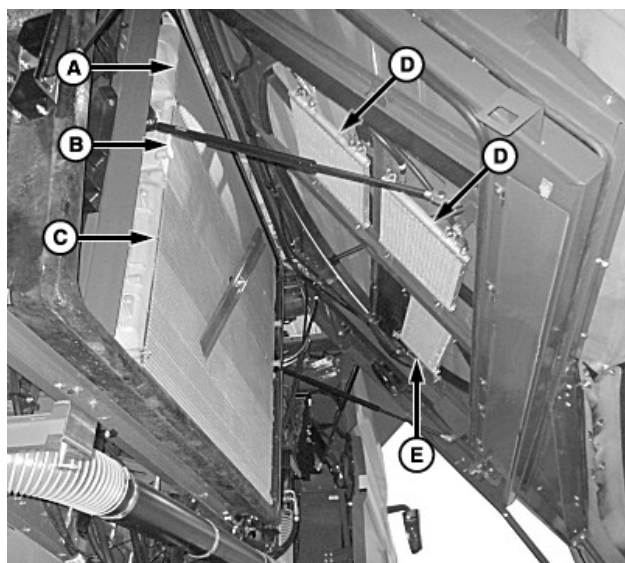
H127251—UN—03SEP19

A—Drain

1. Check the water separator for water or when diagnostic trouble code is generated.
2. To remove the water from the water separator bowl, open the drain (A). See Maintenance—As Required (Engine Fluids and Filters) section for further information.

OOU6075,0004C2B-19-24NOV20

## Rotary Screen, Charge Air Cooler, Oil Cooler, Radiator, Condensers, and Fuel Cooler



H132323—UN—10NOV20

- A—Charge Air Cooler  
B—Oil Cooler  
C—Radiator  
D—Condenser  
E—Fuel Cooler

**CAUTION:** Direction of wind, type of crop and its moisture content can all have an effect on where and how much chaff and debris accumulate in the cooling system.

- In heavy debris or windy conditions, clean the cooling system every 10 hours.
- In normal harvest conditions, clean the cooling system every 50 hours.

1. Clean the following areas from inside out:

- Charge air cooler (A)
- Oil cooler (B)
- Radiator (C)

2. Clean the following areas on the rotary screen door from inside out:

- Condensers (D)
- Fuel cooler (E)

OUC6075,0004C2C-19-10NOV20

## Mass Flow Sensor



H123564—UN—22FEB18

**NOTE:** To lower the grain tank loading auger, remove the bottom support rod hardware.

1. Lower the grain tank loading auger.
2. Clean the mass flow sensor plate.

OUC6075,0004C2D-19-27FEB20

## Cab Fresh Air Filter



H127252—UN—03SEP19

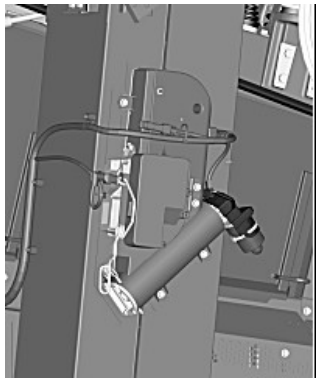
- A—Knob  
B—Fresh Air Filter

**NOTE:** The cab fresh air filter may require cleaning sooner in dusty conditions.

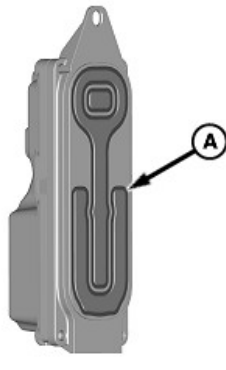
1. Turn the knob (A) and lower the access cover.
2. Remove the fresh air filter (B).
3. Clean or replace the fresh air filter.

OUC6075,0004C2E-19-15OCT19

## Moisture Sensor



A—Moisture Sensor



H127275—UN—04SEP19

**IMPORTANT:** Static electricity can damage the moisture sensor module. To avoid damage, ensure that a metal surface is touched on the machine with at least one hand or arm before working on or cleaning.

The moisture sensor has internal components that can loosen when dropped, which might not be immediately detectable. Handle the moisture sensor with care when working on or cleaning.

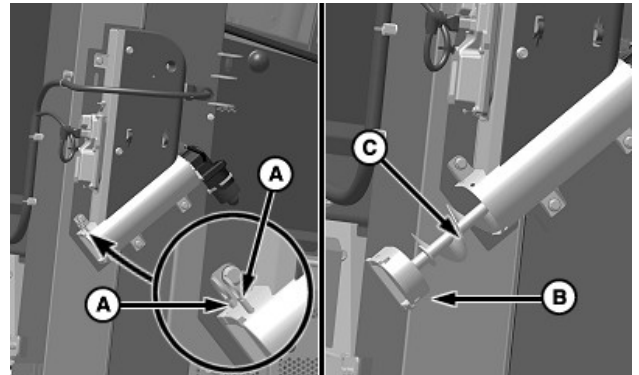
Remove and clean the moisture sensor (A) when operating in weeds, green crops, or small grains (canola).

- Do not use solvents or other cleaners on the sensor face.
- A dry rag is preferred for cleaning. If that does not work, then scrub with only a rag and water.
- Do not power wash the moisture sensor face.

Install the moisture sensor and perform a Moisture Sensor calibration. See Calibrations Application Help or Operator's Station Help for further information.

OUC6075,0004F8D-19-30NOV20

## Moisture Sensor Bypass Auger (If Required)



H132310—UN—10NOV20

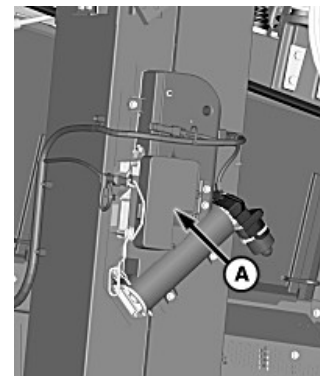
- A—Pin (2 used)  
B—End Cap  
C—Auger

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove pins (A) and end cap (B).
2. Remove auger (C) from the moisture sensor bypass.
3. Clean the auger and area inside the moisture sensor bypass.
4. Install and align the auger.
5. Install end cap and retain with pins.

OUC6075,0004F8E-19-30NOV20

## ActiveVision™ Clean Grain Elevator Camera (If Equipped)



H127237—UN—30AUG19

A—ActiveVision™ Clean Grain Elevator Camera

**NOTE:** Clean the camera lens once per week or as needed. The lens debris indicator in the software alerts the operator when the camera lens needs cleaned, as system functionality may be reduced.

*The cleaning frequency varies depending on several factors, including operating conditions, weather, and crop conditions. Clean the camera lens using a soft, moistened cloth.*

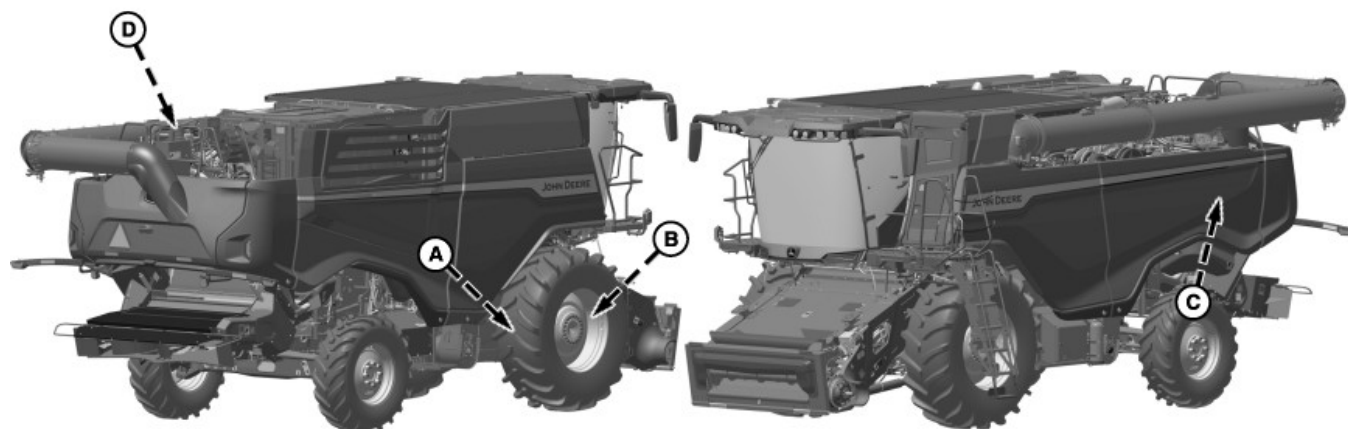
Open the latch and clean the ActiveVision™ clean grain elevator camera (A).

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OUO6075,0004C2F-19-27FEB20

# Maintenance—First 100 Hours

## Service Interval Chart—First 100 Hours

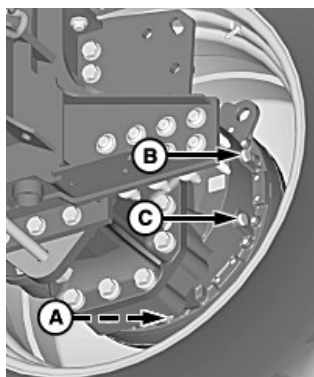


H128641—UN—10FEB20

Legend	Service	First 100 Hours
A	Change Final Drives Oil (Wheel Machines)	•
B	Replace Transmission Filter	•
C	Replace Main Engine Gear Case/Rotor Lube Filter	•
D	Replace Transmission Return Filter	•

OUC6075,0004D7F-19-18NOV20

## Final Drive Oil (Wheel Machines)



H127277—UN—04SEP19

A—Drain Plug  
B—Fill Plug  
C—Check Hole

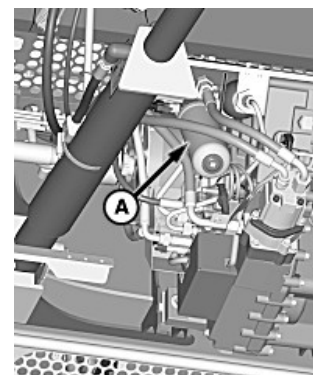
1. Remove the drain plug (A) from the final drive (both sides).
2. Allow the final drive oil to drain.
3. Install the drain plug once the oil is drained.
4. Remove the fill plug (B) from the final drive.

5. Add oil until the oil level is within 12 mm (1/2 in) of the bottom check hole (C).

6. Install the previously removed plugs.

OUC6075,0004D80-19-28JAN20

## Transmission Filter



H127450—UN—18SEP19

A—Transmission Filter

1. Remove the transmission filter (A) and discard.

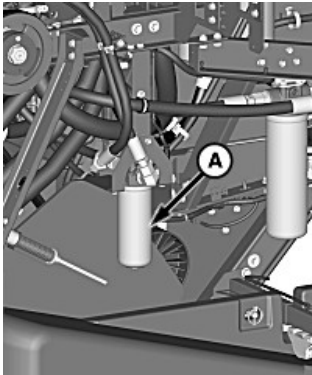
2. Coat the seal on the replacement transmission filter with oil.
3. Install the transmission filter and tighten to specification.

**Specification**

Transmission Filter—Torque. . . . . 38 N·m  
(28 lb·ft)

OUO6075,0004CA2-19-19SEP19

## Main Engine Gear Case/Rotor Lube Filter



H127455—UN—18SEP19

**A—Main Engine Gear Case/Rotor Lube Filter**

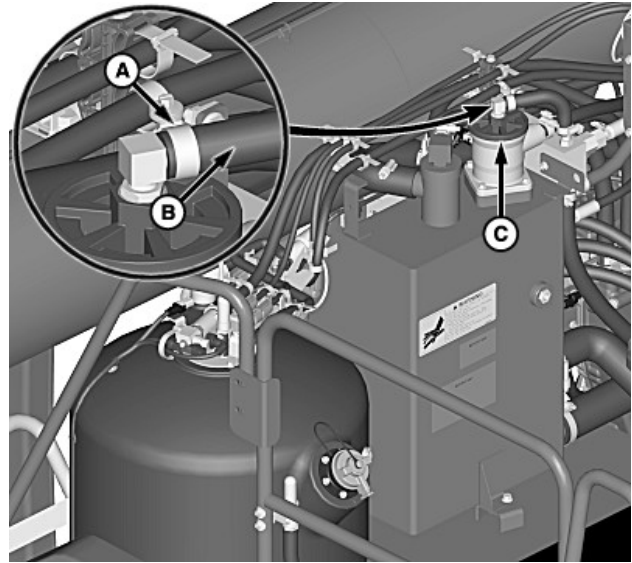
1. Remove the main engine gear case/rotor lube filter (A) and discard.
2. Coat the seal on the replacement main engine gear case/rotor lube filter with oil.
3. Install the main engine gear case/rotor lube filter and tighten to specification.

**Specification**

Main Engine Gear Case/Rotor  
Lube Filter—Torque. . . . . 38 N·m  
(28 lb·ft)

OUO6075,0004CA5-19-19SEP19

## Transmission Return Filter



H127458—UN—18SEP19

A—Clamp  
B—Hose  
C—Cap

1. Loosen clamp (A) and remove the hose (B) from the fitting.
2. Remove cap (C).
3. Use the wire handle on the transmission return filter to remove.
4. Discard the transmission return filter.
5. Coat the seal on the replacement transmission return filter with oil.
6. Install the transmission return filter.
7. Push wire handle down onto the transmission return filter and verify that wire handle locks into place.
8. Install the previously removed cap and tighten to specification.

**Specification**

Cap—Torque. . . . . 31 N·m  
(23 lb·ft)

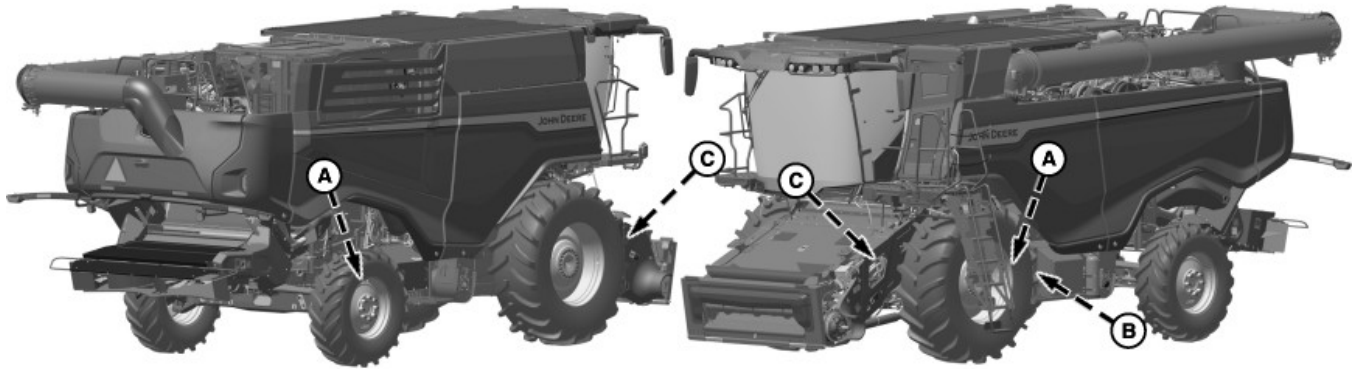
9. Install previously removed hose and retain with clamp.

OUO6075,0004CA7-19-03DEC19



# Maintenance—Every 100 Hours

## Service Interval Chart—Every 100 Hours



H128090—UN—12FEB20

Legend	Service	Every 100 Hours
A	Check Tire Pressure and Wheel Bolt Torque	•
B	Grease Cleaning Fan Variable Driven/Driver Sheaves (Normal Conditions)	•
C	Adjust Feeder House Conveyor Chain	•

OUC6075,0004C34-19-27FEB20

## Tire Pressure and Wheel Bolt Torque

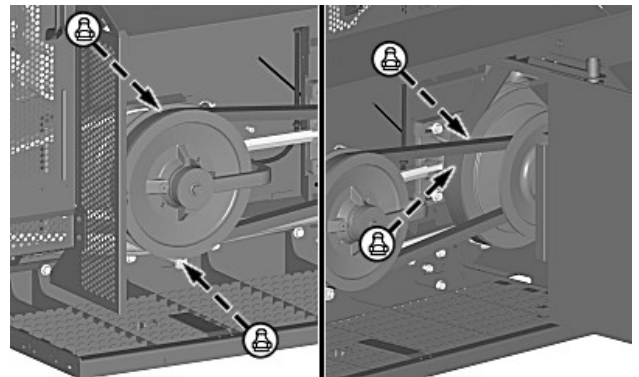


H127254—UN—03SEP19

Check the front and rear tire pressure and the wheel bolt torque. See Ground Drive and Rear Axle section for further information.

OUC6075,0004C35-19-15OCT19

## Cleaning Fan Variable Speed Driven/Driver Sheaves (Normal Conditions)



H127250—UN—03SEP19

Driven Sheaves / Driver Sheaves

**IMPORTANT:** To prevent damage to the cleaning fan variable speed driven/driver sheaves, do not over grease. Pump 10 shots of grease into each fitting.

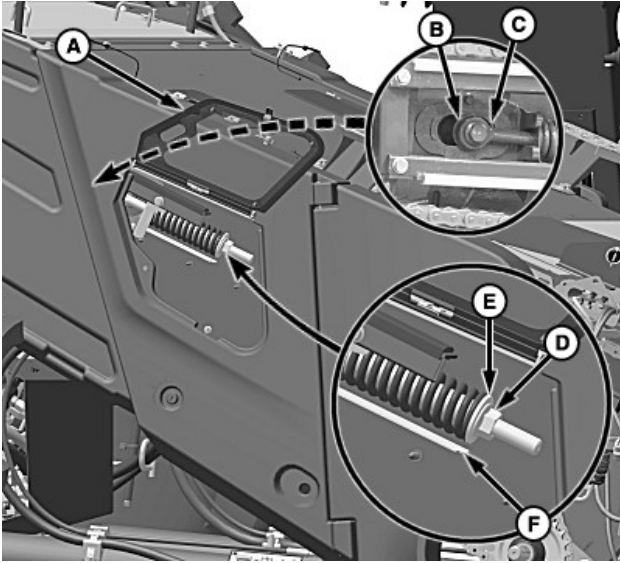
**NOTE:** When operating consistently in hilly conditions, grease the cleaning fan variable speed driven/driver sheaves every 50 hours. In normal conditions, grease every 100 hours.

Close the sheaves (high speed) before greasing. Cycle the fan speed to distribute the grease if operated at constant speed all the time.

OUO6075,0004CF8-19-22NOV19

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## Feeder House Conveyor Chain



H128973—UN—12FEB20

A—Access Door  
B—Bushing  
C—Embossment  
D—Nut  
E—Washer  
F—Gauge

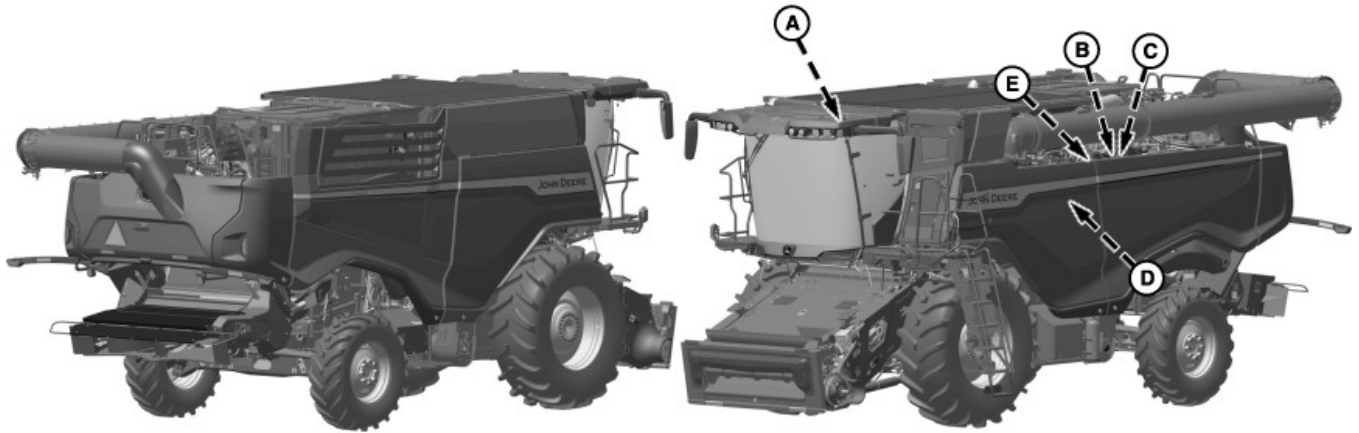
1. Open the access door (A) on both sides of the feeder house shield.
2. One offset link on each chain strand must be removed when bushing (B) aligns with the inner edge of the front embossment (C) as shown.
3. Tighten nut (D) on both sides of the feeder house until washer (E) is between the end of the gauge (F) and the bottom of the step.
4. Close the access door on both sides of the feeder house shield.

OUO6075,0004DA0-19-12FEB20

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# Maintenance—Every 200 Hours

## Service Interval Chart—Every 200 Hours

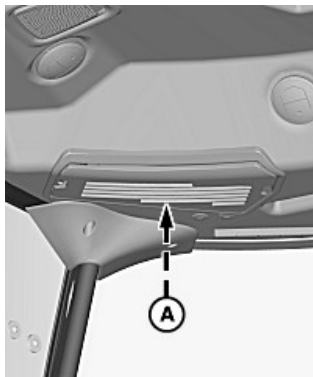


H128091—UN—26NOV19

Legend	Service	Every 200 Hours
A	Clean/Replace Recirculating Filter	•
B	Grease Separator Variable Speed Driven Sheave	•
C	Grease Separator Variable Speed Driver Sheave	•
D	Grease Front End Variable Speed Driven Sheave (If Equipped)	•
E	Grease Front End Variable Speed Driver Sheave (If Equipped)	•

OOU6075,0004C36-19-27FEB20

## Recirculating Filter



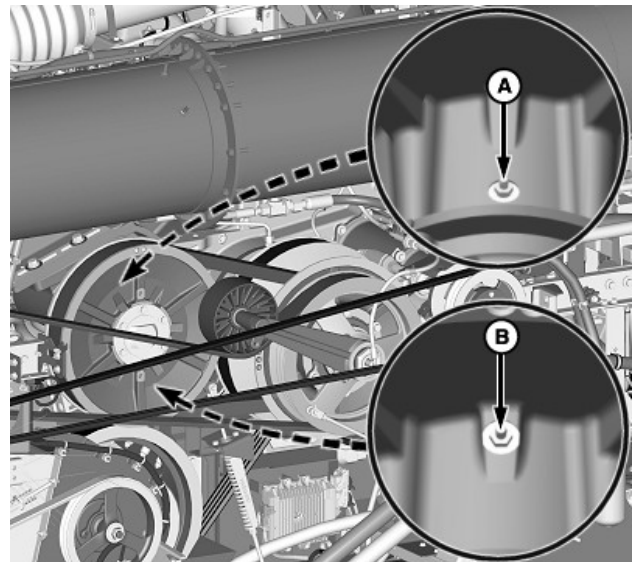
H127255—UN—03SEP19

### A—Recirculating Filter

1. Remove the cover.
2. Remove the recirculating filter (A).
3. Clean or replace the recirculating filter.

OOU6075,0004C37-19-20SEP19

## Separator Variable Speed Driven Sheave



H128166—UN—25NOV19

- A—Fitting (flat surface)  
B—Fitting (angled surface)

**IMPORTANT:** To prevent damage to the separator variable speed driven sheaves, add only John Deere Corn Head Grease to fitting (A). Add John Deere Multi-Purpose SD Polyurea Grease or John Deere Synthetic Grease to fitting (B). Pump 20 shots of grease into each fitting. Do not over grease fittings.

1. To access both fittings, rotate the sheaves.

**NOTE:** Use only John Deere Corn Head Grease when greasing fitting (A). See Fuels and Lubricants section for further information on grease recommendations.

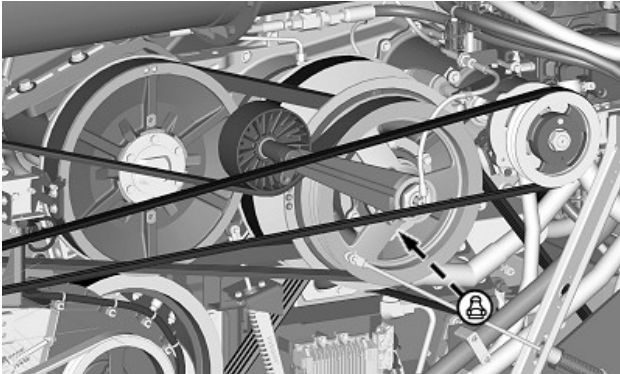
2. Grease fitting (A).

**NOTE:** Use only John Deere Multi-Purpose SD Polyurea Grease or John Deere Synthetic Grease when greasing fitting (B). See Fuels and Lubricants section for further information on grease recommendations.

3. Grease fitting (B).

OUO6075,0004CF9-19-27FEB20

## Separator Variable Speed Driver Sheave



H128167—UN—25NOV19

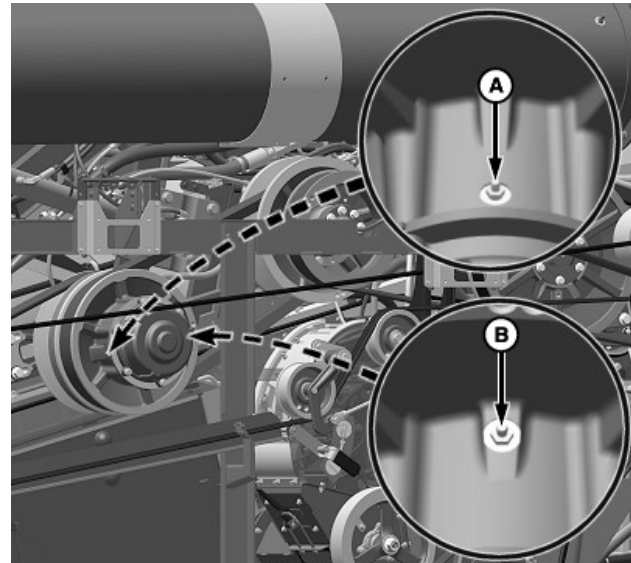
**IMPORTANT:** To prevent damage to the separator variable speed driver sheaves, do not over grease. Pump 20 shots of grease into the fitting.

**NOTE:** To distribute the grease evenly, start the machine and cycle the separator through the full speed range a couple of times.

Close the sheaves (high speed) before greasing. If operated at a constant speed all the time, cycle the separator speed to distribute the grease.

OUO6075,0004CFA-19-26NOV19

## Front End Variable Speed Driven Sheave (If Equipped)



H128169—UN—25NOV19

A—Fitting (flat surface)  
B—Fitting (angled surface)

**IMPORTANT:** To prevent damage to the front end variable speed driven sheaves, add only John Deere Corn Head Grease to fitting (A). Add John Deere Multi-Purpose SD Polyurea Grease or John Deere Synthetic Grease to fitting (B). Pump 20 shots of grease into each fitting. Do not over grease fittings.

1. To access both fittings, rotate the sheaves.

**NOTE:** Use only John Deere Corn Head Grease when greasing fitting (A). See Fuels and Lubricants section for further information on grease recommendations.

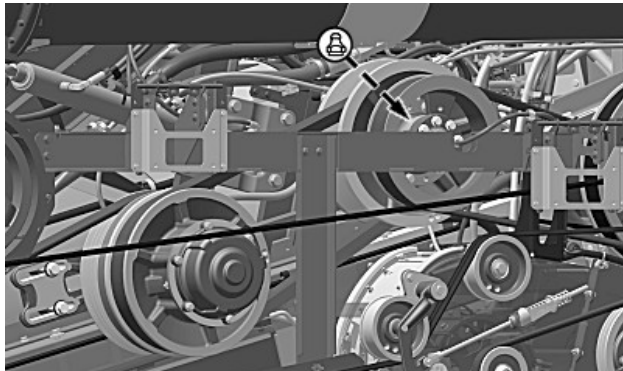
2. Grease fitting (A).

**NOTE:** Use only John Deere Multi-Purpose SD Polyurea Grease or John Deere Synthetic Grease when greasing fitting (B). See Fuels and Lubricants section for further information on grease recommendations.

3. Grease fitting (B).

OUO6075,0004CFB-19-27FEB20

## Front End Variable Speed Driver Sheave (If Equipped)



H128198—UN—26NOV19

**IMPORTANT:** To prevent damage to the front end variable speed driver sheaves, do not over grease. Pump 20 shots of grease into the fitting.

*NOTE:* To distribute the grease evenly, start the machine and cycle the separator through the full speed range a couple of times.

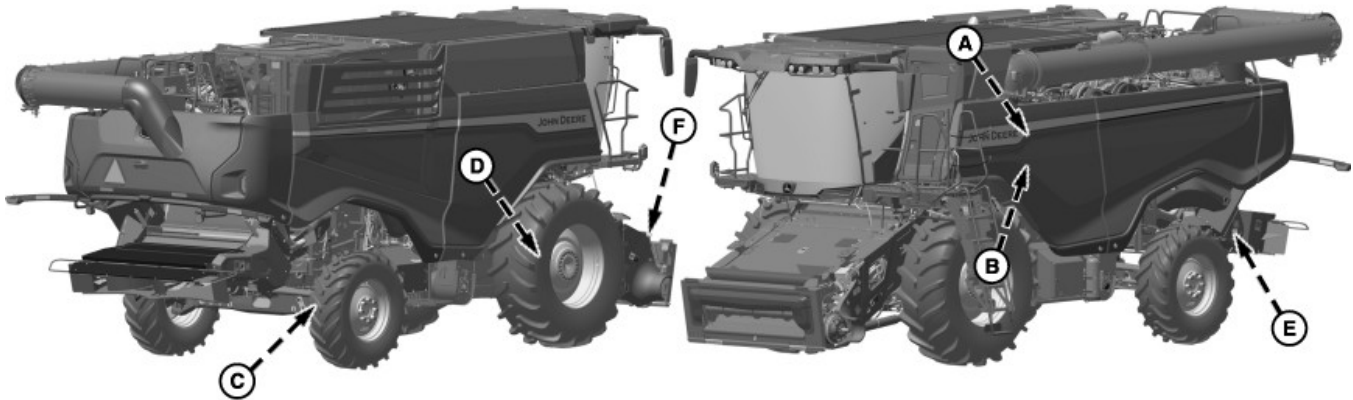
Close the sheaves (high speed) before greasing. If operated at a constant speed all the time, cycle the separator speed to distribute the grease.

OUC6075,0004D03-19-27FEB20

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# Maintenance—Every 400 Hours

## Service Interval Chart—Every 400 Hours

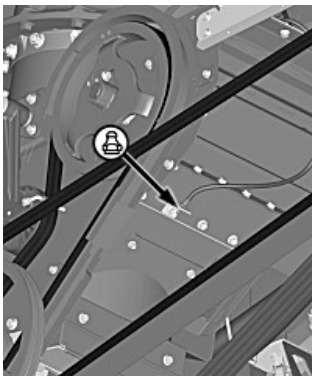


H132516—UN—02DEC20

Legend	Service	Every 400 Hours
A	Grease Unloading Elbow Gear Case	•
B	Grease Vertical Unloading Auger Upper Gear Case	•
C	Grease Rear Axle Tie Rods	•
D	Check Final Drive Oil	•
E	Change Chopper Gear Case Oil	•
F	Grease Feeder House Dust Fan (If Equipped)	•

OOU6075,0004C3F-19-02DEC20

### Unloading Auger Elbow Gear Case



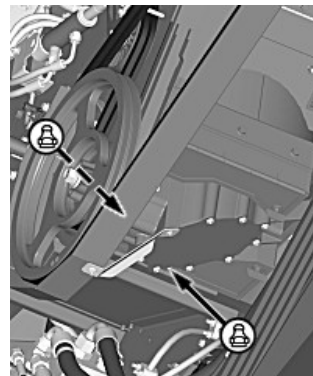
H127262—UN—03SEP19

**IMPORTANT:** To prevent damage to the unloading auger elbow gear case, do no over grease. Pump 20 shots of grease into the fitting.

Grease the fitting.

OOU6075,0004C44-19-20SEP19

### Vertical Unloading Auger Upper Gear Case



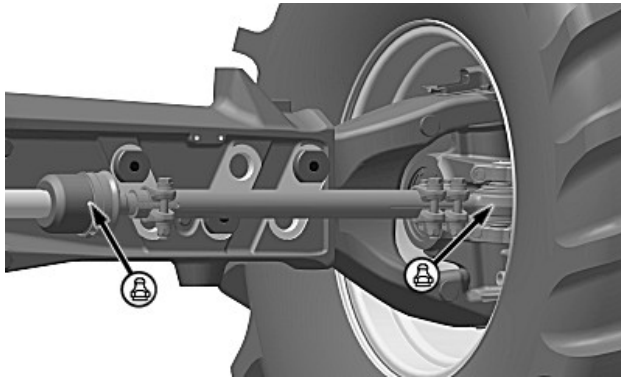
H127264—UN—03SEP19

**IMPORTANT:** To prevent damage to the vertical unloading auger upper gear case, do no over grease. Pump 20 shots of grease into the fittings.

Grease the fittings.

OOU6075,0004C47-19-20SEP19

## Rear Axle Tie Rods

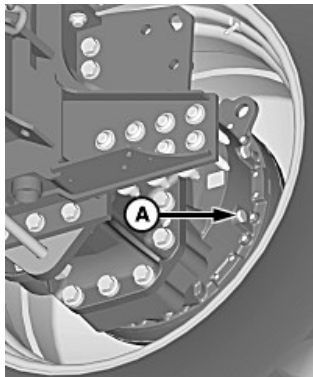


H128197—UN—26NOV19

Grease the fittings (both sides) on the inner and outer rear axle tie rods.

OUC6075,0004C52-19-26NOV19

## Final Drive Oil



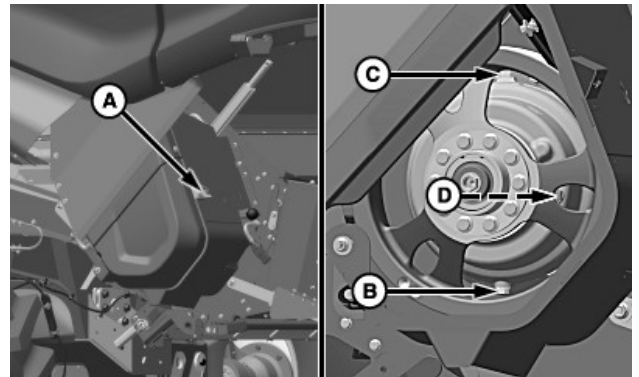
H127269—UN—04SEP19

**A—Plug**

1. Remove the plug (A) and check the oil level (both sides).
2. The oil level should be within 12 mm (1/2 in) of the bottom of the hole.
3. Add oil as needed.
4. Install the previously removed plug.

OUC6075,0004C56-19-27JAN20

## Chopper Gear Case Oil



H132445—UN—18NOV20

**A—Latch**  
**B—Drain Plug**  
**C—Fill Plug**  
**D—Sight Glass**

1. Release latch (A) and rotate shield to open.
2. Remove the drain plug (B) from the two-speed chopper gear case.
3. Allow the two-speed chopper gear case oil to drain.
4. Install the drain plug once the oil is drained.
5. Tighten the drain plug to specification.

### Specification

Drain Plug—Torque. . . . . 30 N·m  
 (22 lb·ft)

6. Remove the fill plug (C) from the two-speed chopper gear case.

**NOTE:** See *Fuels and Lubricants* section for oil recommendations and see *Specifications* section for oil capacity.

7. Add oil until the oil level is visible at sight glass (D).
8. Tighten the fill plug to specification.

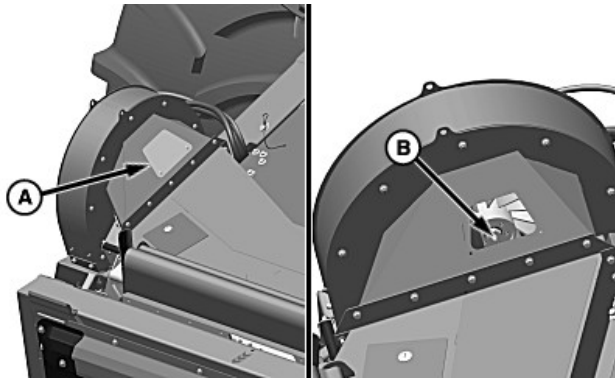
### Specification

Fill Plug—Torque. . . . . 30 N·m  
 (22 lb·ft)

9. Start the machine and run the separator for a maximum of 1 minute.
10. Shut OFF the engine and let the machine sit for 5 minutes, allowing the air to settle from the two-speed chopper gear case.
11. Verify that oil is visible at sight glass.
12. Repeat the procedures as needed until the oil level is visible at sight glass.

OUC6075,0004F89-19-19NOV20

## Feeder House Dust Fan (If Equipped)



H130477—UN—10JUN20

A—Access Door  
B—Fitting

**IMPORTANT:** To prevent damage to the feeder house dust fan, do not over grease. Pump 10 shots of grease into the fitting.

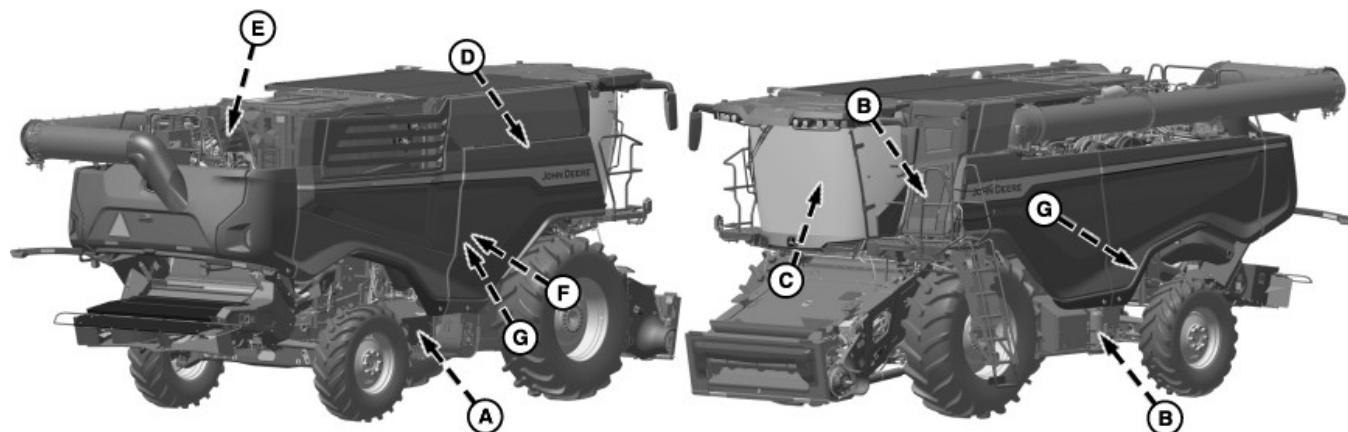
1. Remove the access door (A) on the feeder house dust fan.
2. Grease fitting (B).
3. Install the access door on the feeder house dust fan.

OUO6075,0004E71-19-10JUN20

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## Service Interval Chart—Every 400 Hours (Continued)



H128094—UN—04JUN20

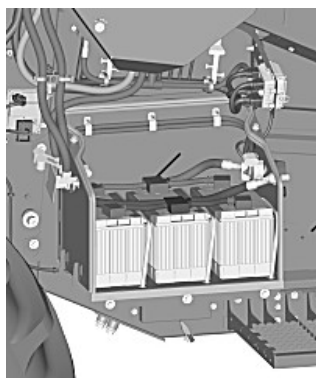
Legend	Service	Every 400 Hours
A	Service/Clean Batteries	•
B	Inspect/Charge/Replace Fire Extinguishers	•
C	Inspect Seat Belts	•
D	Check Loading Auger Fixed Gear Case Oil Check Loading Auger Pivoting Gear Case Oil	•
E	Check Air Filter Elements	•
F	Clean Moisture Sensor Clean Moisture Sensor Bypass Auger (If Required)	•
G	Replace ActiveVision™ Clean Grain Elevator Camera and Tailings System Camera Desiccant Cartridge (If Equipped) <sup>a</sup>	•

ActiveVision is a trademark of Deere &amp; Company

<sup>a</sup>If the harvest season is complete, wait until the beginning of the next harvest season to extend the desiccant cartridge life.

OUO6075,0004C57-19-30NOV20

## Batteries



H127271—UN—04SEP19

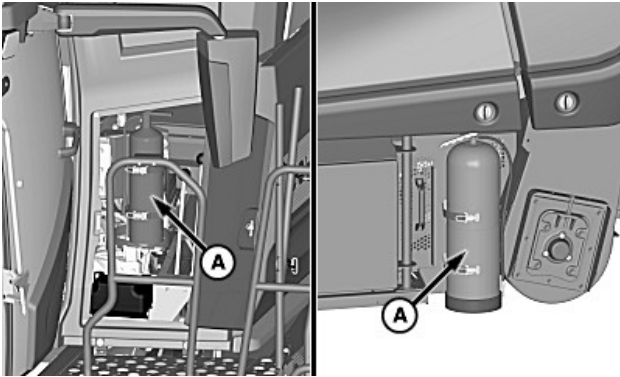
1. Remove the battery box cover.
2. Clean the top of the batteries.
3. Visually check the water level in each cell.

**NOTE:** Water level must be at the bottom of each filler neck.

4. If needed, fill each cell with distilled water.
5. Clean the battery posts, cables, and tighten the connections as needed.

OUO6075,0004C5B-19-20SEP19

## Fire Extinguishers



A—Fire Extinguisher

H127272—UN—04SEP19

**CAUTION:** Inspect fire extinguisher straps and mounting hardware at least once a year. If fire extinguisher straps or mounting hardware show any sign of damage, or unusual wear, discoloration or abrasion, the entire strap and hardware must be replaced. For your safety, replace fire extinguisher components with replacement parts approved for your machine. See your John Deere dealer.

1. Inspect the fire extinguishers (A) by following the maintenance instructions on the fire extinguisher label.
2. Recharge or replace as necessary.

OOU6075,0004C60-19-27FEB20

## Seat Belts



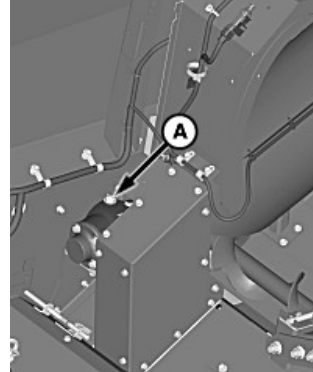
H127365—UN—10SEP19

**CAUTION:** Inspect the seat belt and mounting hardware at least once a year. If the seat belt system, including mounting hardware, buckle, belt, or retractor, shows any sign of damage or unusual wear, discoloration, or abrasion, the entire seat belt must be replaced. Replace the seat belt system only with replacement parts approved for your machine. See your John Deere dealer for further information.

Inspect seat belt (operator's seat and instructional seat) for damage.

OOU6075,0004C63-19-27FEB20

## Loading Auger Fixed Gear Case Oil



H127622—UN—30SEP19

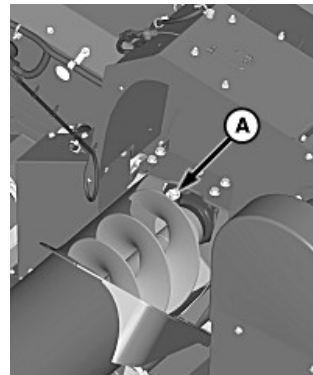
A—Dipstick

*NOTE: Loading auger gear case does not need drained.*

1. Remove dipstick (A) and check oil level.
2. Add oil as needed.

OOU6075,0004CAD-19-30SEP19

## Loading Auger Pivoting Gear Case Oil



H127623—UN—30SEP19

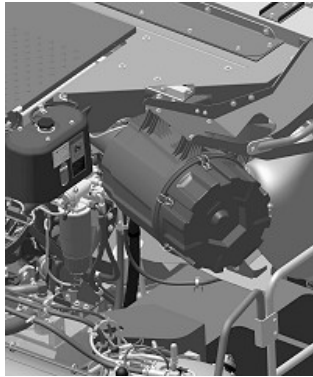
A—Dipstick

*NOTE: Loading auger gear case does not need drained.*

1. Remove dipstick (A) and check oil level.
2. Add oil as needed.

OOU6075,0004CAE-19-30SEP19

## Air Filter Elements



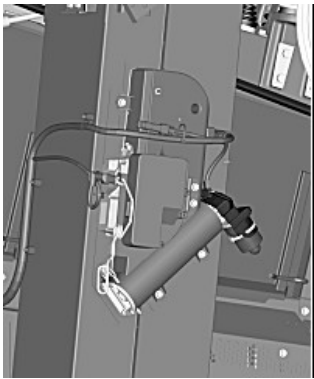
H132266—UN—05NOV20

**IMPORTANT:** To prevent engine damage, only service the primary air filter when the air filter restricted icon is displayed on the armrest display.

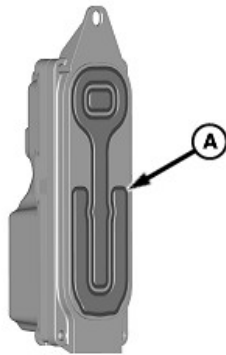
1. Remove the primary air filter and service.
2. Check the safety filter for plugging.
3. Check for leaks and for collapse of the aspirator tube.

OJ06075,0004C6A-19-05NOV20

## Moisture Sensor



A—Moisture Sensor



H127275—UN—04SEP19

**IMPORTANT:** Static electricity can damage the moisture sensor module. To avoid damage, ensure that a metal surface is touched on the machine with at least one hand or arm before working on or cleaning.

The moisture sensor has internal components that can loosen when dropped, which might not be immediately detectable. Handle the moisture sensor with care when working on or cleaning.

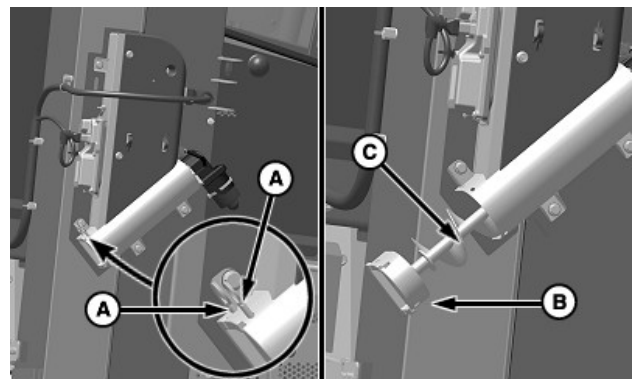
Remove and clean the moisture sensor (A) when operating in weeds, green crops, or small grains (canola).

- Do not use solvents or other cleaners on the sensor face.
- A dry rag is preferred for cleaning. If that does not work, then scrub with only a rag and water.
- Do not power wash the moisture sensor face.

Install the moisture sensor and perform a Moisture Sensor calibration. See Calibrations Application Help or Operator's Station Help for further information.

OJ06075,0004C6B-19-27FEB20

## Moisture Sensor Bypass Auger (If Required)



H132310—UN—10NOV20

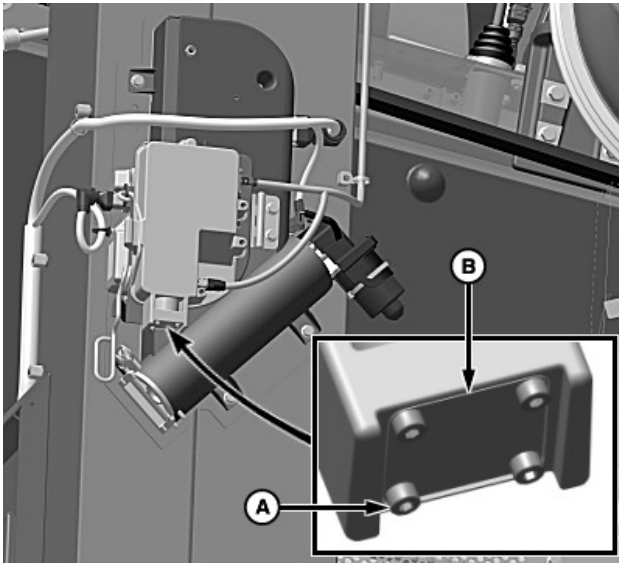
A—Pin (2 used)  
B—End Cap  
C—Auger

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove pins (A) and end cap (B).
2. Remove auger (C) from the moisture sensor bypass.
3. Clean the auger and area inside the moisture sensor bypass.
4. Install and align the auger.
5. Install end cap and retain with pins.

OJ06075,0004F8C-19-30NOV20

## ActiveVision™ Camera Desiccant Cartridge (If Equipped)



A—Hex Socket Screw (4 used)  
B—Cover Plate

**CAUTION:** Shut OFF engine, set park brake, and remove key.

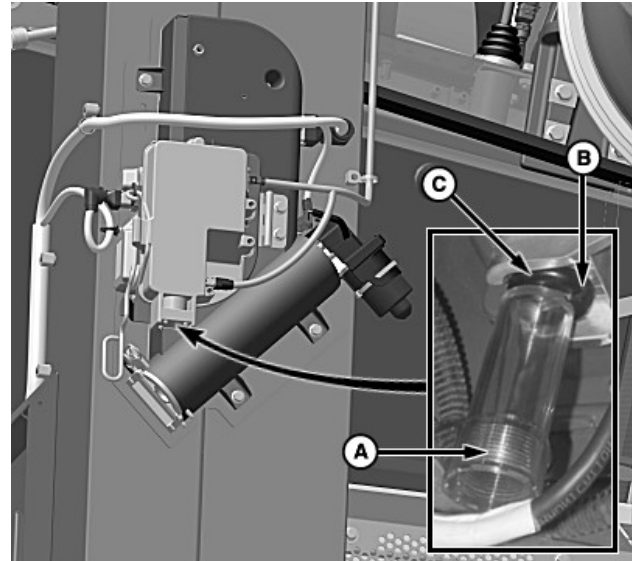
**IMPORTANT:** Crop material and other debris may accumulate around the desiccant cartridge. Inspect and clean the area around the desiccant cartridge before removing.

**NOTE:** The ActiveVision™ clean grain elevator camera is shown. The ActiveVision™ tailings system camera is similar.

Replace the desiccant cartridge as needed when the moisture buildup is visible on the interior of the camera lens.

If the harvest season is complete, wait until the beginning of the next harvest season to extend the desiccant cartridge life.

1. Remove hex socket screws (A) and cover plate (B).



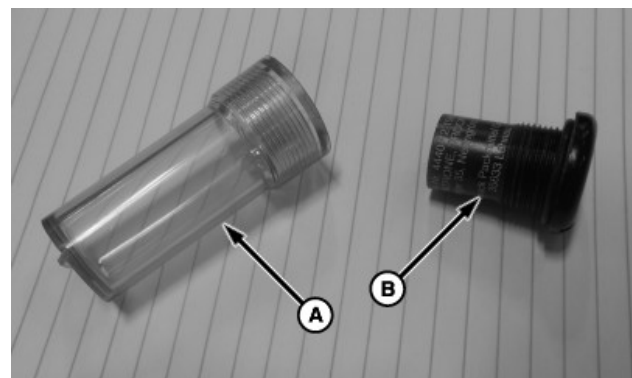
H130400—UN—28MAY20

A—Desiccant Container (tool)  
B—Notch  
C—Desiccant Cartridge

2. Align the desiccant container (A) that was included with the replacement desiccant cartridge with notch (B).

**IMPORTANT:** Do not allow crop material to enter into the ActiveVision™ camera when replacing the desiccant cartridge.

3. Remove the desiccant cartridge (C) from the ActiveVision™ camera.
4. Discard the desiccant cartridge.



H130390—UN—01JUN20

Desiccant Container (tool) and Desiccant Cartridge

A—Desiccant Container (tool)  
B—Desiccant Cartridge

5. Remove the desiccant container (A) from the replacement desiccant cartridge (B).
6. Install the desiccant cartridge into the ActiveVision™ camera.
7. Align the desiccant tool with the notch.

8. Tighten the desiccant cartridge until it is hand-tight or to specification.

**Specification**

Desiccant Cartridge—Torque. . . . . 5 N·m  
(44 lb·in)

9. Install the cover plate over the desiccant cartridge.
10. Apply threadlock and sealer (medium strength) to hex socket screws.
11. Tighten the hex socket screws to specification.

**Specification**

Hex Socket Screws—Torque. . . . . 2.5 N·m  
(22 lb·in)

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OUO6075,0004E60-19-17SEP20

# Maintenance—Every 500 Hours

## Service Interval Chart—Every 500 Hours

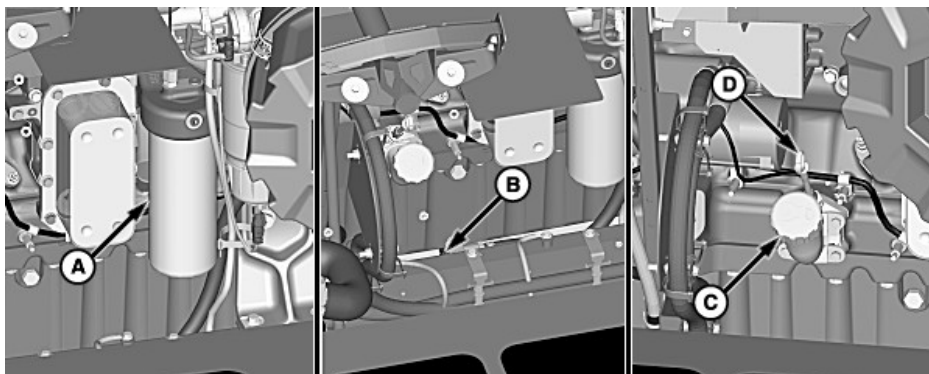


H132267—UN—11NOV20

Legend	Service	Every 500 Hours
A	Change Engine Oil and Filter	•
B	Replace Primary and Secondary Fuel Filter	•
C	Clean Fuel Precleaner Filter (Style A) Replace Fuel Precleaner Filter (Heavy-Duty Option) (Style B)	•
D	Inspect Fuel Tank Breather Inspect Fuel Tank Breather (Fast Fill Fuel System) (If Equipped)	•
E	Inspect Diesel Exhaust Fluid (DEF) Tank Breather (Final Tier 4/Stage V)	•

OOU6075,0004C3A-19-17NOV20

## Engine Oil and Filter



H128209—UN—26NOV19

A—Oil Filter  
B—Drain Valve

C—Cap  
D—Dipstick

**IMPORTANT:** Change the oil every 250 hours when using other engine oils as specified in Fuels and Lubricants section.

Change the oil every 500 hours when using John Deere Plus-50™ II engine oil and a John Deere filter. See Fuels and Lubricants section for further information.

*Plus-50 is a trademark of Deere & Company*

**Final Tier 4/Stage V engines require Plus-50™ II engine oil or API CK-4, API CJ-4, ACEA E9, ACEA E6 certified oils.**

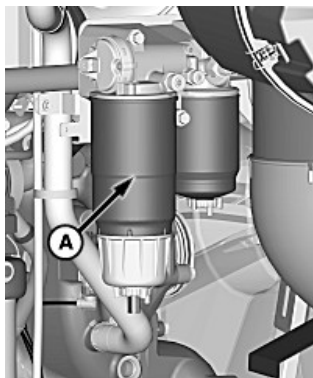
**Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 15 mg/kg (15 ppm).**

1. Remove and replace the oil filter (A).
2. To remove the oil, open the drain valve (B).
3. To fill the oil, remove the cap (C).
4. Check the oil level after filling with dipstick (D).
5. The oil level should be at the "FULL" mark on the dipstick (D).

OOU6075,0004C3C-19-27FEB20

## Primary and Secondary Fuel Filter

### Primary Fuel Filter



H128199—UN—26NOV19

**A—Primary Fuel Filter**

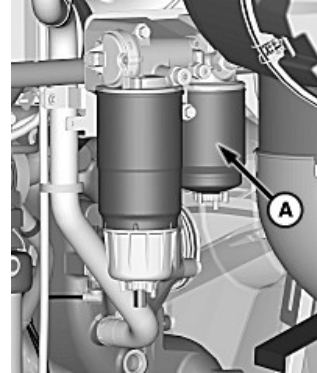
**CAUTION:** High-pressure fluid remaining in fuel lines can cause serious injury. Before disconnecting the fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles, wait a minimum of 15 minutes after the engine is stopped.

**Before performing maintenance work on the fuel filter, shut OFF engine, set park brake, and remove key.**

1. Close the valve on the fuel precleaner.
2. Remove and replace the primary fuel filter (A) when performance decline is noticed or diagnostic trouble code is generated.
3. Disconnect the water sensor (if equipped).
4. Remove the fuel from the filter and discard.
5. Install the replacement primary fuel filter.
6. Open the valve on the fuel precleaner.

7. To prime the fuel system, turn the key switch to the ON position. See Maintenance—As Required (Engine Fluids and Filters) section for further information.

### Secondary Fuel Filter



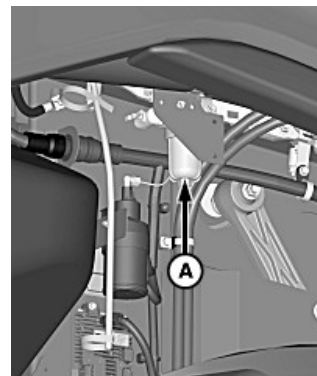
H128200—UN—26NOV19

**A—Secondary Fuel Filter**

1. Close the valve on the fuel precleaner.
2. Remove and replace the secondary fuel filter (A) when performance decline is noticed or diagnostic trouble code is generated.
3. Remove the fuel from the filter and discard.
4. Install the replacement secondary fuel filter.
5. Open the valve on the fuel precleaner.
6. To prime the fuel system, turn the key switch to the ON position. See Maintenance—As Required (Engine Fluids and Filters) section for further information.

OOU6075,0004C42-19-27FEB20

## Fuel Precleaner Filter (Style A)



H127233—UN—30AUG19

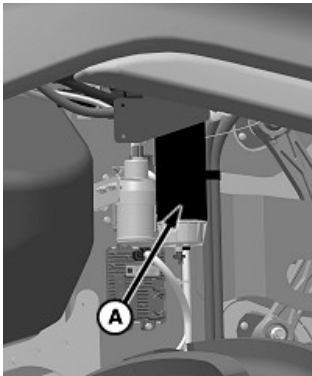
**A—Fuel Precleaner Filter**

**CAUTION:** Before performing maintenance work on the fuel precleaner filter, shut OFF engine, set park brake, and remove key.

1. Close the valve on the fuel precleaner.
2. Remove the fuel precleaner filter (A) and clean the screen.
3. Install the screen and fuel precleaner filter.
4. To fill the bowl, open the valve on the fuel precleaner.

OOU6075,0004C40-19-11NOV20

### Fuel Precleaner Filter (Heavy-Duty Option) (Style B)



H132342—UN—11NOV20

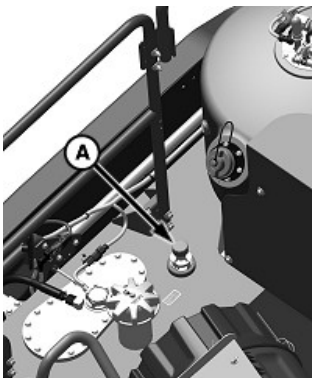
A—Fuel Precleaner Filter

**CAUTION:** Before performing maintenance work on the fuel precleaner filter, shut OFF engine, set park brake, and remove key.

1. Close the valve on the fuel precleaner.
2. Remove and replace the fuel precleaner filter (A) when performance decline is noticed or diagnostic trouble code is generated.
3. Remove the fuel from the filter and discard.
4. Install the replacement fuel precleaner filter.
5. Open the valve on the fuel precleaner.

OOU6075,0004F7C-19-17NOV20

### Fuel Tank Breather



H132268—UN—05NOV20

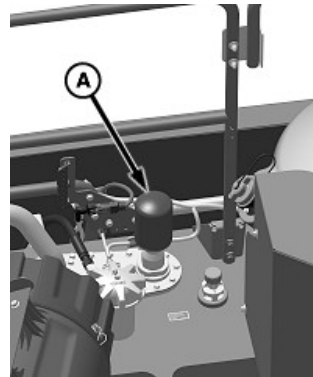
A—Fuel Tank Breather

**IMPORTANT:** To prevent fuel tank damage, do not allow debris to collect on the breather.

1. Visually inspect the fuel tank breather (A).
2. Remove the fuel tank breather and clean.

OOU6075,0004C3D-19-11NOV20

### Fuel Tank Breather (Fast Fill Fuel System) (If Equipped)



H132340—UN—11NOV20

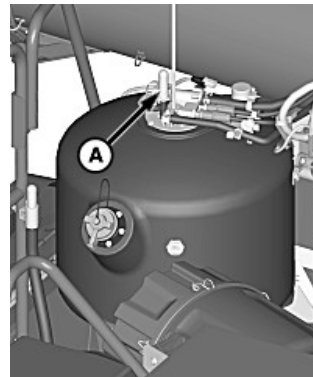
A—Fuel Tank Breather

**IMPORTANT:** To prevent fuel tank damage, do not allow debris to collect on the breather.

1. Visually inspect the fuel tank breather (A).
2. Remove the fuel tank breather and clean.

OOU6075,0004F7D-19-11NOV20

### Diesel Exhaust Fluid (DEF) Tank Breather (Final Tier 4/Stage V)



H127259—UN—03SEP19

A—Diesel Exhaust Fluid (DEF) Tank Breather

**IMPORTANT:** To prevent damage to the diesel exhaust fluid (DEF) tank, do not allow debris to collect on breather.



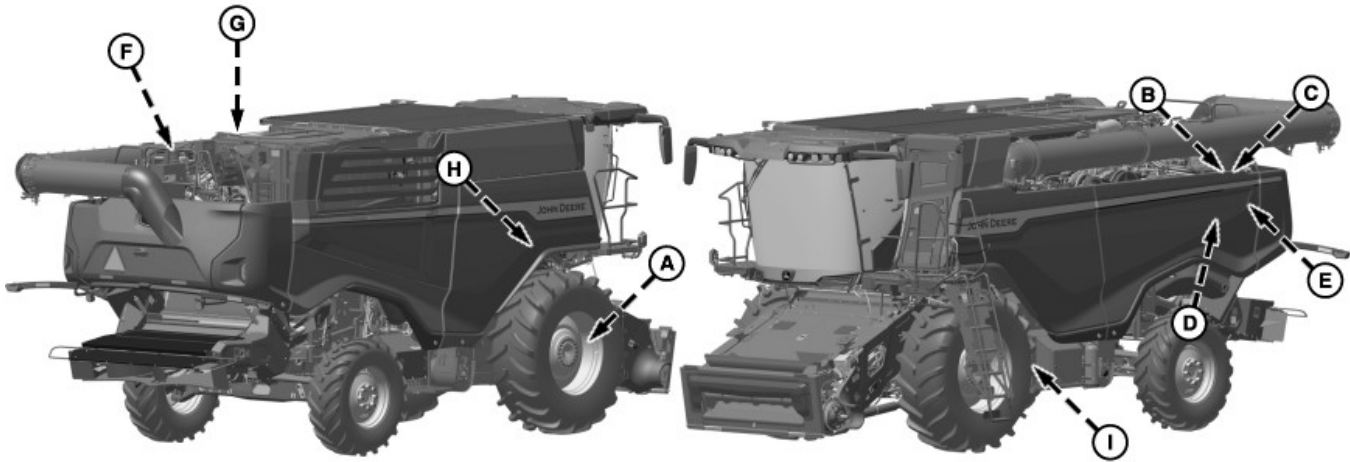
1. Visually inspect the diesel exhaust fluid (DEF) tank breather (A).
2. Remove the diesel exhaust fluid (DEF) tank breather from the hose and clean.

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OUO6075,0004C3E-19-27FEB20

# Maintenance—Every 1000 Hours

## Service Interval Chart—Every 1000 Hours

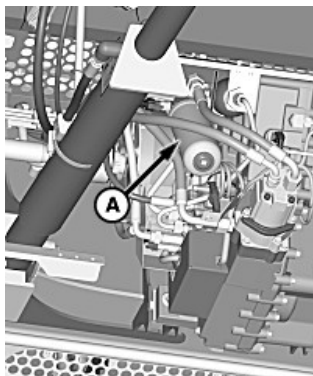


H128095—UN—20NOV19

Legend	Service	Every 1000 Hours
A	Replace Transmission Filter	•
B	Replace Hydrostatic Cooler Return Filter	•
C	Replace Auxiliary Hydraulic Return Filter	•
D	Replace Main Engine Gear Case/Rotor Lube Filter	•
E	Replace Hydrostatic Charge Filter	•
F	Replace Transmission Return Filter	•
G	Replace Main Engine Gear Case Breather	•
H	Change Feed Accelerator Gear Case Oil	•
I	Change Cleaning Fan Variable Speed Driven Sheave Oil	•

OOU6075,0004C6C-19-18NOV20

## Transmission Filter



H127450—UN—18SEP19

### A—Transmission Filter

1. Remove the transmission filter (A) and discard.
2. Coat the seal on the replacement transmission filter with oil.

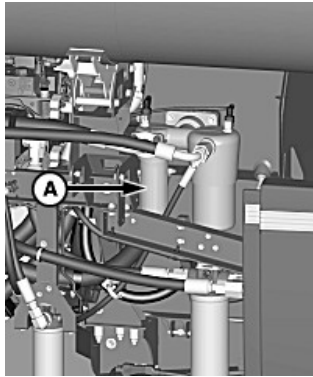
3. Install the transmission filter and tighten to specification.

### Specification

Transmission Filter—Torque. . . . . 38 N·m  
(28 lb·ft)

OOU6075,0004CA2-19-19SEP19

## Hydrostatic Cooler Return Filter



H127452—UN—18SEP19

### A—Filter Bowl

1. Remove the filter bowl (A).
2. Remove the hydrostatic cooler return filter and discard.
3. Coat the seal on the replacement hydrostatic cooler return filter with oil.
4. Install the replacement hydrostatic cooler return filter.
5. Install the previously removed filter bowl and tighten to specification.

### Specification

Filter Bowl—Torque. . . . . 41 N·m  
(30 lb·ft)

OOU6075,0004CA3-19-10DEC19

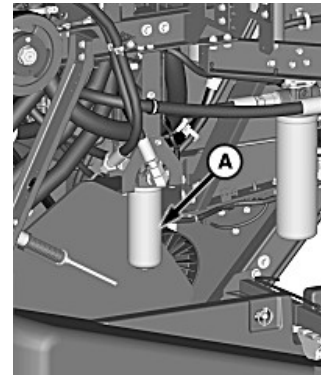
5. Remove the auxiliary hydraulic return filter and discard.
6. Coat the seal on the replacement auxiliary hydraulic return filter with oil.
7. Install and tighten the replacement auxiliary hydraulic return filter until it is hand-tight.
8. Install the previously removed filter bowl and tighten to specification.

### Specification

Filter Bowl—Torque. . . . . 50 N·m  
(37 lb·ft)

OOU6075,0004CA4-19-11DEC19

## Main Engine Gear Case/Rotor Lube Filter



H127455—UN—18SEP19

### A—Main Engine Gear Case/Rotor Lube Filter

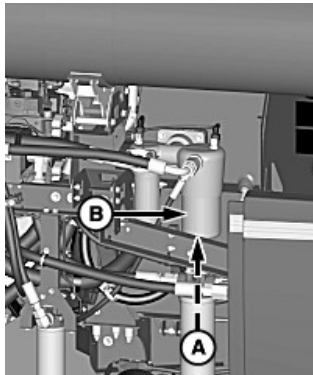
1. Remove the main engine gear case/rotor lube filter (A) and discard.
2. Coat the seal on the replacement main engine gear case/rotor lube filter with oil.
3. Install the main engine gear case/rotor lube filter and tighten to specification.

### Specification

Main Engine Gear Case/Rotor  
Lube Filter—Torque. . . . . 38 N·m  
(28 lb·ft)

OOU6075,0004CA5-19-19SEP19

## Auxiliary Hydraulic Return Filter

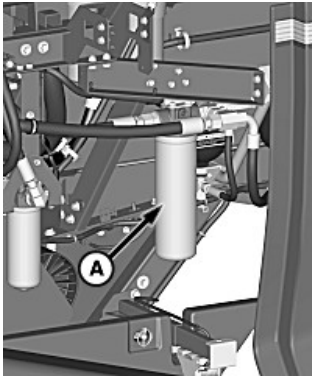


H127454—UN—11DEC19

### A—Drain Plug B—Filter Bowl

1. Remove the drain plug (A) from the bottom of the filter bowl (B).
2. Allow the filter bowl hydraulic oil to drain.
3. Install the plug in the filter bowl once the hydraulic oil is drained.
4. Remove the filter bowl.

## Hydrostatic Charge Filter



H127456—UN—18SEP19

### A—Hydrostatic Charge Filter

1. Remove the hydrostatic charge filter (A) and discard.
2. Coat the seal on the replacement hydrostatic charge filter with oil.
3. Install the hydrostatic charge filter and tighten to specification.

#### Specification

Hydrostatic Charge  
Filter—Torque. . . . . 38 N·m  
(28 lb·ft)

OUC6075,0004CA6-19-19SEP19

3. Use the wire handle on the transmission return filter to remove.
4. Discard the transmission return filter.
5. Coat the seal on the replacement transmission return filter with oil.
6. Install the transmission return filter.
7. Push wire handle down onto the transmission return filter and verify that wire handle locks into place.
8. Install the previously removed cap and tighten to specification.

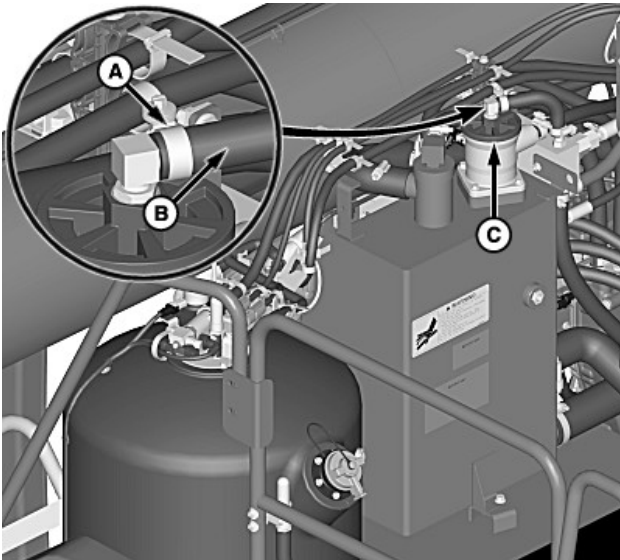
#### Specification

Cap—Torque. . . . . 31 N·m  
(23 lb·ft)

9. Install previously removed hose and retain with clamp.

OUC6075,0004CA7-19-03DEC19

## Transmission Return Filter

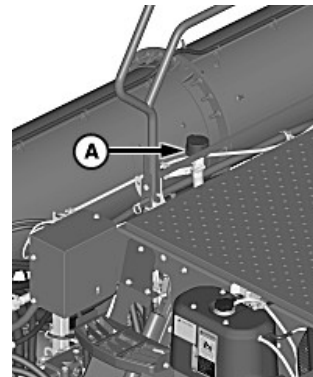


H127458—UN—18SEP19

A—Clamp  
B—Hose  
C—Cap

1. Loosen clamp (A) and remove the hose (B) from the fitting.
2. Remove cap (C).

## Main Engine Gear Case Breather



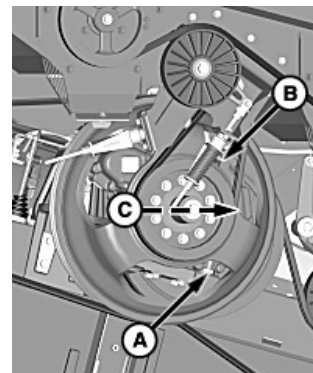
H127457—UN—18SEP19

### A—Main Engine Gear Case Breather

Remove and replace the main engine gear case breather (A).

OUC6075,0004CA8-19-19SEP19

## Feed Accelerator Gear Case



H127532—UN—24SEP19

A—Drain Plug  
B—Fill Plug  
C—Check Hole

1. Remove the drain plug (A) from the feed accelerator gear case.
2. Allow the feed accelerator gear case oil to drain.
3. Install the drain plug once the oil is drained.
4. Tighten the drain plug to specification.

**Specification**

Drain Plug—Torque. . . . . 30 N·m  
(22 lb·ft)

5. Remove the fill plug (B) from the feed accelerator gear case.

*NOTE: See Fuels and Lubricants section for oil recommendations and see Specifications section for oil capacity.*

6. Add oil until the oil level is at the bottom of the check hole (C).
7. Tighten the fill plug to specification.

**Specification**

Fill Plug—Torque. . . . . 30 N·m  
(22 lb·ft)

OUO6075,0004CAA-19-18NOV20

**Specification**

Drain Plug—Torque. . . . . 40 N·m  
(30 lb·ft)

5. Remove the fill plug (B) from the cleaning fan variable speed driven sheave.

*NOTE: See Fuels and Lubricants section for oil recommendations and see Specifications section for oil capacity.*

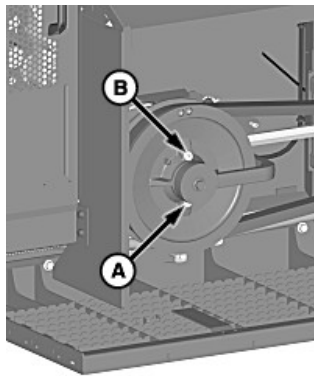
6. Add oil as needed.
7. Tighten the fill plug to specification.

**Specification**

Fill Plug—Torque. . . . . 40 N·m  
(30 lb·ft)

OUO6075,0004CAB-19-18NOV20

## Cleaning Fan Variable Speed Driven Sheave



H127541—UN—24SEP19

A—Drain Plug  
B—Fill Plug

1. Rotate the cleaning fan variable speed driven sheave so fittings are in the twelve and six o'clock positions.
2. Remove the drain plug (A) from the cleaning fan variable speed driven sheave.
3. Install the drain plug once the oil is drained.
4. Tighten the drain plug to specification.

# Maintenance—Every 1500 Hours or Three Years

## Service Interval Chart—Every 1500 Hours or Three Years

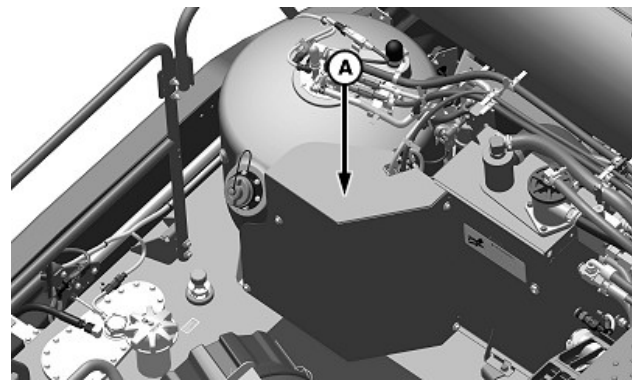


H128097—UN—26NOV19

Legend	Service	Every 1500 Hours or Three Years
A	Replace Diesel Exhaust Fluid (DEF) Dosing Unit Filter	•
B	Replace Diesel Exhaust Fluid (DEF) In-Line Filter	•

OUO6075,0004C78-19-26NOV19

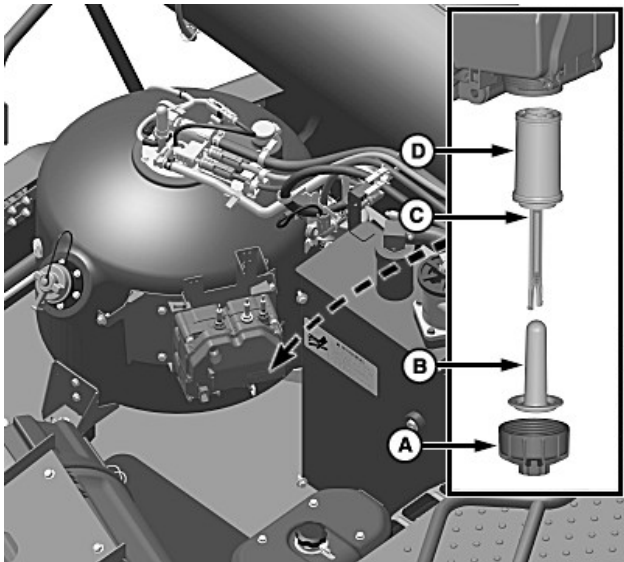
### Change Diesel Exhaust Fluid (DEF) Dosing Unit Filter



H132269—UN—05NOV20

A—Cover

1. Remove cover (A).



H128206—UN—26NOV19

DEF Dosing Unit Filter

- A—Filter Cover
- B—Equalizing Element
- C—Filter Tool
- D—DEF Dosing Unit Filter

**CAUTION:** Avoid contact with eyes. If contact occurs, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

**IMPORTANT:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of selective catalytic reduction (SCR) system leakage problems.

*NOTE: The DEF dosing unit filter and DEF in-line filter must be replaced together every 1500 hours or 36 months, whichever occurs first.*

*Servicing DEF dosing unit filter requires removing extra covers or components. See Access DEF Dosing Unit for location information.*

2. Clear all debris from area around the DEF dosing unit.

*NOTE: Wait approximately 5 minutes for DEF to purge from the system.*

3. Remove filter cover (A).
4. Remove and discard the equalizing element (B).

*NOTE: Filter tool (C) is supplied with the replacement filter.*

5. Insert “black” end of the filter tool (C) into the DEF dosing unit filter (D) until a CLICK is felt or heard, indicating that the filter tool is fully engaged.

*NOTE: A tool, such as a screwdriver, can be inserted into the filter tool slot to assist removal.*

6. Pull filter tool and DEF dosing unit filter from the DEF dosing unit. Discard DEF dosing unit filter and filter tool.
7. Clean DEF dosing unit threads and mating surfaces with distilled water.
8. Lubricate DEF filter O-rings with clean DEF. Carefully insert DEF dosing unit filter into the DEF dosing unit.
9. Install new DEF dosing unit filter equalizing element into the DEF dosing unit filter.
10. Install filter cover and tighten to specification.

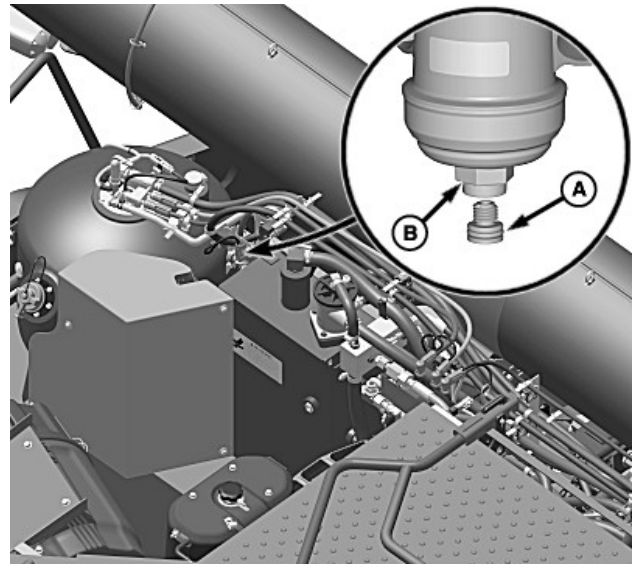
#### Specification

Filter Cover—Torque. . . . . 23 N·m  
(204 lb·in)

11. Install previously removed cover.

OUC6075,0004C79-19-05NOV20

## Replace Diesel Exhaust Fluid (DEF) In-Line Filter



H128207—UN—26NOV19

A—Drain Plug  
B—Filter Cover

**CAUTION:** Avoid contact with eyes. If contact occurs, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

**IMPORTANT:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of selective catalytic reduction (SCR) system leakage problems.

*NOTE: The DEF in-line filter and DEF dosing unit filter must be replaced together every 1500 hours or 36 months, whichever occurs first.*

1. Clear all debris from area around in-line DEF filter assembly.

**NOTE:** Wait approximately 5 minutes for DEF to purge from the system.

2. Remove and discard drain plug (A).
3. Drain DEF fluid into a proper container.
4. Remove filter cover (B).



A—Filter Assembly  
B—Filter

H125462—UN—06DEC18

5. Pull filter assembly (A) down from the DEF body.

**NOTE:** If necessary, tap filter to loosen. Plastic tabs inside the filter cover lock the filter into place.

6. Remove and discard filter (B) from filter cover.
7. Clean assembly threads and mating surfaces with distilled water.



A—Foam Spacer  
B—Seal  
C—Filter Cover

H125463—UN—06DEC18

8. Remove and discard foam spacer (A) and discard seal (B) from filter cover (C).
9. Install replacement foam spacer and replacement seal into previously removed filter cover.



A—Filter  
B—DEF Body

H125464—UN—06DEC18

**NOTE:** Plastic tabs inside the cover lock the filter into place.

10. Insert replacement filter (A) into filter cover as shown, then into the DEF body (B).

11. Install filter cover and tighten to specification.

#### Specification

Filter Cover—Torque. . . . . 25 N·m  
(221 lb·in)



A—O-Ring  
B—Notch

H125465—UN—06DEC18

12. Install replacement O-ring (A) into notch (B) on the replacement drain plug.

13. Install drain plug into filter cover and tighten to specification.

#### Specification

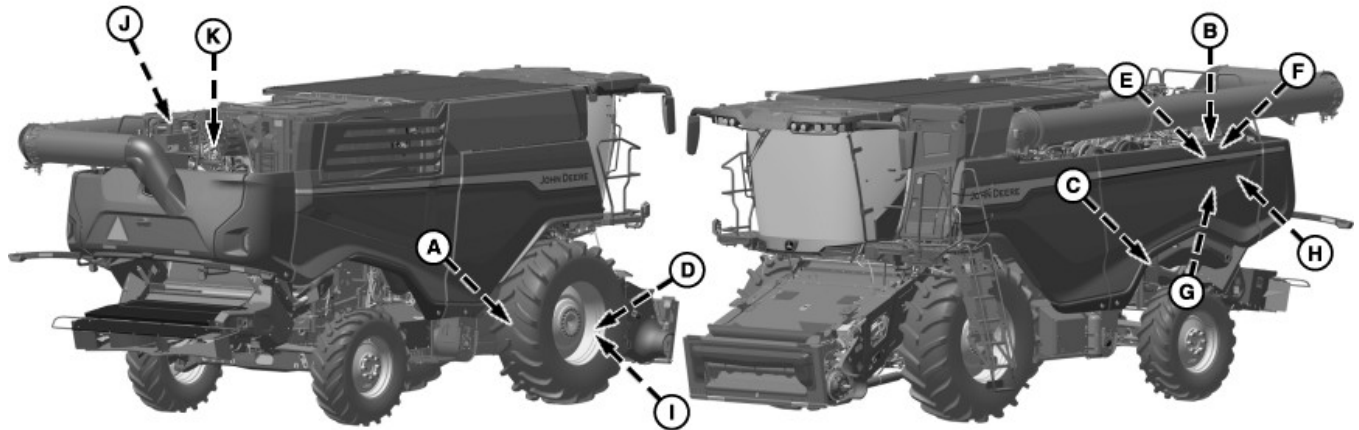
Drain Plug—Torque. . . . . 4 N·m  
(35 lb·in)

OUO6075,0004C7A-19-27FEB20



# Maintenance—Every 2000 Hours

## Service Interval Chart—Every 2000 Hours

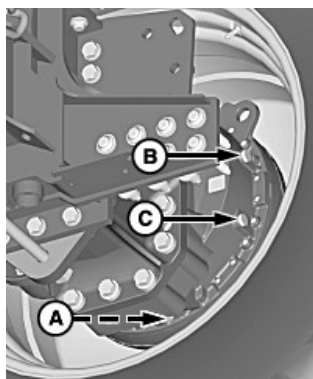


H128096—UN—21NOV19

Legend	Service	Every 2000 Hours
A	Change Final Drives Oil (Both Sides)	•
B—K	Change Hydraulic System Oil and Replace Hydraulic Filters <ul style="list-style-type: none"> <li>• B - Hydraulic Reservoir Drain Valve</li> <li>• C - Engine Gear Case Hydraulic Oil Drain</li> <li>• D - Transmission Drain Plug</li> <li>• E - Hydrostatic Cooler Return Filter</li> <li>• F - Auxiliary Hydraulic Return Filter</li> <li>• G - Main Engine Gear Case/Rotor Lube Filter</li> <li>• H - Hydrostatic Charge Filter</li> <li>• I - Transmission Filter</li> <li>• J - Hydraulic Reservoir Cap</li> <li>• K - Hydraulic Reservoir Fitting</li> </ul>	•

OUC6075,0004C6F-19-30JUN20

## Final Drive Oil



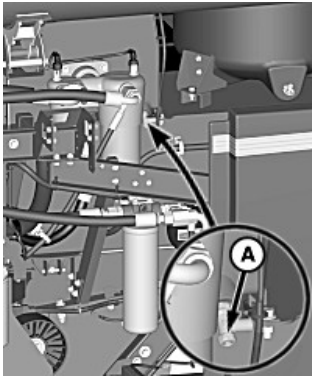
A—Drain Plug  
B—Fill Plug  
C—Check Hole

H127277—UN—04SEP19

1. Remove the drain plug (A) from the final drive (both sides).
2. Allow the final drive oil to drain.
3. Install the drain plug once the oil is drained.
4. Remove the fill plug (B) from the final drive.
5. Add oil until the oil level is within 12 mm (1/2 in) of the bottom check hole (C).
6. Install the previously removed plugs.

OUC6075,0004C72-19-27JAN20

## Hydraulic System Oil and Hydraulic Filters



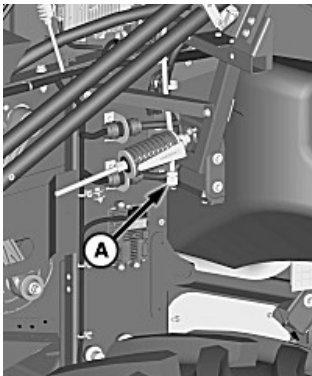
H127500—UN—20SEP19

### A—Drain Valve

1. Fully lower feeder house to the ground to retract the hydraulic lift cylinders and shut OFF engine.

**IMPORTANT: To prevent system contamination, clean hydraulic reservoir area.**

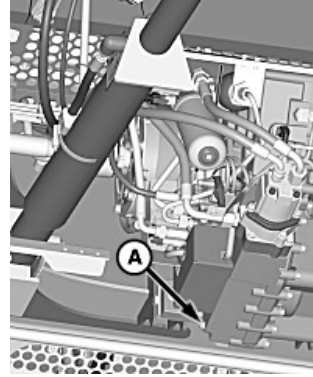
2. Install a drain hose onto the hydraulic reservoir drain valve (A).
3. To drain the hydraulic oil, open the hydraulic reservoir drain valve.
4. Close the hydraulic reservoir drain valve once the hydraulic oil is drained.



H127501—UN—20SEP19

### A—Hydraulic Cap

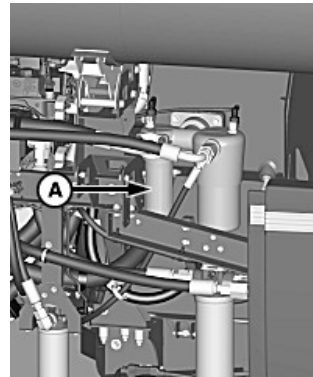
5. Remove the hydraulic cap (A) from the main engine gear case drain tube.
6. Allow the main engine gear case hydraulic oil to drain.
7. Install the hydraulic cap onto the main engine gear case drain tube once the hydraulic oil is drained.



H127502—UN—20SEP19

### A—Drain Plug

8. Remove the transmission drain plug (A).
9. Allow the transmission hydraulic oil to drain.
10. Install the plug in the transmission once the hydraulic oil is drained.



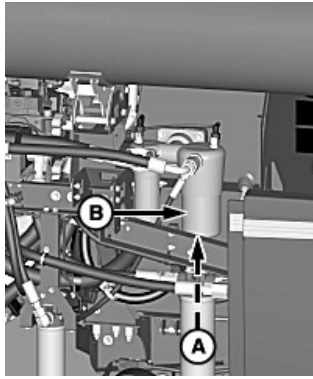
H127452—UN—18SEP19

### A—Filter Bowl

11. Remove the filter bowl (A).
12. Remove the hydrostatic cooler return filter and discard.
13. Coat the seal on the replacement hydrostatic cooler return filter with oil.
14. Install the replacement hydrostatic cooler return filter.
15. Install the previously removed filter bowl and tighten to specification.

### Specification

Filter Bowl—Torque. . . . . 41 N·m  
(30 lb·ft)



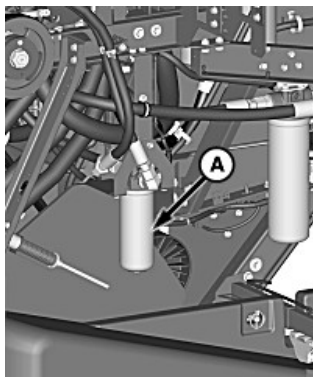
H127454—UN—11DEC19

**A—Drain Plug**  
**B—Filter Bowl**

16. Remove the drain plug (A) from the bottom of the filter bowl (B).
17. Allow the filter bowl hydraulic oil to drain.
18. Install the plug in the filter bowl once the hydraulic oil is drained.
19. Remove the filter bowl.
20. Remove the auxiliary hydraulic return filter and discard.
21. Coat the seal on the replacement auxiliary hydraulic return filter with oil.
22. Install and tighten the replacement auxiliary hydraulic return filter until it is hand-tight.
23. Install the previously removed filter bowl and tighten to specification.

**Specification**

Filter Bowl—Torque. . . . . 50 N·m  
(37 lb·ft)



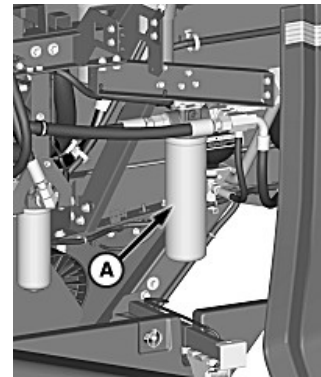
H127455—UN—18SEP19

**A—Main Engine Gear Case/Rotor Lube Filter**

24. Remove the main engine gear case/rotor lube filter (A) and discard.
25. Coat the seal on the replacement main engine gear case/rotor lube filter with oil.
26. Install the main engine gear case/rotor lube filter and tighten to specification.

**Specification**

Main Engine Gear Case/Rotor  
Lube Filter—Torque. . . . . 38 N·m  
(28 lb·ft)



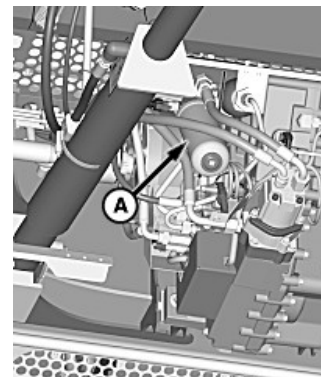
H127456—UN—18SEP19

**A—Hydrostatic Charge Filter**

27. Remove the hydrostatic charge filter (A) and discard.
28. Coat the seal on the replacement hydrostatic charge filter with oil.
29. Install the hydrostatic charge filter and tighten to specification.

**Specification**

Hydrostatic Charge  
Filter—Torque. . . . . 38 N·m  
(28 lb·ft)



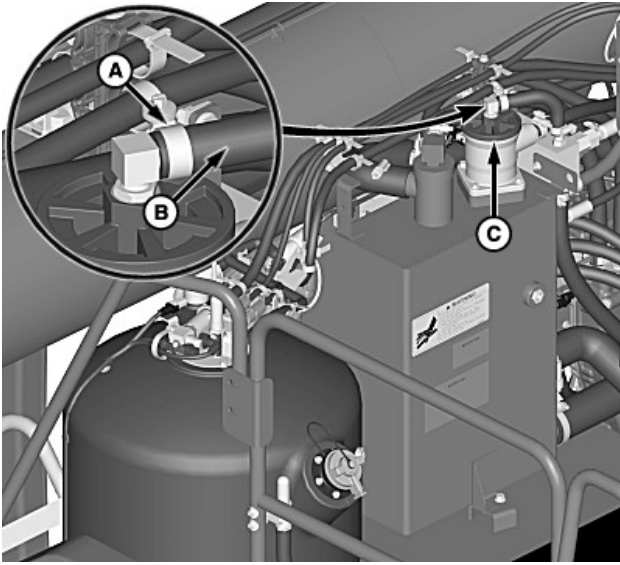
H127450—UN—18SEP19

**A—Transmission Filter**

30. Remove the transmission filter (A) and discard.
31. Coat the seal on the replacement transmission filter with oil.
32. Install the transmission filter and tighten to specification.

**Specification**

Transmission Filter—Torque. . . . . 38 N·m  
(28 lb·ft)



H127458—UN—18SEP19

A—Clamp  
B—Hose  
C—Cap

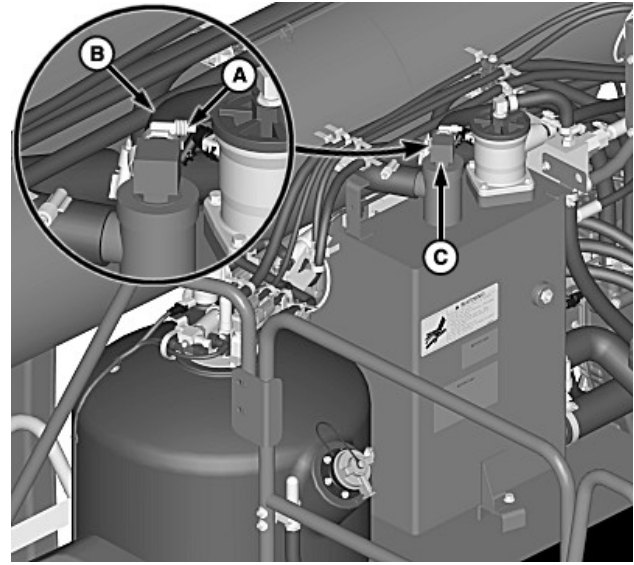
33. Loosen clamp (A) and remove the hose (B) from the fitting.
34. Remove cap (C) from the hydraulic reservoir.
35. Use the wire handle on the transmission return filter to remove.
36. Discard the transmission return filter.
37. Coat the seal on the replacement transmission return filter with oil.
38. Install the transmission return filter.

*NOTE: Verify that wire handle locks into place.*

39. Push wire handle down onto the transmission return filter.
40. Install the previously removed cap and tighten to specification.

**Specification**

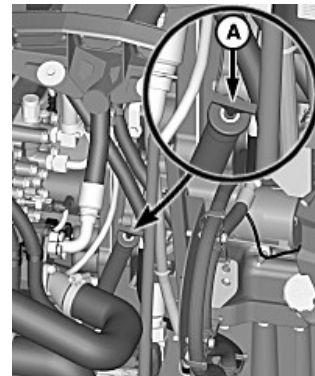
Cap—Torque. . . . . 31 N·m  
(23 lb·ft)



H127503—UN—20SEP19

A—Clamp  
B—Hose  
C—Fitting

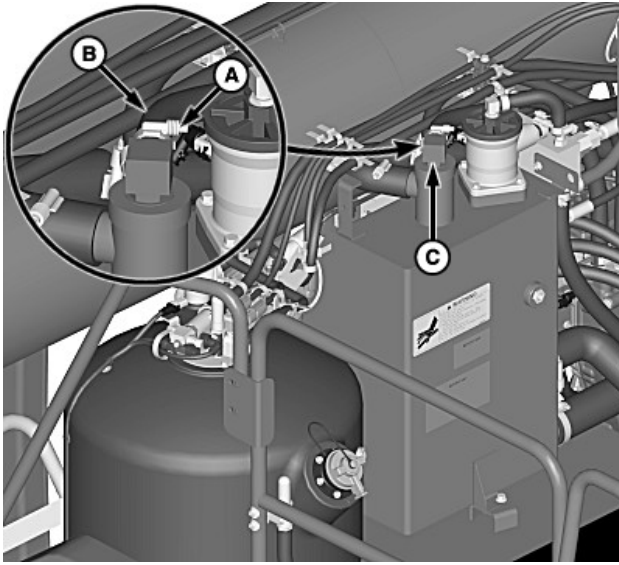
41. Loosen clamp (A) and remove the hose (B).
42. Remove fitting (C) from the hydraulic reservoir.
43. Add hydraulic oil to the hydraulic reservoir through hole opening. See Fuels and Lubricants section for oil recommendations.



H127232—UN—30AUG19

A—Dipstick

44. Add oil until the oil level is at the "ADD" mark on the dipstick (A). See Fuels and Lubricants section for oil recommendations.
45. Install previously removed dipstick.



H127503—UN—20SEP19

A—Clamp  
B—Hose  
C—Fitting

46. Install previously removed fitting (C) into the hydraulic reservoir.
47. Install previously removed hose (B) and retain with previously removed clamp (A).

**IMPORTANT: To prevent hydraulic damage, do not let the engine run longer than 1 minute.**

48. Start the machine and run the engine for a maximum of 1 minute.
49. Shut OFF the engine and let the machine sit for 5 minutes, allowing the air to settle from the hydraulic oil.
50. Remove the main engine gear case dipstick and check the oil level.
51. Add oil through the main engine gear case fill tube until the oil level is at the "FULL" mark on the dipstick.
52. Repeat the procedures as needed until the oil level remains at the "FULL" mark on the main engine gear case dipstick.

OUO6075,0004CA9-19-27FEB20

# Maintenance—Every 6000 Hours or Six Years

## Service Interval Chart—Every 6000 Hours or Six Years



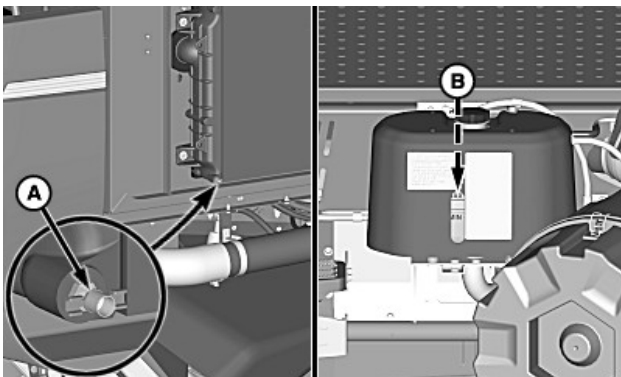
H128099—UN—20NOV19

**NOTE:** SCHEDULED coolant change interval is six years or 6000 hours if John Deere Cool-Gard™ II or Cool-Gard™ II PG is used.

Legend	Service	Every 6000 Hours or Six Years
A and B	Replace Engine Coolant	•

OOU6075,0004C7D-19-27FEB20

## Engine Cooling System



H127284—UN—04SEP19

A—Drain  
B—Surge Tank

*If a coolant other than Cool-Gard™ II or Cool-Gard™ II PG is used, reduce the drain interval to two years or 2000 hours of operation.*

1. Open the drain (A) on the radiator.
2. Flush and refill the surge tank (B) with the correct coolant and conditioner. See Maintenance—As Required (Engine Fluids and Filters) section for further information. See Fuels and Lubricants section for coolant recommendations.
3. Check the engine coolant level in the surge tank with the engine cold. The level must be up to the "Max Cold" line.

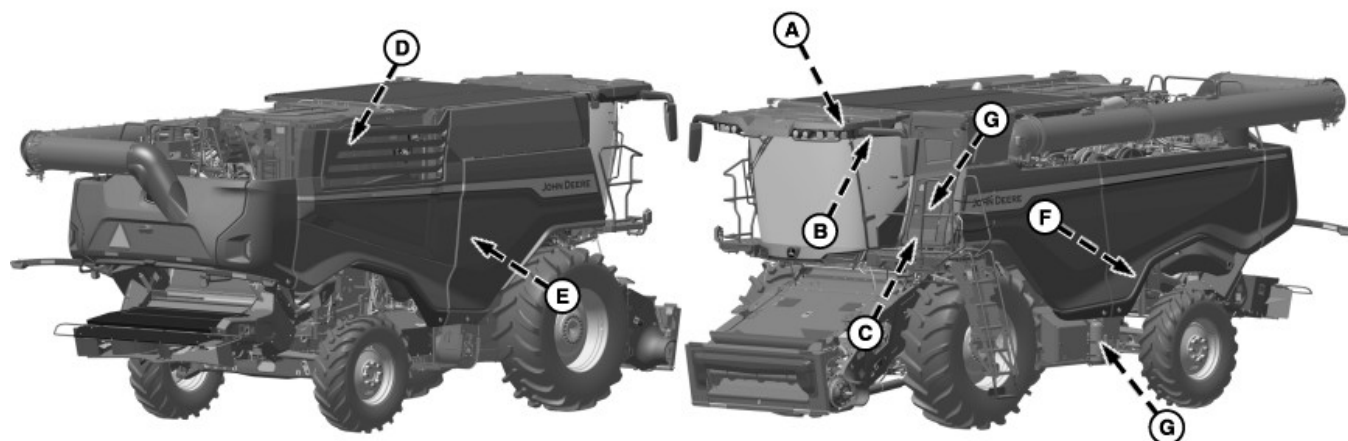
OOU6075,0004C7E-19-27FEB20

**NOTE:** When Cool-Gard™ II or Cool-Gard™ II PG is used, the drain interval is six years or 6000 hours of operation.

*Cool-Gard is a trademark of Deere & Company*

# Maintenance—As Required

## Service Interval Chart—As Required



H128100—UN—20NOV19

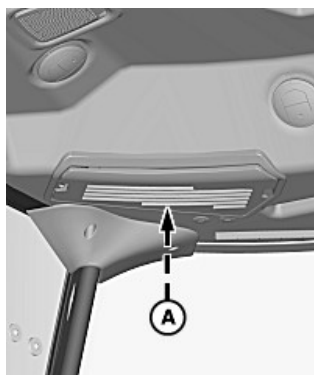
Legend	Service	As Required
A	Clean/Replace Recirculating Filter	•
B	Clean/Replace Cab Fresh Air Filter	•
C	Fill Windshield Washer Reservoir	•
D	Clean Alternator Screen	•
E	Clean Moisture Sensor Clean Moisture Sensor Bypass Auger Clean ActiveVision™ Clean Grain Elevator Camera (If Equipped) Replace ActiveVision™ Clean Grain Elevator Camera Desiccant Cartridge (If Equipped) <sup>a</sup>	•
F	Clean ActiveVision™ Tailings System Camera (If Equipped) Replace ActiveVision™ Tailings System Camera Desiccant Cartridge (If Equipped) <sup>a</sup>	•
G	Inspect Fire Extinguisher Bracket Straps (If Equipped)	•

ActiveVision is a trademark of Deere & Company

<sup>a</sup>If the harvest season is complete, wait until the beginning of the next harvest season to extend the desiccant cartridge life.

OUC6075,0004C7F-19-10NOV20

## Recirculating Filter



H127255—UN—03SEP19

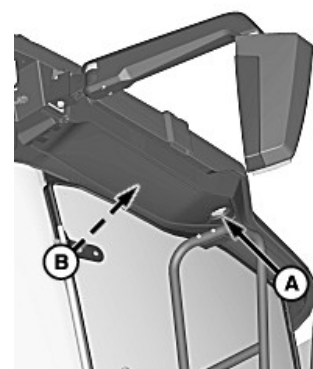
### A—Recirculating Filter

1. Remove the cover.
2. Remove the recirculating filter (A).

3. Clean or replace the recirculating filter.

OUC6075,0004C80-19-27FEB20

## Cab Fresh Air Filter



H127252—UN—03SEP19

A—Knob  
B—Fresh Air Filter

**NOTE:** The cab fresh air filter may require cleaning sooner in dusty conditions.

1. Turn the knob (A) and lower the access cover.
2. Remove the fresh air filter (B).
3. Clean or replace the fresh air filter.

OUO6075,0004C81-19-27FEB20

## Windshield Washer Reservoir



H127324—UN—05SEP19

A—Cap

1. Open the cap (A).
2. Fill the windshield washer reservoir.

OUO6075,0004C82-19-20SEP19

## Alternator Screen

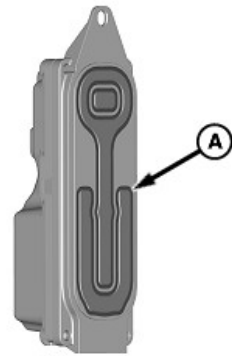
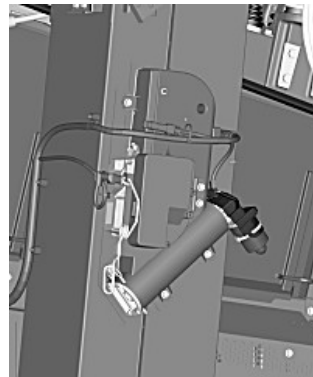


H127325—UN—05SEP19

Clean the screen when it is 50% covered with debris.

OUO6075,0004C83-19-27FEB20

## Moisture Sensor



H127275—UN—04SEP19

A—Moisture Sensor

**IMPORTANT:** Static electricity can damage the moisture sensor module. To avoid damage, ensure that a metal surface is touched on the machine with at least one hand or arm before working on or cleaning.

The moisture sensor has internal components that can loosen when dropped, which might not be immediately detectable. Handle the moisture sensor with care when working on or cleaning.

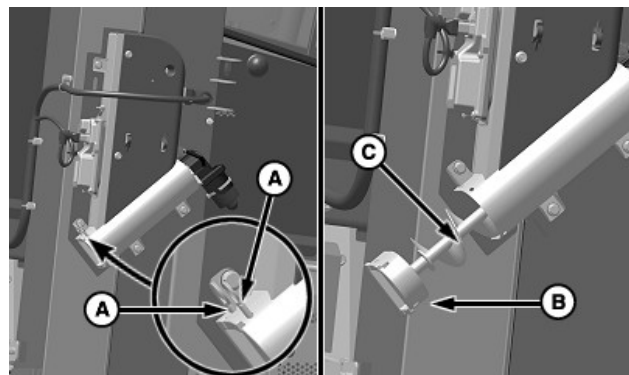
Remove and clean the moisture sensor (A) when operating in weeds, green crops, or small grains (canola).

- Do not use solvents or other cleaners on the sensor face.
- A dry rag is preferred for cleaning. If that does not work, then scrub with only a rag and water.
- Do not power wash the moisture sensor face.

Install the moisture sensor and perform a Moisture Sensor calibration. See Calibrations Application Help or Operator's Station Help for further information.

OUO6075,0004C84-19-27FEB20

## Moisture Sensor Bypass Auger



H132310—UN—10NOV20

A—Pin (2 used)



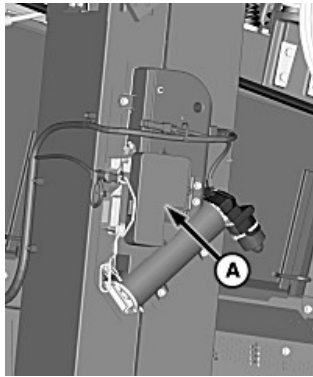
B—End Cap  
C—Auger

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Remove pins (A) and end cap (B).
2. Remove auger (C) from the moisture sensor bypass.
3. Clean the auger and area inside the moisture sensor bypass.
4. Install and align the auger.
5. Install end cap and retain with pins.

OOU6075,0004F7B-19-30NOV20

## ActiveVision™ Clean Grain Elevator Camera (If Equipped)



H127237—UN—30AUG19

A—ActiveVision™ Clean Grain Elevator Camera

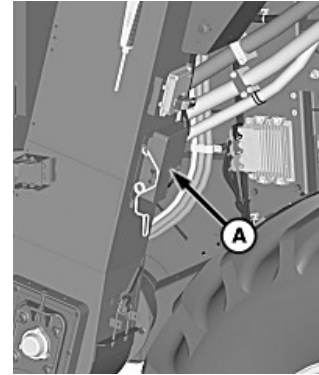
**NOTE:** Clean the camera lens once per week or as needed. The lens debris indicator in the software alerts the operator when the camera lens needs cleaned, as system functionality may be reduced.

The cleaning frequency varies depending on several factors, including operating conditions, weather, and crop conditions. Clean the camera lens using a soft, moistened cloth.

Open the latch and clean the ActiveVision™ clean grain elevator camera (A).

OOU6075,0004C85-19-27FEB20

## ActiveVision™ Tailings System Camera (If Equipped)



H127326—UN—05SEP19

A—ActiveVision™ Tailings System Camera

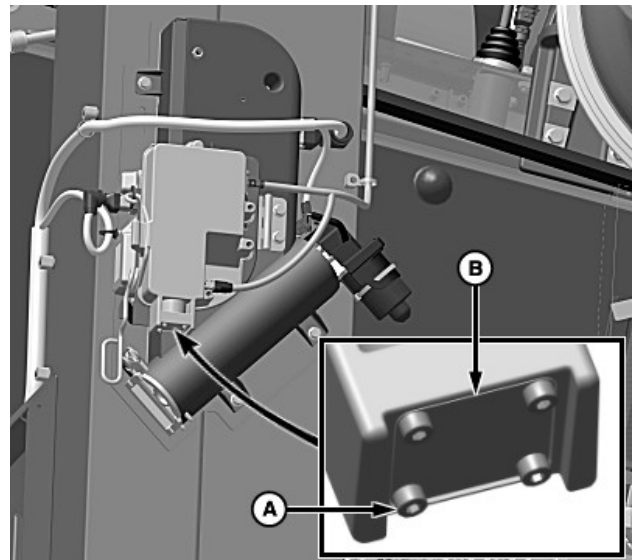
**NOTE:** Clean the camera lens once per week or as needed. The lens debris indicator in the software alerts the operator when the camera lens needs cleaned, as system functionality may be reduced.

The cleaning frequency varies depending on several factors, including operating conditions, weather, and crop conditions. Clean the camera lens using a soft, moistened cloth.

Open the latch and clean the ActiveVision™ tailings system camera (A).

OOU6075,0004C86-19-27FEB20

## ActiveVision™ Camera Desiccant Cartridge (If Equipped)



H131299—UN—27AUG20

A—Hex Socket Screw (4 used)  
B—Cover Plate

**CAUTION:** Shut OFF engine, set park brake, and remove key.

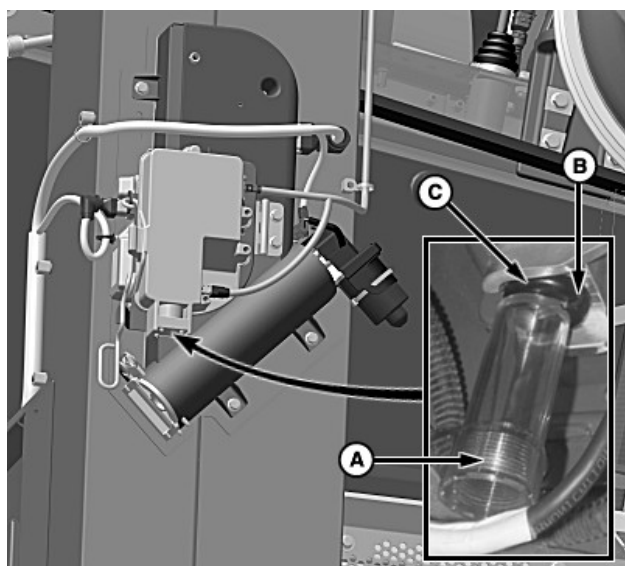
**IMPORTANT:** Crop material and other debris may accumulate around the desiccant cartridge. Inspect and clean the area around the desiccant cartridge before removing.

**NOTE:** The ActiveVision™ clean grain elevator camera is shown. The ActiveVision™ tailings system camera is similar.

Replace the desiccant cartridge as needed when the moisture buildup is visible on the interior of the camera lens.

If the harvest season is complete, wait until the beginning of the next harvest season to extend the desiccant cartridge life.

1. Remove hex socket screws (A) and cover plate (B).



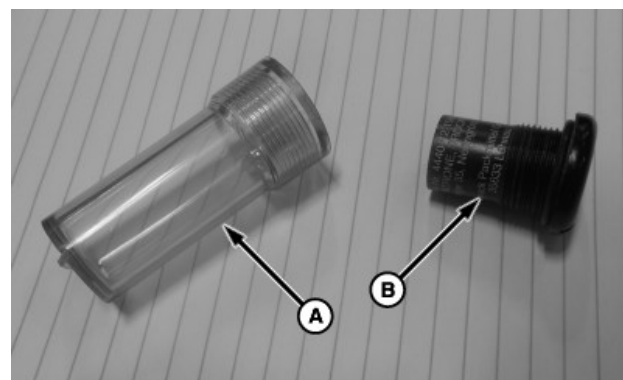
H130400—UN—28MAY20

A—Desiccant Container (tool)  
B—Notch  
C—Desiccant Cartridge

2. Align the desiccant container (A) that was included with the replacement desiccant cartridge with notch (B).

**IMPORTANT:** Do not allow crop material to enter into the ActiveVision™ camera when replacing the desiccant cartridge.

3. Remove the desiccant cartridge (C) from the ActiveVision™ camera.
4. Discard the desiccant cartridge.



H130390—UN—01JUN20

Desiccant Container (tool) and Desiccant Cartridge

A—Desiccant Container (tool)  
B—Desiccant Cartridge

5. Remove the desiccant container (A) from the replacement desiccant cartridge (B).
6. Install the desiccant cartridge into the ActiveVision™ camera.
7. Align the desiccant tool with the notch.
8. Tighten the desiccant cartridge until it is hand-tight or to specification.

#### Specification

Desiccant Cartridge—Torque. . . . . 5 N·m  
(44 lb·in)

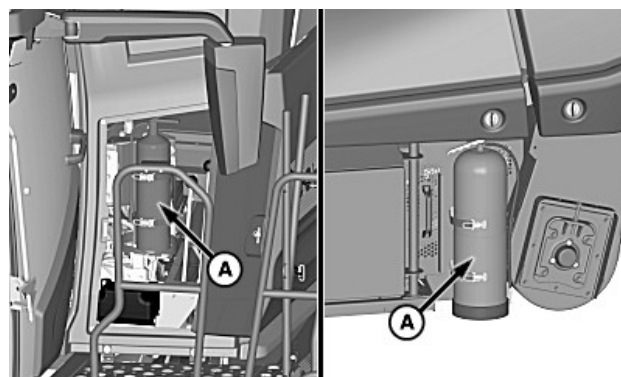
9. Install the cover plate over the desiccant cartridge.
10. Apply threadlock and sealer (medium strength) to hex socket screws.
11. Tighten the hex socket screws to specification.

#### Specification

Hex Socket Screws—Torque. . . . . 2.5 N·m  
(22 lb·in)


OUO6075,0004E57-19-17SEP20

## Fire Extinguisher Bracket Straps (If Equipped)



H127272—UN—04SEP19

A—Fire Extinguisher

 **CAUTION:** Inspect fire extinguisher straps and mounting hardware at least once a year. If fire extinguisher straps or mounting hardware show any sign of damage or unusual wear, discoloration, or abrasion, the entire strap and hardware must be replaced. For your safety, replace fire extinguisher components with replacement parts approved for your machine. See your John Deere dealer.

Inspect the fire extinguisher (A) bracket straps.

OUO6075,0004C87-19-27FEB20

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### **Clean Windows, Mirrors, and Lights**

Be sure that there is good visibility in all directions. Clean windows, mirrors, and lights to ensure good visibility.

- Do not use solvents or other cleaners. John Deere Glass Cleaner or equivalent is recommended.
- A soft, non-abrasive rag or towel is preferred for cleaning.

OUO6075,0004C88-19-27FEB20

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# Maintenance—As Required (Engine Fluids and Filters)

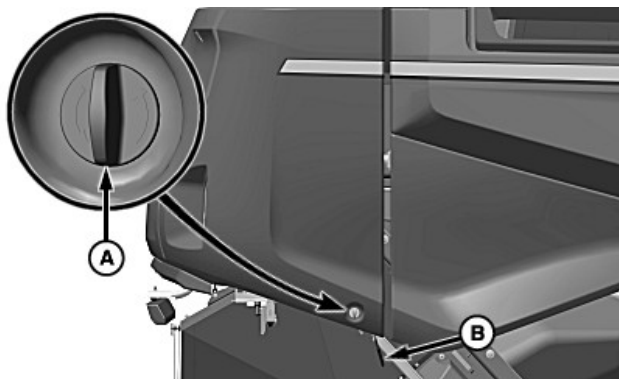
## Required Emission-Related Information

### Service Provider

A qualified repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

DX,EMISSIONS,REQINFO-19-12JUN15

## Rear Ladder



A—Latch  
B—Handle

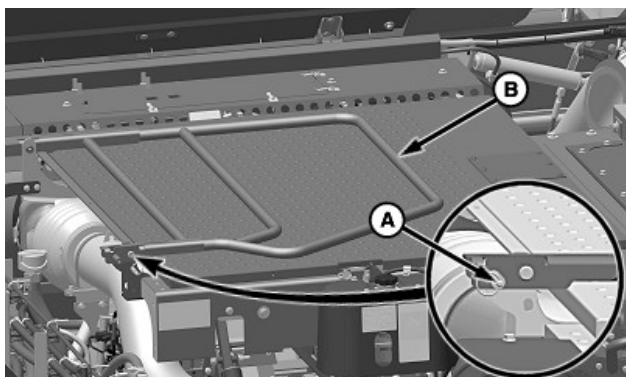
H127392—UN—04MAR20

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Turn latch (A) to unlock the ladder.
2. Use handle (B) to lower/raise the ladder fully.

MH69740,00008C1-19-09NOV20

## Engine Access Covers



A—Lockout Pin  
B—Handrail

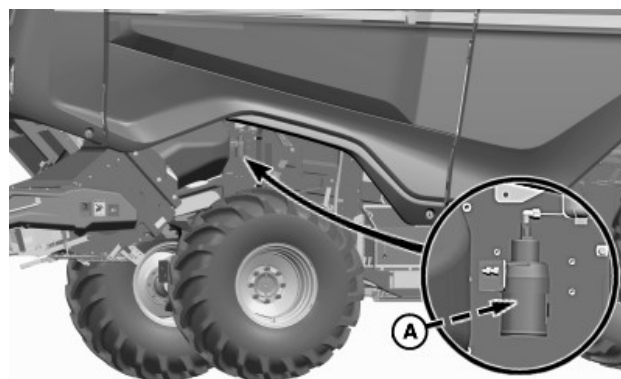
H132324—UN—10NOV20

1. Pull lockout pin (A) and rotate handrail (B) up until handrail locks into place.

2. Open engine access covers.

MH69740,00008EE-19-10NOV20

## Changing Starting Fluid Can



H127843—UN—18OCT19

A—Starting Fluid Can

**CAUTION:** Starting fluid is highly flammable and can cause injury or death to you or others if accidentally ignited. DO NOT use near fire, sparks, or flames. Read the cautionary information on the container and protect the container against damage.

1. Open the engine access cover. Remove the safety cap and spray button from starting fluid can (A). Loosen the thumb wheel enough to change the cans and then tighten.

**IMPORTANT:** To avoid drawing dust into the engine, always keep the can in position.

2. Protect the starting fluid can from extreme heat or damage.
3. Check for fluid and valve operation by installing and pressing the spray nozzle. If no fluid sprays out, replace the can.

**CAUTION:** To prevent possible injury from exploding container, do not carry extra or empty cans inside cab.

MH69740,00008EF-19-18OCT19

## Do Not Modify Engine Power or Fuel/Air System

**IMPORTANT:** Increasing horsepower, or altering any aspect of fuel and air delivery on emissions certified engines beyond factory settings, will cause emission levels beyond what is allowed by engine emission regulations. Unauthorized adjustments are in violation of the emission regulations applicable to this engine and may result in substantial fines and penalties. Machine warranty will be voided if power level is changed from factory specifications.

Do not attempt to service injection pump or fuel injectors. Special training and special tools are required. See your John Deere dealer.

OUO6075,000058D-19-11FEB10

## Fuel System



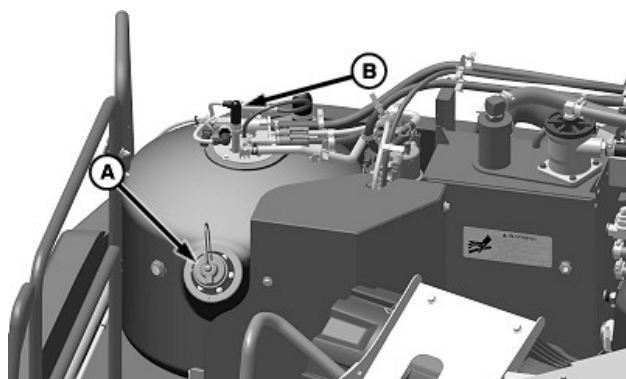
X9811—UN—23AUG88

**CAUTION:** Escaping diesel fuel under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pin holes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, it must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene may result.

OUO6075,000058E-19-11FEB10

## Diesel Exhaust Fluid (DEF) Tank—Filling



H132270—UN—05NOV20

A—Cap  
B—Diesel Exhaust Fluid (DEF) Tank Breather

**CAUTION:** Diesel exhaust fluid (DEF) contains urea. Do not get fluid in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. In the event DEF is ingested, contact a physician immediately. Reference Materials Safety Data Sheet (MSDS) for additional information.

**IMPORTANT:** Using incorrect or unapproved aftertreatment components can damage the vehicle's aftertreatment system and reduce ability of the aftertreatment system to function correctly.

**NOTE:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Cap (A) is not vented. Excess air is vented through Diesel exhaust fluid (DEF) tank breather (B).

Visually inspect the breather. Do not allow excessive amounts of chaff or debris to collect on the breather. If the breather is covered with debris, it does not allow the tank to breathe. Remove the breather from the hose and clean.

Fill tank every time the machine is refueled. If this cannot be done, monitor the Diesel exhaust fluid (DEF) level indicator on the corner post display and refill as necessary. To avoid drastic changes in the machine performance, always keep the fluid level above the topmost red mark on the level indicator. See Combine Overview Application Help or Operator's Station for further information.

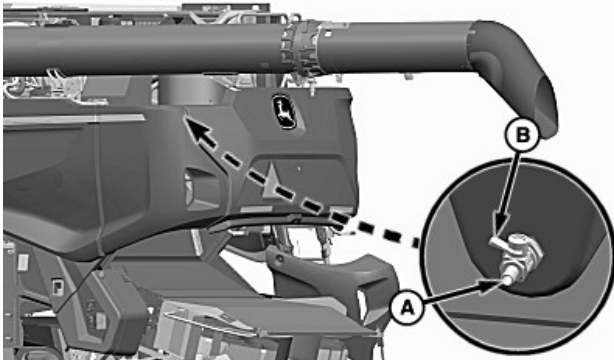
To fill tank:

1. Wash and rinse containers with distilled water to remove contaminants before adding the fluid.
2. Wipe area around the cap before removing to reduce the chance of contaminating fluid.

3. Using a funnel, carefully pour the fluid into the tank, watching the level through the sight glass.
4. Install the previously removed cap.
5. Carefully clean any spills using distilled water.

MH69740,00008F0-19-05NOV20

## Diesel Exhaust Fluid (DEF) Tank—Draining



H127845—UN—18OCT19

A—Fitting  
B—Handle

**CAUTION:** Shut OFF engine, set park brake, and remove key.

**IMPORTANT:** Long-term storage of fluids in the vehicle (over 12 months) is not recommended. If long-term storage is necessary, periodic testing of the fluid is recommended to ensure that the urea concentration does not fall out of specification.

If an unapproved fluid, such as diesel fuel or engine coolant is added, drain the tank and rinse with distilled water, then refill the tank. If the system does not operate correctly after cleaning and refilling, contact your John Deere dealer to determine how to clean and purge the system. If water has been added to the tank, drain tank, flush with distilled water, and refill with Diesel exhaust fluid (DEF). Check the concentration of fluid after filling the tank. See Fuels and Lubricants section for testing.

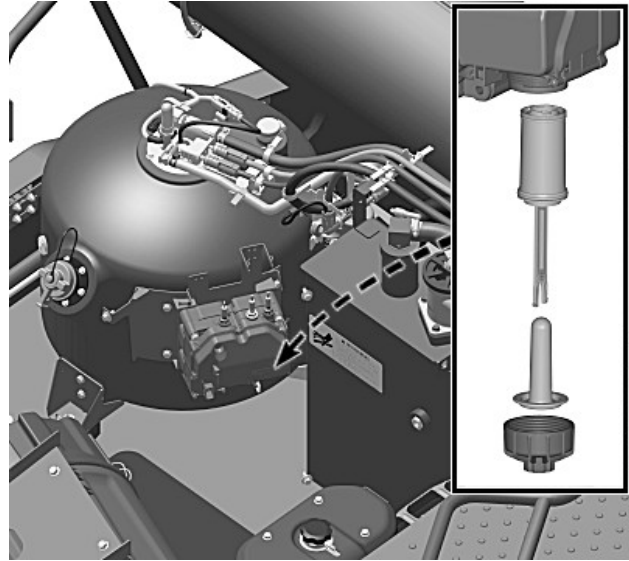
**NOTE:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. Fluid is corrosive to painted surfaces and can distort some plastic and rubber components.

1. Attach a hose to the fitting (A) at the bottom of the tank.
2. Use handle (B) to open the drain valve.

3. Close the drain valve and remove the hose once the fluid is drained.

MH69740,00008F1-19-25FEB20

## Access Diesel Exhaust Fluid (DEF) Dosing Unit Filter



H128761—UN—03FEB20

Diesel Exhaust Fluid (DEF) Dosing Unit Filter

**CAUTION:** Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

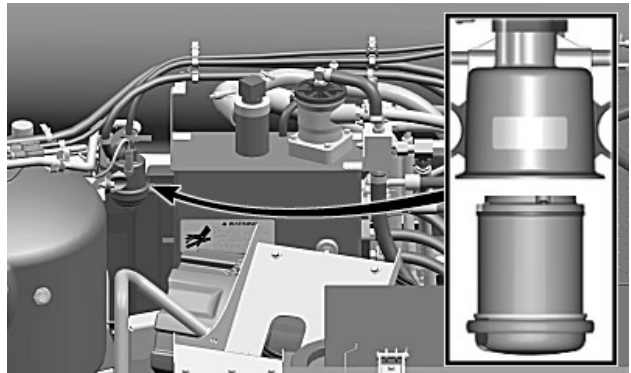
**IMPORTANT:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective catalytic reduction (SCR) system leakage problems.

1. Shut OFF engine, set park brake, and remove key.
2. Remove and replace the diesel exhaust fluid (DEF) dosing unit filter. See Change Diesel Exhaust Fluid (DEF) Dosing Unit Filter for further information.

MH69740,00008F2-19-25FEB20

## Access Diesel Exhaust Fluid (DEF) In-Line Filter



H127852—UN—21OCT19

Diesel Exhaust Fluid (DEF) In-Line Filter

**CAUTION:** Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

**IMPORTANT:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of selective catalytic reduction (SCR) system leakage problems.

1. Shut OFF engine, set park brake, and remove key.
2. Remove and replace the diesel exhaust fluid (DEF) in-line filter. See Replace Diesel Exhaust Fluid (DEF) In-Line Filter for further information.

MH69740,00008F3-19-25FEB20

## Cleaning Diesel Exhaust Fluid (DEF) Tank

**CAUTION:** Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

**IMPORTANT:** If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

If foreign material or fluid has been added to the DEF tank, drain the DEF tank, flush, and fill with new DEF.

If DEF quality is in question, pull a sample out of the DEF tank and place into a clear container. DEF should be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used.

1. Remove drain plug (if equipped), and drain or siphon bad DEF from DEF tank.

**NOTE:** Cleaning can take place with DEF tank installed or removed.

2. Clean DEF tank with new DEF.

DEF must pass visual, smell, and concentration checks before running the engine. See Diesel Exhaust Fluid (DEF) – For Use In Selective Catalytic Reduction (SCR) Equipped Engines in the Fuels, Lubricants, and Coolants Section for more information.

3. Drain or siphon DEF tank.

**NOTE:** Repeat steps 2—3 until DEF tank has been cleaned.

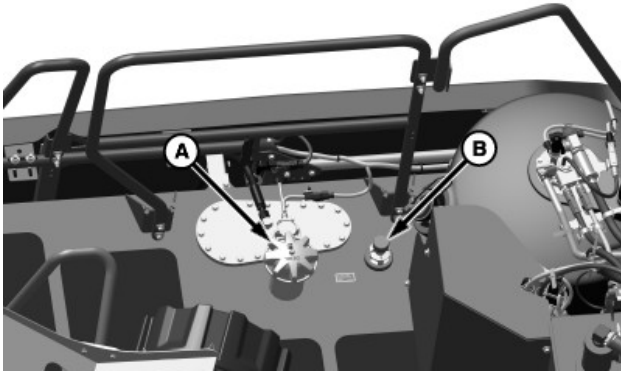
4. **Early version:** Change DEF dosing unit filter and DEF tank header suction screen.

**Later version:** Change DEF dosing unit filter and DEF inline filter.

5. If removed, install DEF tank drain plug.
6. If removed, install DEF tank.
7. Fill DEF tank with new DEF.
8. Check DEF concentration with DEF refractometer, such as JDG11594 or JDG11684. The correct DEF concentration is 31.8% — 33.2%. See your authorized dealer for more information.
9. If DEF is not within specification, does not appear clear, or does not have a slight ammonia smell, contact your authorized dealer.

DX,DEF,CLEANTANK-19-18SEP19

## Fuel Tank—Filling



H132271—UN—05NOV20

A—Fuel Tank Cap  
B—Fuel Tank Breather

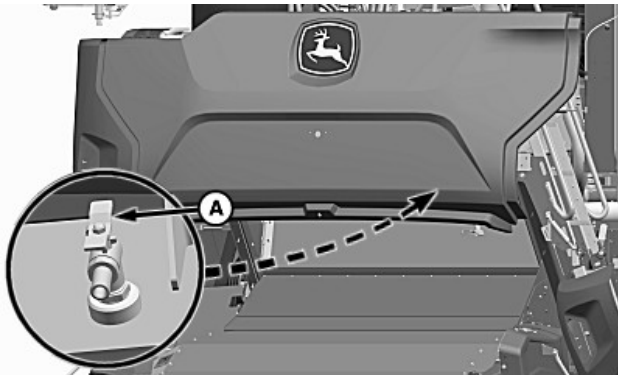
**CAUTION:** Handle fuel carefully. Do not refuel the machine while smoking. Shut OFF engine, set park brake, and remove key before filling tank.

Do not overfill the fuel tank. Bodily injury can result from fuel splash back. Leakage can result from expansion of the fuel. If the tank is too full and the temperature gets too hot (such as from being left in direct sunlight) the tank will overflow.

1. Fuel tank cap (A) is not vented. Excess air is vented through the fuel tank breather (B).
2. Visually inspect the fuel tank breather. Do not allow excessive amounts of chaff or debris to collect on the breather. If the breather is covered with debris, it does not allow the fuel tank to breathe. Remove the fuel tank breather from the hose and clean.

MH69740,00008F4-19-05NOV20

## Fuel Tank—Draining



H127856—UN—21OCT19

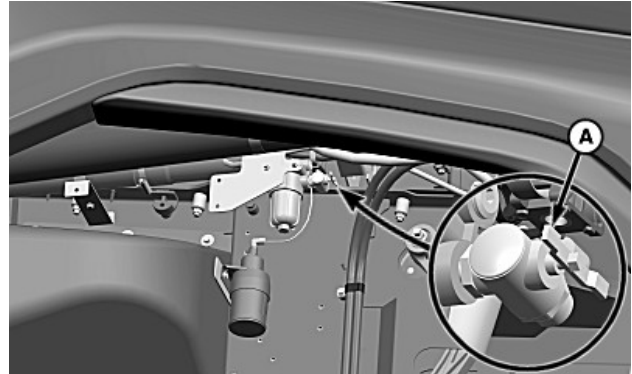
A—Drain

**CAUTION:** Shut OFF engine, set park brake, and remove key.

Turn drain (A) at the bottom of the fuel tank to drain the fuel.

MH69740,00008F5-19-13FEB20

## Fuel Precleaner—Shutoff Valve



H127857—UN—22OCT19

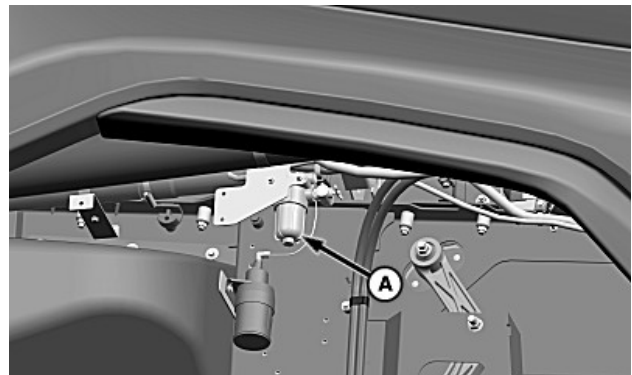
A—Valve

**CAUTION:** Shut OFF engine, set park brake, and remove key.

Close valve (A) when servicing the fuel precleaner.

MH69740,00008F6-19-13FEB20

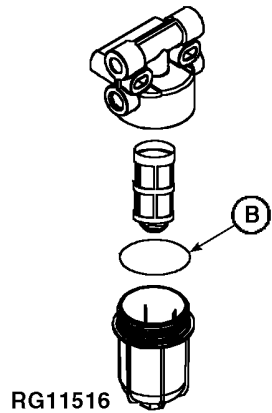
## Fuel Precleaner Filter—Cleaning (Style A)



H127870—UN—22OCT19

Fuel Precleaner Filter





Fuel Precleaner Parts

RG11516—UN—10NOV00

A—Precleaner Bowl  
B—O-Ring

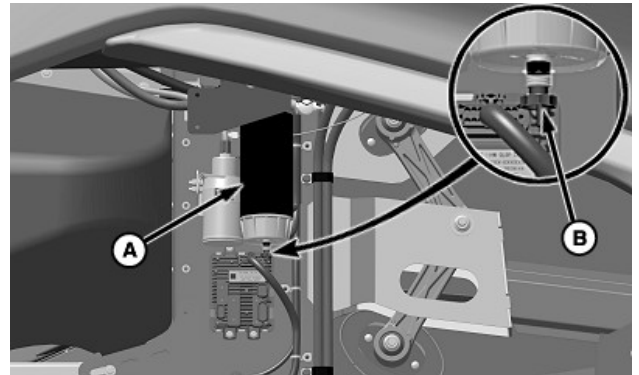
**NOTE:** Do not clean the fuel precleaner and change the primary and secondary fuel filters at the same time. Doing so makes it difficult to restart the machine. Perform this procedure, then run engine before changing the primary and secondary fuel filters.

Clean the fuel precleaner filter if buildup is visible on the filter screen or if a diagnostic trouble code appears. Reset the code after cleaning the filter.

1. Start the engine and run 3—5 minutes at low idle if the machine had not been previously running.
2. Shut OFF the engine and close the shutoff valve at the top of the precleaner housing to prevent fluid from draining back within the supply line.
3. Thoroughly clean the fuel precleaner assembly and the surrounding area.
4. Remove the precleaner bowl (A).
5. Clean the filter screen and precleaner bowl. Inspect O-ring (B).
6. Install the screen and tighten precleaner bowl.
7. Open the shutoff valve to fill the precleaner.
8. Start the engine and run 3—5 minutes at low idle.

MH69740,00008F8-19-11NOV20

## Fuel Precleaner Filter (Heavy-Duty Option) —Replacing (Style B)



H132341—UN—11NOV20

A—Fuel Precleaner Filter  
B—Drain Valve

1. Start the engine and run 3—5 minutes at low idle if the machine had not been previously operating.
2. Shut OFF engine and close valve on the fuel precleaner.
3. Thoroughly clean the exterior of the fuel precleaner filter and the filter mounting area.

**NOTE:** Use a catch pan when draining fuel and when removing fuel precleaner filter.

4. Drain the fuel contaminants from the fuel precleaner filter (A) by opening the drain valve (B).
5. Close the drain valve and remove the fuel precleaner filter.
6. Install the previously removed separator bowl onto the replacement fuel precleaner filter.

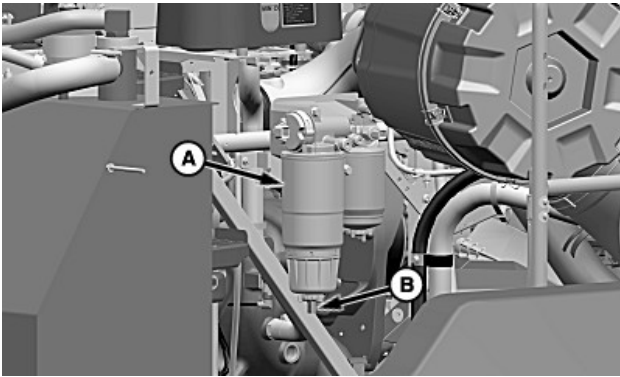
**IMPORTANT:** Do NOT prefill fuel precleaner filter with fuel.

**NOTE:** Lube the filter seal with diesel fuel before installing

7. Install the fuel precleaner filter assembly. Tighten the filter assembly with 3/4 of a turn after the seal contacts the filter housing.
8. Verify that drain valve is closed.
9. Open valve on the fuel precleaner.
10. Turn key switch ON for 60 seconds to allow fuel pump to prime the fuel system.
11. Start engine and run 3—5 minutes at low idle. If engine does not start or dies, see Primary and Secondary Fuel Filter Element—Replacing.

MH69740,00008FA-19-11NOV20

## Water Separator Primary Fuel Filter—Draining



A—Primary Fuel Filter  
B—Drain

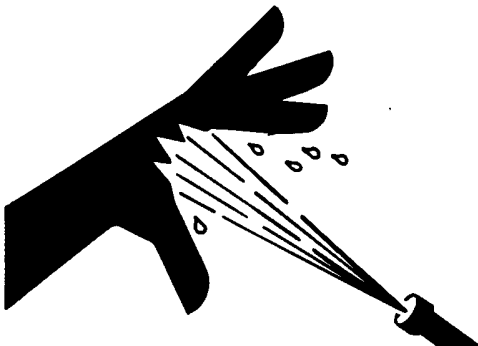
H127868—UN—22OCT19

**CAUTION:** Shut OFF engine, set park brake, and remove key before performing maintenance work.

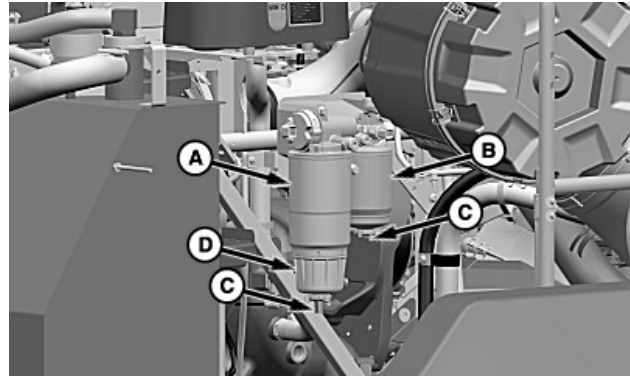
1. When primary fuel filter (A) senses water in the fuel system, a diagnostic trouble code is generated.
2. If a diagnostic trouble code appears, drain the primary filter using drain (B) and reset the code.

MH69740,00008F7-19-13FEB20

## Primary and Secondary Fuel Filter Element—Replacing



TS1343—UN—18MAR92



H127871—UN—22OCT19

A—Primary Fuel Filter  
B—Secondary Fuel Filter  
C—Drain Valve  
D—Separator Bowl

**CAUTION:** High-pressure fluid remaining in fuel lines can cause serious injury. Only technicians familiar with this type of system should perform repairs. Before disconnecting the fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with the high-pressure common rail (HPCR) fuel system, wait a minimum of 15 minutes after the engine is stopped.

**NOTE:** Do not clean the fuel precleaner and change the primary and secondary fuel filter at the same time. Doing so makes it difficult to restart the machine. Perform the fuel precleaner cleaning procedure, then run the engine before changing the primary and secondary fuel filter.

Change the primary and secondary fuel filters if performance decline is noticed or a diagnostic trouble code appears. Reset the code after replacing the filters.

1. Start the engine and run 3—5 minutes at low idle if the machine had not been previously operating.
2. Thoroughly clean the exterior of the filter elements and the filter mounting areas.

**CAUTION:** Fuel in the filters may be under pressure. Do not remove the filters without completing the following step.

**NOTE:** Use a catch pan when draining fuel and when removing fuel filters.

3. **Style A:** Drain the fuel contaminants and relieve pressure from the primary fuel filter (A) and secondary fuel filter (B) by opening the drain valves (C). Close the drain valves and remove the fuel filters.

**Style B:** Drain the fuel contaminants and relieve pressure from the primary fuel filter (A) by opening

the drain valve (C). Close the drain valve and remove and retain the separator bowl (D).

**NOTE:** Additional fuel drains from filter housings.

4. Remove the primary fuel filter and secondary fuel filter.

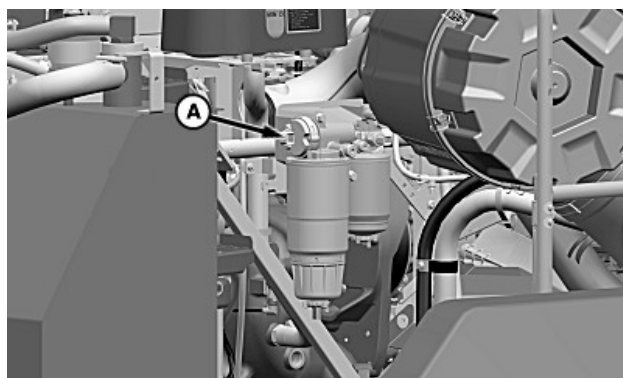
**IMPORTANT:** Do NOT prefill either fuel filter with fuel.

**NOTE:** Lube the filter seals with diesel fuel before installing.

5. **Style B Only:** Install the previously removed separator bowl on the replacement primary fuel filter.
6. Install primary fuel filter (A) assembly on the engine. Tighten the filter assembly with 3/4 of a turn after the seal contacts the filter housing.
7. Install the replacement secondary fuel filter (B). Tighten the filter with 3/4 of a turn after the seal contacts the filter housing.
8. Verify that drain valves (C) are closed.
9. Turn the key switch ON for 60 seconds to prime the fuel system.
10. Start the engine and run 3—5 minutes at low idle.

MH69740,00008FB-19-25JUN20

## Fuel System—Bleeding



A—Fuel Pump

**CAUTION:** Shut OFF engine, set park brake, and remove key.

Air can enter the fuel system when changing the fuel filters or when the machine has run out of fuel. Air in the fuel system could prevent the engine from starting. If the engine does not start, turn the key switch ON for 60

seconds to allow the fuel pump (A) to prime the fuel system.

MH69740,00008FC-19-13FEB20

## Cooling System—Draining



TS281—UN—15APR13



H127874—UN—23OCT19

A—Drain Valve

**CAUTION:** Shut OFF engine, set park brake, and remove key. Avoid being scalded when opening the surge tank cap. Never open the cap when the engine is hot. Open the cap slowly to relieve the pressure.

**NOTE:** Radiator drain is on the rear side of the radiator.

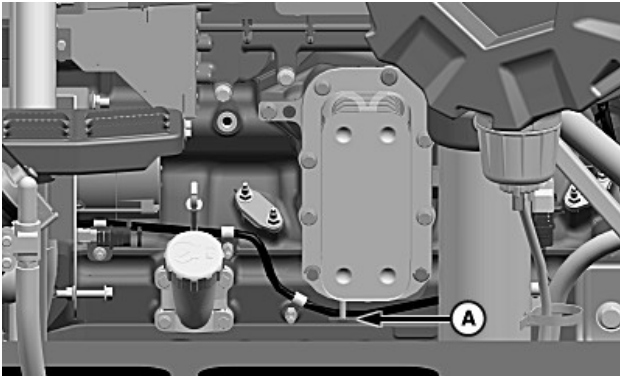
When Cool-Gard™ II or Cool-Gard™ II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than Cool-Gard™ II or Cool-Gard™ II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.

Coolant must be drained and replaced. See Fuels and Lubricants section for engine coolant recommendations.

1. Open drain valve (A) on the radiator.

Cool-Gard is a trademark of Deere & Company

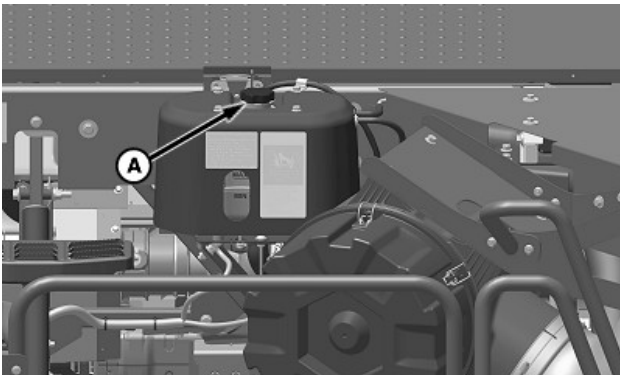


Front Side of Engine

H127875—UN—23OCT19

**A—Drain Valve**

2. Open drain valve (A) on the engine block.



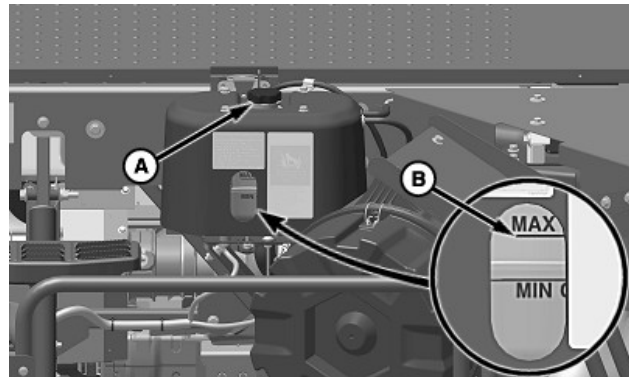
H132325—UN—10NOV20

**A—Surge Tank Cap**

3. Open surge tank cap (A) to allow coolant to drain faster.
4. Close the radiator drains and fill the system with clean water.
5. Install the surge tank cap and run the engine until it reaches operating temperature with the heater ON.
6. Shut OFF the engine, carefully remove the surge tank cap, and drain out the water before rust or sediment settles.
7. Close the radiator drains and refill the system with a solution of clean water and John Deere Cooling System Cleaner PT500 or equivalent. Follow the instructions with the cleaner.
8. After using the cleaner, flush the system with clean water and drain.
9. Close the radiator drains and fill the system. See Cooling System—Filling in this section for filling procedure. See Fuels and Lubricants section for engine coolant recommendations.

MH69740,00008FD-19-10NOV20

## Cooling System—Filling



H132326—UN—10NOV20

**A—Surge Tank Cap  
B—Max Cold Line**

**CAUTION:** Shut OFF engine, set park brake, and remove key. Avoid being scalded when opening the surge tank cap. Never open the cap when the engine is hot and never fill cooling system when the engine is overheated. Open the cap slowly to relieve pressure. Pour the coolant in slowly. Check the coolant level when engine is cold.

**IMPORTANT:** A special cap is used on the surge tank and radiator. If the cap is damaged or missing, it must be replaced by an equivalent cap.

**Never pour cold water into a hot engine, as it might crack the cylinder block or head. Do not operate the engine without coolant.**

1. Remove surge tank cap (A) and fill until fluid is at the "Max Cold" line (B).
2. Install the cap on the surge tank, turn ON the heater, and run the engine until it reaches operating temperature.
3. Carefully remove the cap from the surge tank and refill as necessary. Install the cap on the surge tank.
4. When the engine is cool, the coolant level should be at the "Max Cold" line.

**NOTE:** Coolant level must be between the "Max Cold" and "Min Cold" lines. Add coolant as needed if the coolant is below the "Min Cold" line.

MH69740,00008FE-19-10NOV20

## Cooling System—Winterize

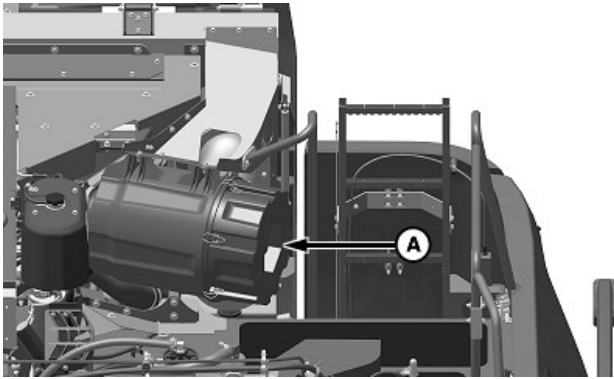
**IMPORTANT:** Do not drain cooling system to protect against freezing. Heater does not drain completely, so damage would result.

Before cold weather, be sure that cooling system has enough antifreeze. Use a reliable brand of permanent-type ethylene glycol antifreeze which contains a rust inhibitor and water pump lubricant, but does not contain a leak-stopping additive. See Fuels and Lubricants in this manual for correct recommendations.

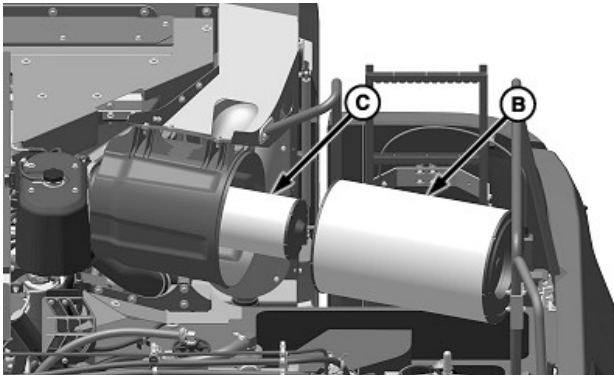
After adding antifreeze, turn heater ON and run engine until it reaches operating temperature. This mixes the solution and circulates it through the system.

OUC06075,00043AF-19-11OCT16

## Air Cleaner Filters—Removing



H132328—UN—10NOV20



H132329—UN—10NOV20

A—Dust Cover  
B—Primary Air Filter  
C—Safety Filter

**IMPORTANT:** When servicing the filters, shut OFF engine, set park brake, and remove key so dirt cannot be pulled into the engine.

Service the filters only when the engine air filter icon is displayed on the armrest display.

1. Unsnap dust cover (A) and remove the primary air filter (B).
2. Unscrew safety filter (C) in a counterclockwise direction to remove. The safety filter stops dirt that would pass through a damaged primary filter.

**IMPORTANT:** Never wash, brush, or knock the elements. If blowing out the primary element, use dry compressed air no greater than 500 kPa (5 bar) (72.5 psi). Clean the element from the inside out, making sure that the tip of the air gun does not come in contact with the filter paper.

**Never clean the safety element. Replace if dirty.**

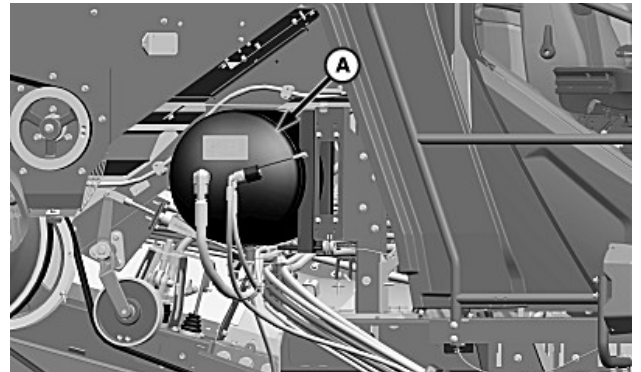
**Never run the engine without both filters in place.**

3. Service the filters as needed.
4. Install the safety filter and turn in a clockwise direction until hand-tight.
5. Install the primary air filter and dust cover.
6. Check all connections in the air intake system. Be certain that they are tight.

**IMPORTANT:** Do not use any exhaust flow cleaning unit to blow chaff off the combine. Using such a unit can cause air filter failure, followed by engine failure.

MH69740,00008FF-19-10NOV20

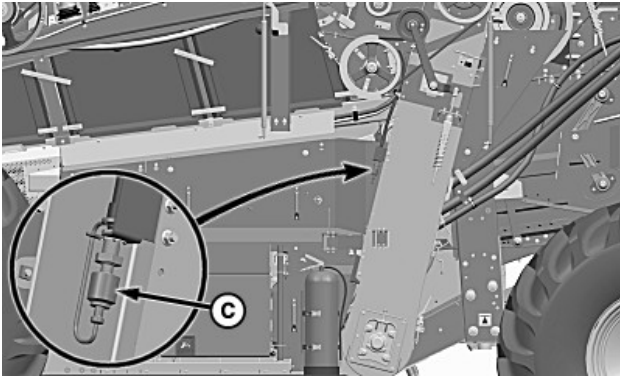
## Air Compressor System (If Equipped)



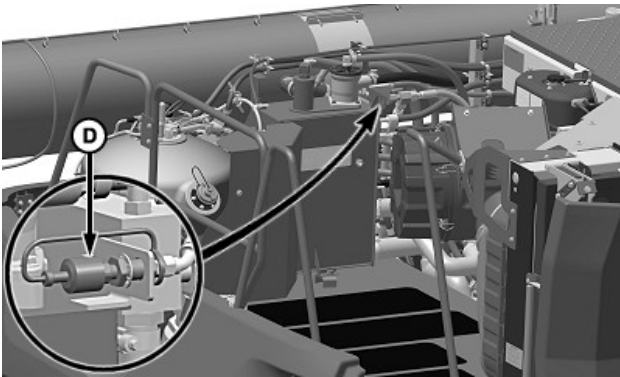
H127888—UN—24OCT19



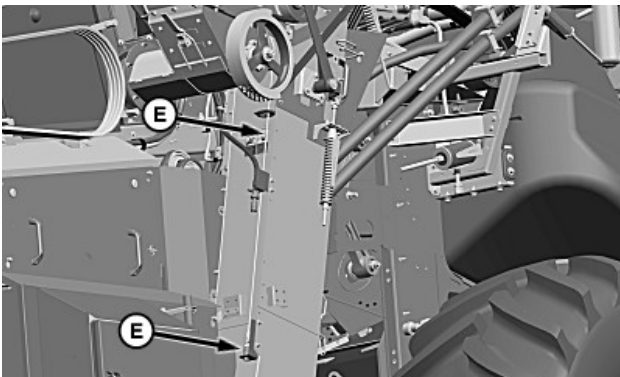
H127889—UN—24OCT19



H127890—UN—24OCT19



H132330—UN—10NOV20



H127892—UN—24OCT19

- A—Reservoir  
B—Right-Hand Landing Couplerr  
C—Tailings Elevator Coupler  
D—Hydraulic Reservoir Coupler  
E—Air Compressor Hose/Wand

**IMPORTANT: Never clean the engine air filters while the engine is running.**

**NOTE:** For optimal air compressor performance, the engine must be running to provide continuous air supply.

*It is not recommended to inflate the tires on the machine or operate air tools.*

*It is not recommended to use both of the coupler connections simultaneously.*

The air compressor is on the engine, and the reservoir (A) is on the right-hand side of the machine.

The air compressor hose couplers are located:

- (B) Under the right-hand landing.
- (C) On the tailings elevator.
- (D) On the hydraulic reservoir.

The air compressor hose/wand (E) is on the tailings elevator.

MH69740,0000900-19-11NOV20

## Diesel Particulate Filter Aftertreatment Replacement (Stage V)



H127895—UN—24OCT19

The exhaust filter includes the diesel oxidation catalyst and diesel particulate filter (DPF). The DPF is designed to retain residual ash, which is a noncombustible result of additives used in crankcase lubrication oils and the fuel. The DPF provides many hours of maintenance-free operation. At some point, the DPF requires professional service or replacement to remove the accumulated ash. The exact number of hours of operation before service or replacement is required varies depending upon the engine's power category, duty cycle and operating conditions, engine oil ash content, and fuel quality. Adhering to John Deere's recommended oil and fuel specifications will maximize the hours of operation before professional DPF service or replacement is required.

As the engine owner, you are responsible for performing the required maintenance described in your Operator's Manual. During normal equipment operation, the DPF maintenance requirements will depend on the rate at which ash accumulates in it. DPFs on engines above 175 hp/130 kW may require service or replacement at about 4500 hours. As ash levels rise in the DPF, the capacity for soot storage is reduced and the back pressure of the exhaust system will rise more frequently. A diagnostic trouble code will appear, indicating when the DPF needs servicing.

The removal of DPF ash must be done by removing the DPF from the machine and placing it into specialized equipment. Do not remove ash by using water or chemicals. Removing ash by these methods may damage the material securing the DPF in its canister,

resulting in the loosening of the DPF element in the canister and subjecting it to damage from vibration.

Failure to follow the approved ash removal methods may violate U.S. federal, state, and local hazardous waste laws, and may also damage the DPF, resulting in potential denial of the diesel exhaust filter emissions warranty. It is strongly recommended you take the DPF to an authorized John Deere service location or other qualified service provider for service or replacement.

When AUTO or PARKED cleaning is enabled, the exhaust temperature may be high under no load or light load conditions at certain times during the exhaust filter cleaning cycle.

Disable exhaust filter cleaning system in conditions where it may be unsafe for elevated exhaust temperatures.

Disable the automatic exhaust filter cleaning system only when necessary.

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OUO6075,0004DBF-19-02MAR20

## Exhaust Filter / Diesel Particulate Filter Ash Handling and Disposal (Stage V)

**⚠ CAUTION:** Under federal, state, and/or local laws or regulations, diesel particulate filter (DPF) ash may be classified as a hazardous waste. Hazardous waste must be disposed of in accordance with all applicable federal, state, and local laws or regulations governing hazardous waste disposal. Only a qualified service provider should remove ash from the DPF. Personal protective equipment and clothing, maintained in a sanitary and reliable condition, should be used when handling and cleaning a DPF. See your John Deere dealer or qualified service provider for assistance.

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OUO6075,0004DC0-19-02MAR20

## Exhaust Filter Disposal (Stage V)

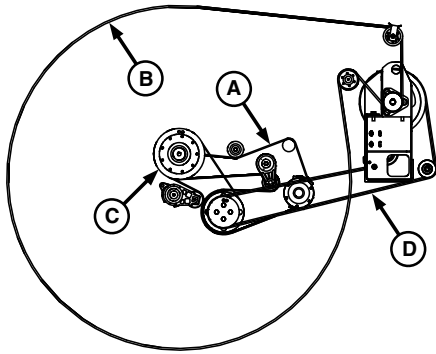
**⚠ CAUTION:** Proper management of an exhaust filter that has reached the end of its useful life is required, since the ash or catalyst material in the device may be classified as hazardous waste under federal, state, and/or local laws or regulations. Used exhaust filter, which includes the diesel particulate filter (DPF), may be exchanged at any John Deere dealer or qualified service provider.

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OUO6075,0004DC1-19-02MAR20

# Maintenance—As Required (Engine Belts)

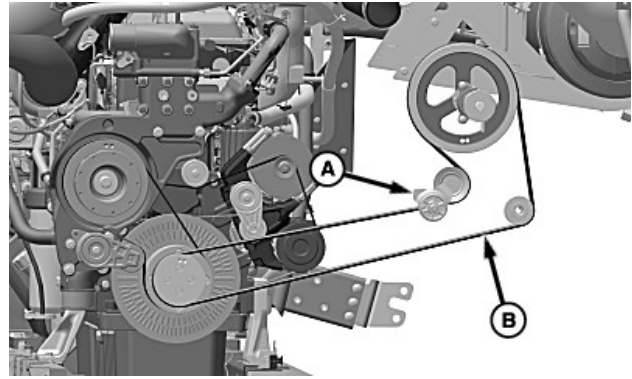
## Engine Belt—Routing



H127899—UN—04NOV19

- A—Air Conditioner Compressor, Alternator Belt  
B—Rotary Screen Drive Belt, Screen Side  
C—Fan Drive Belt  
D—Rotary Screen Drive Belt, Engine Side

MH69740,0000905-19-08JAN20



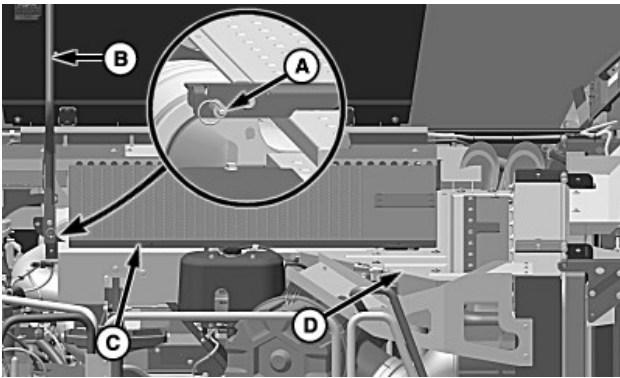
H128439—UN—08JAN20

- A—Tensioner Arm  
B—Rotary Screen Driven Belt

4. Use a breaker bar to relieve belt tension from the tensioner arm (A) and remove the rotary screen driven belt (B).
5. Use a breaker bar to relieve tension from the tensioner arm and install the replacement rotary screen driven belt.
6. Install the previously removed shield.

MH69740,0000904-19-10NOV20

## Rotary Screen Driven Belt—Replacing



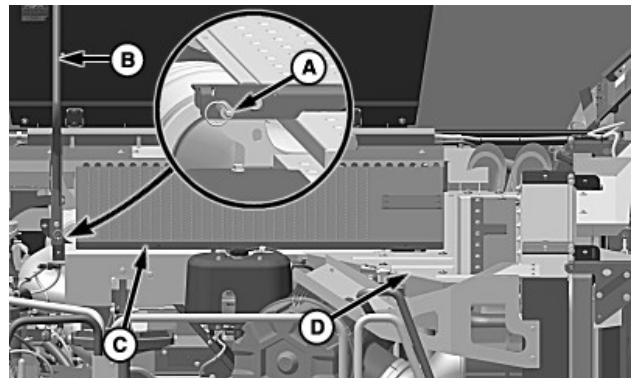
H128272—UN—03DEC19

- A—Lockout Pin  
B—Handrail  
C—Engine Access Cover  
D—Engine Access Shield

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Pull lockout pin (A) and rotate handrail (B) up until the handrail locks into place.
2. Open engine access cover (C).
3. Remove engine access shield (D).

## Fan Drive Belt—Replacing



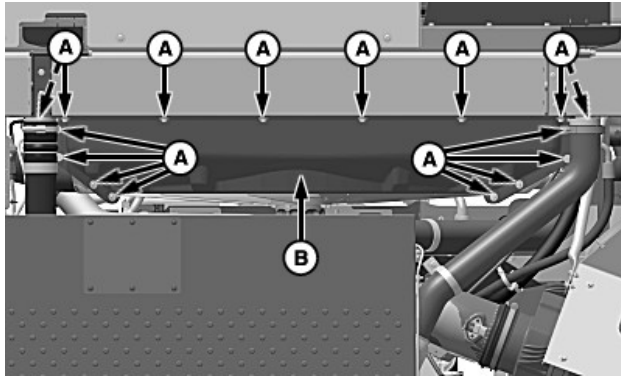
H128272—UN—03DEC19

- A—Lockout Pin  
B—Handrail  
C—Engine Access Cover  
D—Engine Access Shield

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Pull lockout pin (A) and rotate handrail (B) up until the handrail locks into place.
2. Open engine access cover (C).
3. Remove engine access shield (D).

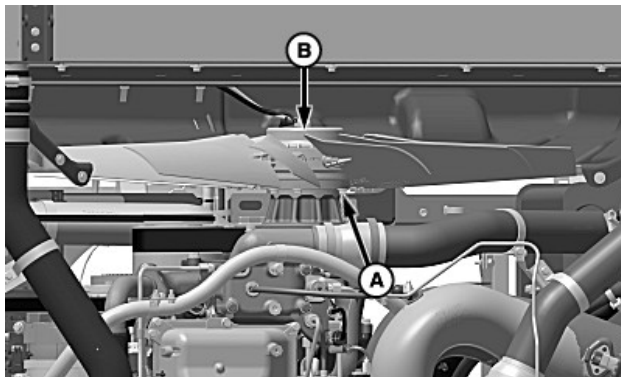




H128440—UN—26AUG20

**A—Cap Screw and Nut (16 used)**  
**B—Fan Shroud**

4. Remove cap screws and nuts (A) and fan shroud (B).

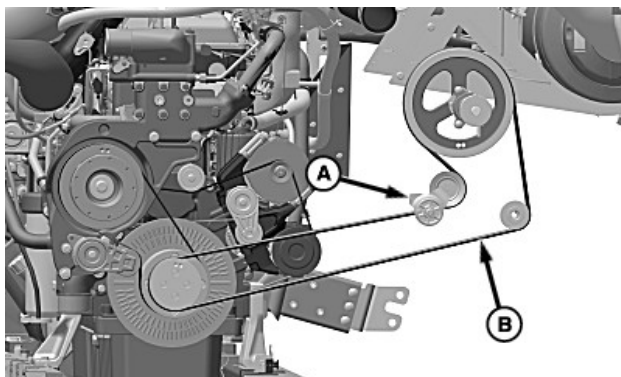


H128442—UN—08JAN20

**A—Cap Screw**  
**B—Engine Fan**

**NOTE:** Rotate the engine fan as needed to access all of the cap screws.

5. Remove cap screws (A) and engine fan (B).
6. Support the engine fan or slide the engine fan towards the radiator enough to access the fan drive belt.

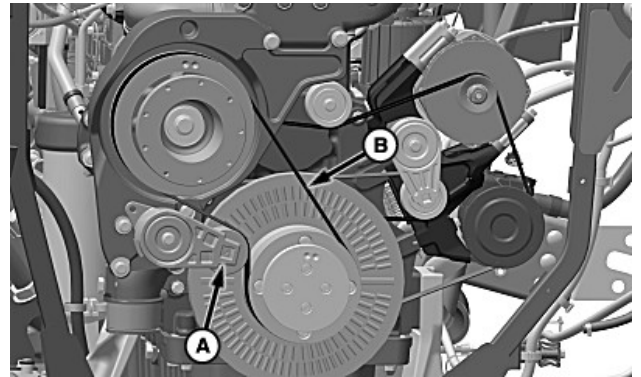


H128439—UN—08JAN20

**A—Tensioner Arm**  
**B—Rotary Screen Driven Belt**

7. Use a breaker bar to relieve belt tension from the

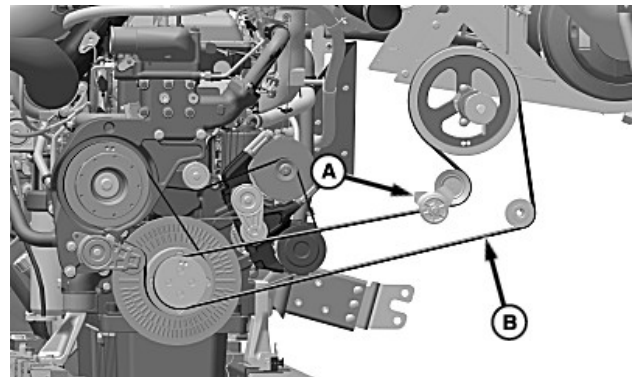
tensioner arm (A) and remove the rotary screen driven belt (B).



H128438—UN—08JAN20

**A—Tensioner Arm**  
**B—Fan Drive Belt**

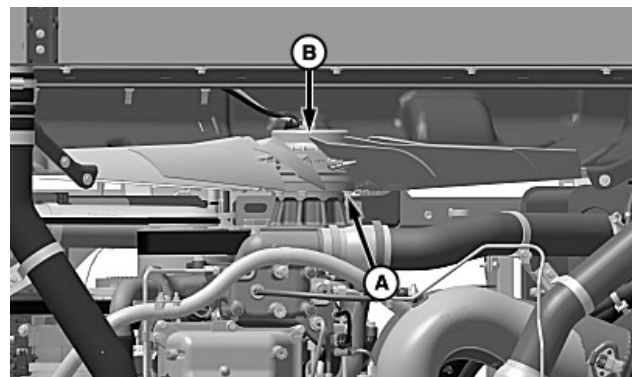
8. Use a breaker bar to relieve belt tension from the tensioner arm (A).
9. Remove the fan drive belt (B).
10. Use a breaker bar to relieve tension from the tensioner arm to install the replacement fan drive belt.



H128439—UN—08JAN20

**A—Tensioner Arm**  
**B—Rotary Screen Driven Belt**

11. Use a breaker bar to relieve tension from the tensioner arm (A) and install the previously removed rotary screen driven belt (B).



H128442—UN—08JAN20

**A—Cap Screw**

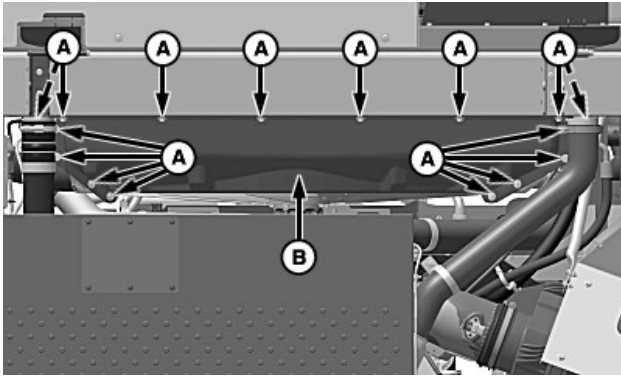
**B—Engine Fan**

**NOTE:** Rotate the engine fan as needed to access all of the cap screws.

12. Install the previously removed engine fan (B) and tighten cap screws (A) to specification.

**Specification**

Cap Screws—Torque. . . . . 20 N·m  
(177 lb·in)



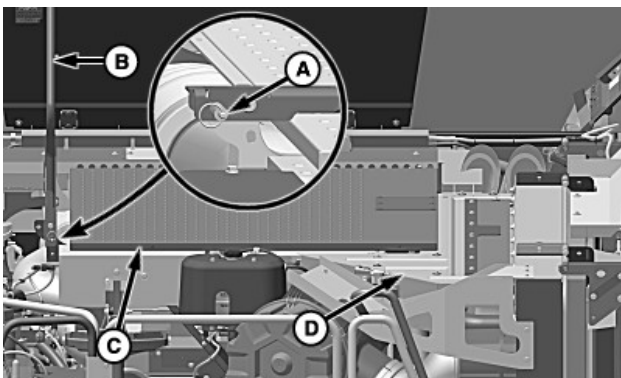
**A—Cap Screw and Nut (16 used)**  
**B—Fan Shroud**

H128440—UN—26AUG20

13. Install the previously removed fan shroud (B) and retain with cap screws and nuts (A).
14. Install the previously removed shield.

MH69740,000090A-19-26AUG20

**Air Conditioner Compressor/Alternator Belt—Replacing**



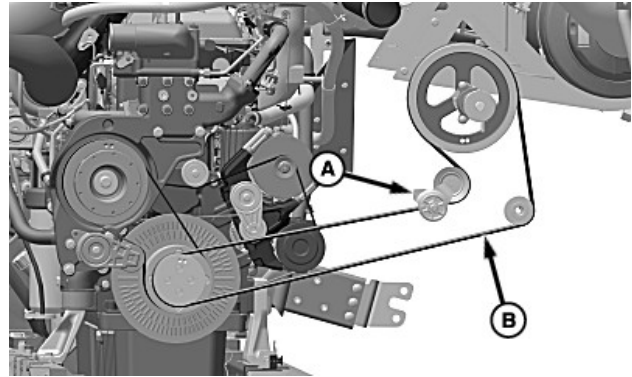
**A—Lockout Pin**  
**B—Handrail**  
**C—Engine Access Cover**  
**D—Engine Access Shield**

H128272—UN—03DEC19

**CAUTION:** Shut OFF engine, set park brake, and remove key.

1. Pull lockout pin (A) and rotate handrail (B) up until the handrail locks into place.

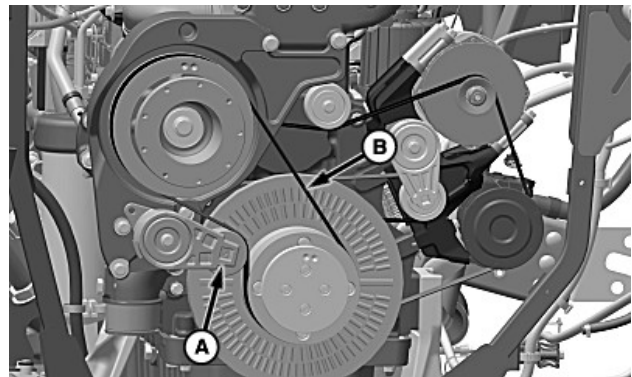
2. Open engine access cover (C).
3. Remove engine access shield (D).



H128439—UN—08JAN20

**A—Tensioner Arm**  
**B—Rotary Screen Driven Belt**

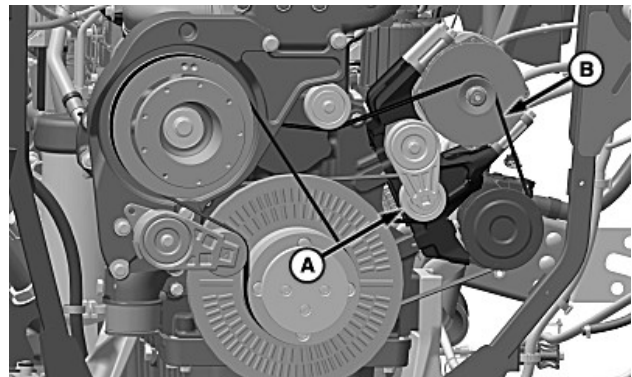
4. Use a breaker bar to relieve belt tension from the tensioner arm (A) and remove the rotary screen driven belt (B).



H128438—UN—08JAN20

**A—Tensioner Arm**  
**B—Fan Drive Belt**

5. Use a breaker bar to relieve belt tension from the tensioner arm (A).
6. Remove the fan drive belt (B).

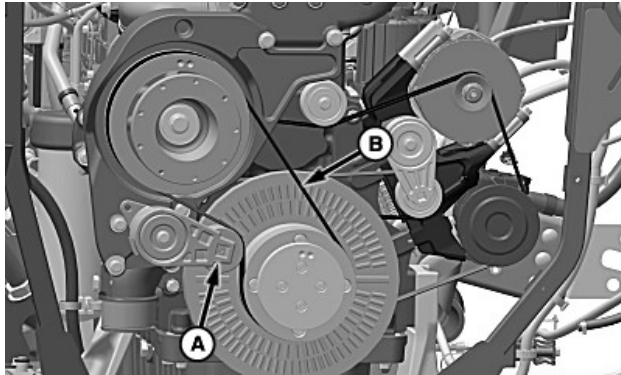


H128437—UN—08JAN20

**A—Tensioner Arm**  
**B—Air Conditioner/Alternator Belt**

7. Use a breaker bar to relieve belt tension from the tensioner arm (A).

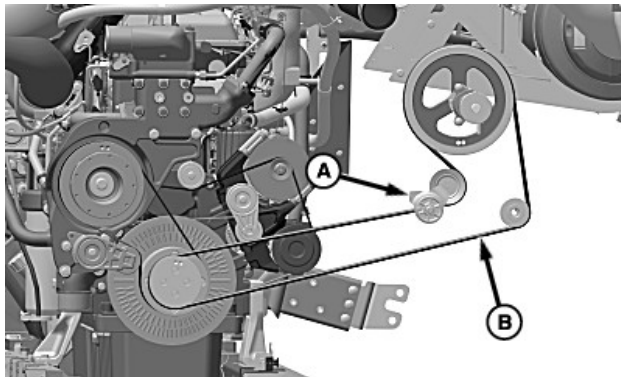
8. Remove the air conditioner/alternator belt (B).
9. Use a breaker bar to relieve tension from the tensioner arm to install the replacement air conditioner/alternator belt.



H128438—UN—08JAN20

A—Tensioner Arm  
B—Fan Drive Belt

10. Use a breaker bar to relieve tension from the tensioner arm (A) to install the fan drive belt (B).



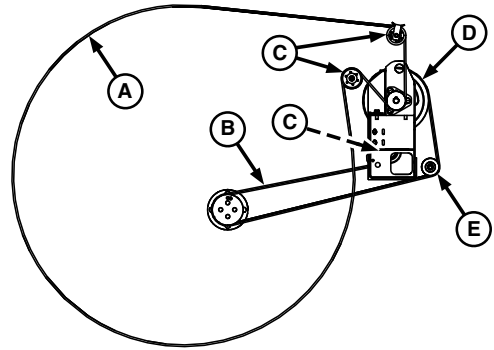
H128439—UN—08JAN20

A—Tensioner Arm  
B—Rotary Screen Driven Belt

11. Use a breaker bar to relieve tension from the tensioner arm (A) and install the previously removed rotary screen driven belt (B).
12. Install the previously removed shield.

MH69740,0000906-19-24NOV20

## Rotary Screen Belt—Routing

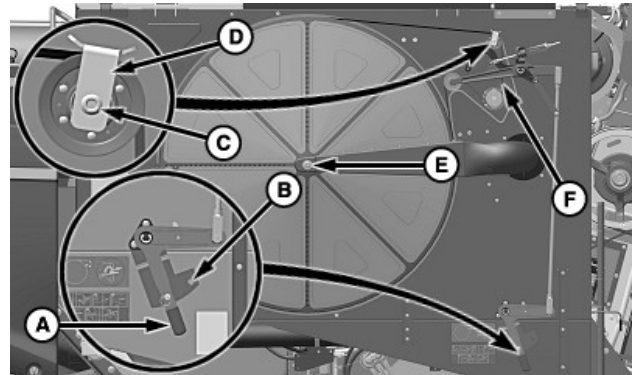


H127901—UN—04NOV19

A—Rotary Screen Driven Belt  
B—Rotary Screen Drive Belt  
C—Idlers  
D—Rotary Screen Drive Sheave  
E—Vacuum Fan Drive Sheave

MH69740,0000903-19-04NOV19

## Rotary Screen Drive Belt—Replacing



H132272—UN—05NOV20

A—Handle  
B—Notch  
C—Nut  
D—Idler Bracket  
E—Nut  
F—Rotary Screen Drive Belt

**CAUTION:** Shut OFF engine, set park brake, and remove key.

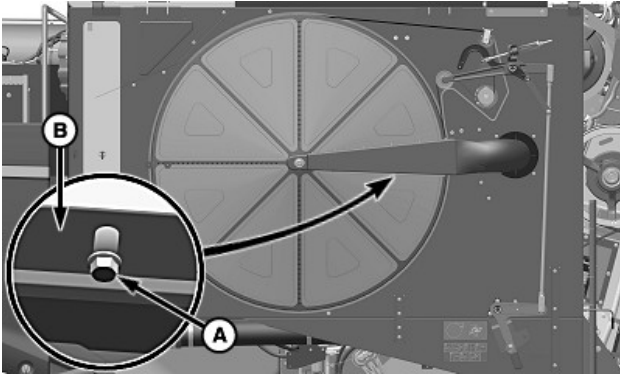
1. Raise the rear gull wing door on the right-hand side of the machine.
2. To detension the rotary screen drive belt, move handle (A) to notch (B).
3. Loosen nut (C) and slide idler bracket (D) up.
4. Remove nut (E) and the rotary screen drive belt (F).
5. Install the replacement rotary screen drive belt.
6. Install the previously removed hardware and tighten the idler bracket.

7. Tension the rotary screen drive belt by lifting the handle into the upper position.

MH69740,0000907-19-05NOV20

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## Rotary Screen Brush—Adjustment



H132273—UN—05NOV20

**A—Cap Screw**  
**B—Brush**

Loosen cap screws (A) and adjust brush (B) as needed to remove crop debris.

MH69740,000090B-19-05NOV20

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# Troubleshooting

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## Feeder House

Symptom	Problem	Solution
<b>Uneven or Bunched Feeding of Crop to Separator</b>	Header auger too high.	Adjust auger down and back. See header Operator's Manual.
	Buildup of grain on cutterbar.	Lower reel and set fore/aft position as close as possible to cutterbar and auger. See header Operator's Manual.
	Drum arms bind up to side sheet on one side.	Loosen and tension chain again. Straighten or replace bent parts.
	Feeder conveyor chain too tight and holds drum up.	Adjust conveyor chain to correct tension.
	Feeder house fixed drive belt slipping.	Check spring tensioner and adjust as needed.
	Auger too far ahead of stripper.	Adjust auger back to stripper. See header Operator's Manual.
	Feeder conveyor slats bowed up.	Straighten or replace bent slats.
	Buildup of dirt and sap on bottom of the feeder house.	Clean feeder house floor.

OUO6075,0004DB6-19-12NOV20

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## Separator

Symptom	Problem	Solution
<b>Slugging or Overloading of Separator</b>	Separator variable drive belt is slipping at the slow end of each gear.	Adjust separator drive sheave gap.
	Separator speed too slow for crop.	See Crop Settings section for further information.
<b>Backfeeding of Feed Accelerator</b>	Separator speed too slow for crop.	See Crop Settings section for further information.
	Feed accelerator speed in slow-speed position.	Change feed accelerator speed to high-speed position.
<b>Grain Not Threshed</b>	Concave clearance too wide.	Tighten threshing clearance in increments of 5—10 mm. After threshing clearance adjustment, check grain quality.
	Separator speed too slow for crop.	Increase separator speed in increments of 50—100 rpm. After separator speed adjustment, check grain quality.

## Troubleshooting

Symptom	Problem	Solution
	Grain is still not threshed enough.	Install two concave covers on the left and right concaves. Concave covers are available through service parts. See your John Deere dealer for further information.
	Concave clearance not even from front to rear.	Adjust to specification. See Concave Leveling in Separator section for further information.
	Not enough material entering machine for proper threshing.	Increase ground speed.
<b>Too Much Cracked Grain in Tank</b>	Separator speed too fast for crop.	Decrease separator speed in increments of 50 rpm.
	Concave clearance too tight.	Open threshing clearance in 2 mm increments.
	Feed accelerator speed too fast for crop.	Decrease feed accelerator speed by switching to low speed.
	Excessive grain in tailings.	Open sieve in increments of 2 mm to reduce tailings.
	Not enough material entering machine.	Increase ground speed.
	Active tailings system concave position incorrectly set.	Set active tailings system concave position. See Crop Settings section for further information.
<b>Separator Loss Too High</b>	Loose grain in straw.	Increase separator speed in increments of 50 rpm. After separator speed adjustment, check grain quality.
<b>Separator Grain Loss</b>	Separator overloaded due to incomplete threshing or late threshing at concave.	Reduce separator-to-concave spacing and/or increase separator speed to increase threshing action.
	Separator covers installed.	See Crop Settings section for further information.
		Remove covers to increase open area while maintaining even shoe loading.
<b>Dirty Grain Tank (unthreshed heads)</b>	Separator not threshing enough.	Decrease threshing clearance in increments of 2 mm.
		Increase separator speed in increments of 50—100 rpm.
		Check concave level. See Concave Leveling in Separator section for further information.

Symptom	Problem	Solution
		Install concave covers in the first concave.
		Add concave interrupters to the first concave.
	Active tailings system concave position incorrectly set.	Verify that active tailings system concave position is correct for crop harvested.
		Check active tailings system concave position for correct zero position. See Tailings System Wear Strips and Rasp Bars—Adjusting in Separator section for further information.
Dirty Grain Tank (mostly chaff)	Fan speed too slow.	Increase fan speed.
	Incorrect chaffer clearance.	Close chaffer clearance.
Dirty Grain Tank (small pieces of cob)	Check threshing clearance. If clearance is less than bare cob diameter, rotor may break up cob.	Install separator grate spacers.
	Separator speed too fast for crop.	Decrease separator speed in increments of 30 rpm.
	Incorrect chaffer/sieve clearance.	Check and calibrate chaffer/sieve clearance.
	Broken cob pieces in the grain tank.	<i>NOTE: Spacers should be used in corn and soybeans only. Remove spacers for all other crops.</i>
		Install separator grate spacers.
	Not enough material entering machine.	Close chaffer incrementally until tank sample improves.
		<i>NOTE: Do not go below the recommended minimum chaffer setting.</i>
Loss of Grain over Cleaning Shoe	Incorrect chaffer/sieve clearance.	Check and calibrate chaffer/sieve clearance.
	Incorrect distribution of chaff/grain on cleaning shoe.	Adjust separator grate deflectors and front step pan dividers as required. See Power Shutdown Procedure in Crop Settings section for further information.
Straw/Stems Stabbing in Front Chaffer	Incorrect front chaffer clearance.	Reduce front chaffer clearance as needed to lessen stabbing potential.

## Troubleshooting

Symptom	Problem	Solution
<b>VisionTrak™ Performance Monitor Not Reading</b>	Cleaning shoe loss increases at low feed rate.	Reduce fan speed.
	Cleaning shoe loss increases at high feed rate.	Open chaffer.
		Increase fan speed.
	Sensor not reading.	Check crop sensitivity settings.
		Check that sensors are connected.
		Check that sensors are not blocked by material.
<b>Undesirable Straw Quality</b>	Excessive material handling.	Decrease separator speed and increase threshing clearance to increase straw quality and balance threshing performance.
		Decrease material handling speed (feeder house and feed accelerator) to balance straw quality and material handling performance.

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## Hydrostatic Ground Drive

Symptom	Problem	Solution
<b>System Overheats</b>	Oil cooler or radiator plugged.	Perform a Service Clean Out Fan Reversal. See Engine Application Help or Operator's Station Help for further information on reversing the cooling fan.
		Clean oil cooler and radiator with compressed air. See Maintenance—Every 10 Hours section for further information.
	Lack of charge oil flow.	See your John Deere dealer.
	Engine fan belt slipping or broken.	Check for worn or broken belt.
	Plugged charge oil filter.	Change charge oil filter.
	Exceeding relief valve pressure.	See your John Deere dealer.
	Relief valve stuck closed.	See your John Deere dealer.
	Cooler bypass valve stuck open.	See your John Deere dealer.



## Troubleshooting

Symptom	Problem	Solution
	Seized or failed bearing or bearings in the ground drive system.	See your John Deere dealer.
<b>High Oil Loss</b>	Loose connections or leaking hydraulic lines, hoses, or O-rings.	Tighten connections or replace damaged lines, hoses, or O-rings.
<b>Machine Will Not Move Forward or Reverse</b>	System detects ground drive faults.	See your John Deere dealer.
	Low on hydraulic oil.	Check for leaks and correct. Add hydraulic oil.
	Air leak in the hydrostatic system.	Tighten connections.
	Lack of charge flow or charge pressure.	See your John Deere dealer.
	Plugged filter.	Change filter.
	Exceeding maximum operating pressure setting.	See your John Deere dealer.
	Drive system unable to build hydrostatic pressure.	See your John Deere dealer.
	Relief valve stuck open.	See your John Deere dealer.
<b>Ground Travel Speed Erratic</b>	Low on hydraulic oil.	Check for leaks and correct. Add hydraulic oil.
	Plugged hydrostatic charge filter.	Change hydrostatic charge filter.
	Exceeding maximum operating pressure setting.	See your John Deere dealer.
	Damaged multi-function lever assembly.	See your John Deere dealer.
	System unable to maintain charge pressure.	See your John Deere dealer.
<b>Lack of Power or Lost Power</b>	System detects ground drive faults.	See your John Deere dealer.
	Hydrostatic pump mechanical pressure limiter issue.	See your John Deere dealer.
	Plugged hydrostatic charge filter.	Change hydrostatic charge filter.
	Lack of charge flow or charge pressure.	See your John Deere dealer.
	Dirty fuel filter.	Replace fuel filter.
	Water in separator bowl.	Drain water from separator bowl.

Symptom	Problem	Solution
	Drive system unable to maintain or build pressure.	See your John Deere dealer.

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## Hydraulics

Symptom	Problem	Solution
<b>Hydraulic Oil Level Too High</b>	Too much oil in the system.	See Hydrostatic/Hydraulic Oil Level in the Prestaring Checks section for further information.
	Hydraulic oil is highly aerated.	See Hydrostatic/Hydraulic Oil Level in the Prestaring Checks section for further information.
	Machine is not parked on a level surface.	Check the hydraulic oil level with the machine parked on a level surface.
	Header has discharged oil from accumulators into the combine's hydraulic oil system.	Check the hydraulic oil level with the header system at the normal accumulator charging pressure.
<b>Hydraulic Oil Level Too Low</b>	Not enough oil in the system.	See Hydrostatic/Hydraulic Oil Level in the Prestaring Checks section for further information.
	Feeder house cylinders are fully extended.	Lower the feeder house to the ground and check hydraulic oil level.
	Machine is not parked on a level surface.	Check the hydraulic oil level with the machine parked on a level surface.
	Combine has filled a hydraulically empty header and has discharged all the hydraulic oil to the header.	See Hydrostatic/Hydraulic Oil Level in the Prestaring Checks section for further information.
	There is an external hydraulic oil leak.	Inspect the combine and header for an external hydraulic leak.
	There is an internal hydraulic oil leak.	Inspect and check the gear case hydraulic oil levels.
<b>Header Lift Blocking Valve Does Not Unlock (lock indicator not showing red while the cylinder is locked)</b>	Lock button on the side of the feeder house is not pulled out.	Pull out the lock button.
	Hydraulic pilot pressure is not present or is low.	See your John Deere dealer.
	Check valve is stuck in the closed position.	See your John Deere dealer.

Symptom	Problem	Solution
	One of the blocking valves is working properly and the other is stuck in the closed or open position.	See your John Deere dealer.
<b>Header Lift Blocking Valve Stays in Unlocked Position (lock indicator popped out and showing red while the cylinder is unlocked)</b>	Hydraulic pilot pressure is not being released.	See your John Deere dealer.
	Check valve is stuck in the open position.	See your John Deere dealer.
<b>System Overheats</b>	Oil cooler or radiator plugged.	Blow air through core and clean.
	Lack of oil flow.	See your John Deere dealer.
	Engine fan belt slipping or broken.	Check for worn or broken belt.
	Plugged oil filter.	Change filter.
	Bypass valve fails to close.	See your John Deere dealer.

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## Four-Wheel Drive (Optional)

Symptom	Problem	Solution
<b>Machine Will Not Move when Four-Wheel Drive is Engaged</b>	System detects ground drive faults.	See your John Deere dealer.
	One or both rear wheels in spin-out condition.	Reduce four-wheel motor displacement or switch to two-wheel drive.
	One or both front wheels/tracks in spin-out condition.	Increase four-wheel motor displacement.
	Loose four-wheel drive connections or leaking hydrostatic lines, hoses, or O-rings.	Tighten connections or replace damaged lines, hoses, or O-rings.
<b>Four-Wheel Drive Will Not Disengage</b>	Bad electrical control switch on console.	See your John Deere dealer.
	Bad solenoid valve on the four-wheel drive valve.	See your John Deere dealer.
	Faulty or damaged spool in the four-wheel drive valve.	See your John Deere dealer.

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## Steering

Symptom	Problem	Solution
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## *Troubleshooting*

Symptom	Problem	Solution
<b>Rear Wheels Wander During Transport Speeds</b>	Toe-in out of adjustment.	Adjust toe-in. See your John Deere dealer.
	Loose tie-rod connection or connections.	Replace worn tie-rod connection or connections.
	Rear wheel dish orientation incorrect.	Install wheel so the dish is in the correct orientation.
<b>Steering Arms Do Not Contact Stops at Full Turns</b>	Tie-rod out of adjustment.	Check left-hand side and right-hand side tie-rod lengths and adjust so they are equal. Adjust toe-in. See your John Deere dealer.
	Incorrect rear axle or steering stop configuration.	See your John Deere dealer.
	Steering stop bolt not installed.	Install steering stop bolt. See your John Deere dealer.
	Rear wheels contacting chassis.	See your John Deere dealer.
<b>Hard Steering</b>	Low hydraulic oil level.	Add hydraulic oil.
	Issue with the steering pump or steering valve.	See your John Deere dealer.

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## **Brakes**

Symptom	Problem	Solution
<b>Loss of Service Braking Power</b>	Inadequate brake work pressure.	Tighten connections or replace damaged lines, hoses, or O-rings.
	Inadequate brake supply pressure.	See your John Deere dealer.
	Worn or glazed brake linings.	See your John Deere dealer.
	Incorrect brake pedal linkage adjustment.	See your John Deere dealer.
<b>Parking Brake Not Holding</b>	Lack of park brake spring force.	See your John Deere dealer.
	Worn brake linings.	See your John Deere dealer.
	Park brake piston stuck.	See your John Deere dealer.
	Driveshafts disconnected.	Connect driveshafts.
<b>Park Brake Will Not Release</b>	System detects ground drive faults.	See your John Deere dealer.
	Inadequate brake supply pressure.	See your John Deere dealer.

## *Troubleshooting*

Symptom	Problem	Solution
<b>Park Brake Will Not Engage</b>	Failed or faulty park brake valve or valves.	See your John Deere dealer.
	Failed or damaged park brake piston seal.	See your John Deere dealer.
	Disconnected brake valve solenoid or solenoids.	Reconnect electrical connection or connections.
	Stuck park brake valve or valves.	See your John Deere dealer.
	Lack of park brake spring force.	See your John Deere dealer.
	Park brake electrical or harness failure.	See your John Deere dealer.

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## **Engine**

Symptom	Problem	Solution
<b>Engine Will Not Crank</b>	Weak battery.	Charge or replace battery.
	Corroded or loose battery connections.	Clean battery terminals and connections.
	Defective main switch or start safety switch.	Repair switch as required.
	Starter defective.	Replace starter.
<b>Engine Hard to Start or Will Not Start</b>	Starting system problem.	Starting system is not strong enough to start engine.  Perform solution found in Engine Will Not Crank.
	Poor fuel quality.	Drain fuel and replace with quality fuel of the proper grade.
	Slow cranking speed.	Check for a problem in the charging/starting system.
	Too high viscosity crankcase oil.	Drain crankcase oil and replace with correct viscosity oil.
	Electronic control system problem or basic engine problem.	See your John Deere dealer.
	Poor fuel quality.	Drain fuel and replace with quality fuel of the proper grade.

## *Troubleshooting*

Symptom	Problem	Solution
<b>Lack of Engine Power</b>	Electronic control system problem or basic engine problem.	See your John Deere dealer.
	Poor fuel quality.	Drain fuel and replace with quality fuel of the proper grade.
	Plugged fuel filter.	Replace fuel filters.
	Engine overloaded.	Reduce engine load.
	Improper crankcase oil.	Drain crankcase oil and replace with correct viscosity oil.
	Electronic control system problem or basic engine problem.	See your John Deere dealer.
	Engine is in derate because of an active diagnostic trouble code.	See your John Deere dealer.
<b>Engine Emits Black or Gray Smoke</b>	Engine is in derate because exhaust filter cleaning is required.	Engage exhaust filter auto cleaning mode and request a manual exhaust filter cleaning.
	Engine overloaded.	Reduce engine load.
	Improper type of fuel.	Use proper fuel.
	Air cleaner restricted or dirty.	Replace air cleaner element as required.
	Defective muffler/exhaust piping (causing backpressure).	Replace muffler or defective piping.
	Electronic control system problem or basic engine problem.	See your John Deere dealer.
	Fuel injectors dirty.	See your John Deere dealer.
	High-pressure fuel pump out of time.	See your John Deere dealer.
<b>Engine Emits White Smoke</b>	Turbocharger not functioning.	See your John Deere dealer.
	Exhaust filter is cracked or damaged.	See your John Deere dealer.
	Engine compression too low.	Determine cause of low compression and repair as required. See your John Deere dealer.
	Improper type of fuel.	Use proper fuel.
	Low engine temperature.	Warm up engine to normal operating temperature.

Symptom	Problem	Solution
	Defective thermostats.	Test thermostats; replace thermostats as required.
	Coolant entering combustion chamber (failed cylinder head gasket or cracked cylinder head).	Repair or replace as required. See your John Deere dealer.
	Electronic control system problem or basic engine problem.	See your John Deere dealer.
	Defective fuel injectors.	See your John Deere dealer.
	High-pressure fuel pump out of time.	See your John Deere dealer.
<b>Engine Idles Poorly</b>	Poor fuel quality.	Drain fuel and replace with quality fuel of the proper grade.
	Air leak on the suction side of the air intake system.	Check hose and pipe connections for tightness; repair as required.
	Electronic control system problem or basic engine problem.	See your John Deere dealer.
<b>Excessive Fuel Consumption</b>	Poor fuel quality.	Drain fuel and replace with quality fuel of the proper grade.
	Engine overloaded.	Reduce engine load.
	Air cleaner restricted or dirty.	Replace air cleaner element as required.
	Compression too low.	Determine cause of low compression and repair as required.
	Leaks in the fuel supply system.	Locate source of the leak and repair as required.
	Improper type of fuel.	Use the proper type of fuel.
	Improper valve clearance.	See your John Deere dealer.
	Fuel injectors defective.	See your John Deere dealer.
	High-pressure fuel pump out of time.	See your John Deere dealer.
	Improper turbocharger operation.	Inspect turbocharger. See your John Deere dealer.
	Low engine temperature.	Check thermostats.
<b>Fuel in Oil</b>	Cracked cylinder head.	Locate crack; repair/replace components as required. See your John Deere dealer.

## *Troubleshooting*

<b>Symptom</b>	<b>Problem</b>	<b>Solution</b>
	Cracked or worn electronic unit injector O-ring.	Remove suspected electronic unit injector and replace O-ring as required. See your John Deere dealer.
<b>Low Fuel Pressure</b>	Plugged fuel filter.	Replace fuel filter.
	Restricted fuel line.	Locate restriction; repair as required.
	Faulty fuel transfer pump.	Remove fuel transfer pump; repair/replace pump as required. See your John Deere dealer.
<b>Fuel Aeration</b>	Electronic unit injector hold-down clamp loose.	Tighten hold-down clamp cap screw to proper torque. See your John Deere dealer.
	Cracked or worn electronic unit injector O-ring.	Remove suspected electronic unit injector and replace O-ring as required. See your John Deere dealer.
<b>Low Oil Pressure</b>	Low crankcase oil level.	Fill crankcase to the proper oil level.
	Crankcase oil level too high.	Fill crankcase to the proper oil level.
	Faulty pressure sensor.	Replace sensor. See your John Deere dealer.
	Clogged oil cooler or filter.	Remove and inspect oil cooler. See your John Deere dealer.
	Excessive oil temperature.	Remove and inspect oil cooler. See your John Deere dealer.
	Defective oil pump.	Remove and inspect oil pump. See your John Deere dealer.
	Incorrect oil.	Drain crankcase and refill with correct oil.
	Oil pressure regulating valve failure.	Remove and inspect oil pressure regulating valve. See your John Deere dealer.
	Broken piston spray nozzle.	Replace piston spray nozzle. See your John Deere dealer.
	Clogged oil pump screen or cracked pick-up tube.	Remove oil pan and clean screen or replace pick-up tube.
<b>High Oil Pressure</b>	Excessive main or connecting rod bearing clearance.	Determine bearing clearance. See your John Deere dealer.
	Improper oil classification.	Drain crankcase and refill with correct oil.



Symptom	Problem	Solution
	Faulty pressure sensor.	Replace sensor. See your John Deere dealer.
	Oil pressure regulating valve bushing loose (wanders).	Remove and inspect oil pressure regulating valve. See your John Deere dealer.
	Improperly operating regulating valve.	Remove and inspect oil pressure regulating valve. See your John Deere dealer.
	Plugged piston spray nozzle.	Replace piston spray nozzle. See your John Deere dealer.
	Stuck or damaged filter bypass valve.	Remove and inspect filter bypass valve. See your John Deere dealer.
	Stuck or damaged oil cooler bypass valve.	Remove and inspect the oil cooler bypass valve. See your John Deere dealer.
<b>Excessive Oil Consumption</b>	Too low viscosity crankcase oil.	Drain crankcase and refill with correct viscosity oil.
	Crankcase oil level too high.	Drain oil until oil level is correct.
	External oil leaks.	Determine source of oil leaks and repair as required.
	Oil control rings not seated.	See your John Deere dealer.
	Oil control rings worn or broken.	Replace piston rings. See your John Deere dealer.
	Scored cylinder liners or pistons.	Remove and inspect cylinders and liners; replace as required. See your John Deere dealer.
	Worn valve guides or stems.	Inspect and measure valve stems and valve guides; repair as required. See your John Deere dealer.
	Excessive oil pressure.	See High Oil Pressure earlier in this section.
	Piston ring grooves excessively worn.	Remove and inspect pistons. See your John Deere dealer.
	Piston rings sticking in ring grooves.	Remove and inspect pistons. See your John Deere dealer.
	Insufficient piston ring tension.	Remove and inspect pistons. See your John Deere dealer.

## Troubleshooting

Symptom	Problem	Solution
<b>Abnormal Engine Noise <sup>1</sup></b>	Piston ring gaps not staggered.	Remove and inspect pistons. See your John Deere dealer.
	Front and/or rear crankshaft oil seal faulty.	Replace oil seals. See your John Deere dealer.
	Worn main or connecting rod bearings.	Determine bearing clearance. See your John Deere dealer.
	Excessive crankshaft end play.	Check crankshaft end play. See your John Deere dealer.
	Loose main bearing caps.	Check bearing clearance; replace bearings and bearing cap screws as required. See your John Deere dealer.
	Worn connecting rod bushings and piston pins.	Inspect piston pins and bushings. See your John Deere dealer.
	Scored pistons.	Inspect pistons. See your John Deere dealer.
	Worn timing gears or excess backlash.	Check timing gear backlash. See your John Deere dealer.
	Excessive valve clearance.	Check and adjust valve clearance. See your John Deere dealer.
	Worn camshaft lobes.	Replace camshaft. See your John Deere dealer.
	Worn rocker arm shafts.	Replace rocker arm shafts. See your John Deere dealer.
<b>Turbocharger “Whistles”</b>	Air leak in the intake manifold.	Check intake manifold gasket and manifold; repair as required. See your John Deere dealer.
<b>Turbocharger Noise or Vibration <sup>1</sup></b>	Bearings not lubricated (insufficient oil pressure).	Determine cause of lack of lubrication; repair as required. See your John Deere dealer.
	Air leak in engine intake or exhaust manifold.	Check intake and exhaust manifold gaskets and manifolds; repair as required. See your John Deere dealer.
	Improper clearance between turbine wheel and turbine housing.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.

<sup>1</sup> NOTE: Variable geometry turbocharger recycles after starting engine, causing a momentary revving sound in engine. This is normal. Do not confuse whine heard during run down with noise that indicates a bearing failure.

Symptom	Problem	Solution
	Broken blades (or other wheel failures).	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
<b>Oil on Turbocharger Compressor Wheel or in Compressor Housing (oil being pushed or pulled through center housing)</b>	Excessive crankcase pressure.	Determine cause of excessive crankcase pressure; repair as required. See your John Deere dealer.
	Air intake restriction.	Determine cause of intake restriction; repair as required. See your John Deere dealer.
	Drain tube restriction.	Determine cause of drain tube restriction; repair as required. See your John Deere dealer.
<b>Oil in Intake Manifold or Dripping from Turbocharger Housing</b>	Excessive crankcase pressure.	Determine cause of excessive crankcase pressure; repair as required. See your John Deere dealer.
	Air intake restriction.	Determine cause of intake restriction; repair as required. See your John Deere dealer.
	Drain tube restriction.	Determine cause of drain tube restriction; repair as required. See your John Deere dealer.
	Damaged or worn housing bearings.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Unbalanced or rotating assembly.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Damage to turbine or compressor wheel or blade.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Dirt or carbon buildup on wheel or blade.	Check for air intake leaks (post air filter). Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Bearing wear.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Oil starvation or insufficient lubrication.	Determine cause of lack of lubrication; repair as required. See your John Deere dealer.

Symptom	Problem	Solution
	Shaft seals worn.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
<b>Turbocharger Turbine Wheel Drag</b>	Carbon buildup behind turbine wheel, caused by coked oil or combustion deposits.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Dirt buildup behind the compressor wheel, caused by air intake leaks.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
	Bearing seizure or dirty, worn bearings.	Inspect turbocharger; repair/replace as required. See your John Deere dealer.
<b>Engine Overheats</b>	Rotary screen not turning.	Verify that handle for the rotary screen drive belt is engaged.
	Radiator plugged or charge air cooler plugged.	Perform a Service Clean Out Fan Reversal. See Engine Application Help or Operator's Station Help for further information on reversing the cooling fan.  Clean charge air cooler and radiator with compressed air. See Maintenance— Every 10 Hours section for further information.
	Vacuum fan duct is not removing crop debris from the rotary screen.	Verify that the rotary screen door is latched and it fully contacts the vacuum fan housing.  Verify that vacuum fan is turning with engine running.
	Vacuum fan duct is plugged.	Inspect vacuum fan duct and discharge tube for blockage.
	Engine overloaded.	Reduce engine load.
	Low coolant level.	Fill cooling system to the proper level, then check radiator and hoses for loose connections or leaks.
	Defective surge tank cap.	Replace surge tank cap as required.
	Loose or defective fan belt.	Replace fan belt as required. Check belt tensioner.
	Low engine oil level.	Check oil level. Add oil as required.
	Cooling system needs flushing.	Flush cooling system.

## *Troubleshooting*

Symptom	Problem	Solution
	Defective thermostats.	Remove and check thermostats as required.
	Defective temperature gauge or sender.	Check coolant temperature with thermometer and replace if necessary.
	Incorrect grade of fuel.	Use correct grade of fuel.
	Radiator core dirty.	Clean radiator as required.
	Too low crankcase oil level.	Fill crankcase to the proper oil level.
	Damaged cylinder head gasket.	Replace cylinder head gasket. See your John Deere dealer.
	Defective coolant pump.	Replace coolant pump. See your John Deere dealer.
	Variable pitch fan blades not actuating correctly.	See your John Deere dealer for further information.
<b>Coolant in Crankcase</b>	Cylinder head gasket defective.	Replace cylinder head gasket. See your John Deere dealer.
	Cylinder head or block cracked.	Locate crack; repair/replace components as required.
	Cylinder liner seals leaking.	Remove and inspect cylinder liners. See your John Deere dealer.
	Leaking oil cooler.	Pressure test the oil cooler; repair/replace as required. See your John Deere dealer.
	Defective oil cooler O-rings.	Remove and inspect oil cooler O-rings; replace as required. See your John Deere dealer.
	Faulty coolant pump seal, weep hole is plugged, or coolant is leaking through bearing.	Replace coolant pump seals. See your John Deere dealer.
<b>Coolant Temperature Below Normal</b>	Defective thermostats.	Test thermostats; replace thermostats as required.

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## **Electrical**

Symptom	Problem	Solution
<b>Undercharged System</b>	Excessive electrical load from added accessories.	Remove accessories or install a higher output alternator.

## Troubleshooting

Symptom	Problem	Solution
	Excessive engine idling.	Increase engine rpm when heavy electrical load is used.
	Poor electrical connections on battery, ground strap, starter, or alternator.	Inspect and clean as necessary.
	Defective battery.	Test batteries.
	Defective alternator.	Test charging system.
<b>Battery Used Too Much Water</b>	Cracked battery case.	Check for moisture and replace as necessary.
	Battery charging rate too high.	Test charging system.
<b>Batteries Will Not Charge</b>	Loose or corroded connections.	Clean and tighten connections.
	Sulfated or worn-out batteries.	See your John Deere dealer.
	Stretched belt or defective belt tensioner.	Adjust belt tension or replace belt.
<b>Starter Will Not Crank</b>	Engine drivelines engaged.	Disengage engine drivelines.
	Loose or corroded connections.	Clean and tighten loose connections.
	Low battery output voltage or discharged battery.	Charge or replace batteries.
	Faulty start circuit relay.	See your John Deere dealer.
	Blown fuse.	Replace fuse.
		Clean battery terminals and connections.
	Defective main switch or start safety switch.	Repair switch as required.
	Starter solenoid defective.	Replace solenoid.
	Starter defective.	Replace starter.
<b>Starter Cranks Slowly</b>	Low battery output.	Charge batteries.
	Crankcase oil too heavy.	Use proper viscosity oil.
	Loose or corroded connections.	Clean and tighten loose connections.
<b>Entire Electrical System Does Not Function</b>	Faulty battery connection.	Clean and tighten connections.
	Sulfated or worn-out batteries.	Replace batteries.

## *Troubleshooting*

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Symptom	Problem	Solution
	Blown fuse.	Replace fuse.

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### **Heater**

Symptom	Problem	Solution
<b>Heater Not Blowing Warm Air (poor air flow).</b>	Dirty cab fresh air filter.	Clean or replace filter.
	Dirty recirculating filter.	Clean or replace filter.
	Evaporator or heater coils are plugged.	Clean coils.
<b>Heater Not Blowing Warm Air (cool louver temperatures).</b>	Radiator coolant level is low.	Fill radiator with coolant and check for leaks.
	Radiator coolant temperature is low.	Check for a faulty engine thermostat. See your John Deere dealer.
	Verify that the heater hoses in and out of the cab are hot.	If not, check for kinked heater hoses or plugged heater core.
	Faulty blend air door.	See your John Deere dealer.

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OUO6075,0004DBA-19-12NOV20

### **Air Conditioner**

Symptom	Problem	Solution
<b>Insufficient Cooling (poor airflow)</b>	Dirty cab fresh air filter.	Clean or replace filter.
	Dirty recirculating filter.	Clean or replace filter.
	Evaporator or heater coils are plugged.	Clean coils.
	Air ducts are obstructed or leak.	Clear obstructions or fix leaks.
<b>Insufficient Cooling (initially cools and airflow drops)</b>	Evaporator core is frozen with ice.	Thaw evaporator core.
	Diagnostic trouble code for high evaporator temperature voltage is generated.	See your John Deere dealer.
	Diagnostic trouble code for low evaporator temperature voltage is generated.	See your John Deere dealer.
	Freeze switch probe is not inserted into the evaporator core correctly.	See your John Deere dealer.

## Troubleshooting

Symptom	Problem	Solution
	Freeze switch remains closed when submerged in ice water.	See your John Deere dealer.
<b>Insufficient Cooling (warm louver temperatures)</b>	Hose clamp for the heater supply hose is loose.	Check and tighten the clamp.
	Faulty blend door.	See your John Deere dealer.
<b>Insufficient Cooling (refrigerant issues)</b>	Refrigerant circuit pressure low or high.	Check refrigerant pressure. See your John Deere dealer.
	Engine cooling fan not working properly.	See your John Deere dealer.
	Debris is obstructing condenser airflow.	Clean condenser.
	Obstructed or damaged refrigerant lines.	See your John Deere dealer.
<b>Foul odor in cab</b>	Plugged drain tube.	Blow out condensate tube and clean pan under evaporator.  Ensure that the weep valve in the condensate drain tube is installed.
	Dirty cab fresh air filter.	Clean or replace filter.
		Vacuum out cab.
	Dirty recirculating filter.	Clean or replace filter.
		Vacuum out cab.
<b>No Cooling (blower is functioning properly, but air from the louvers is not cold)</b>	HVAC electrical fuses are blown.	Replace fuses as needed.
	Air conditioner compressor clutch coil is faulty.	Replace air conditioner compressor.
	Freeze switch is not functioning correctly.	Replace switch. See your John Deere dealer.
	Air conditioner switch is not functioning properly.	Replace switch. See your John Deere dealer.
		Check refrigerant pressure. See your John Deere dealer.
	Engine cooling fan not working properly.	See your John Deere dealer.



## *Troubleshooting*

Symptom	Problem	Solution
	Obstructed or damaged refrigerant lines.	See your John Deere dealer.
	Air conditioner compressor/alternator belt is broken.	Replace belt.
	Air conditioner compressor/alternator belt tension is loose.	Tighten belt tension.
	Air conditioner compressor clutch is seized.	Replace air conditioner compressor.
	Refrigerant circuit pressure low or high.	Check refrigerant pressure. See your John Deere dealer.
	Air conditioner compressor runs for a short time or is cycling rapidly.	Check refrigerant pressure. See your John Deere dealer.

OUO6075,0004DBB-19-12NOV20

### **Moisture Sensor**

Symptom	Problem	Solution
<b>Moisture Consistently Too Low or Too High</b>	Green plant sap or weed seed buildup on moisture sensor plate.	Clean moisture sensor plate.
	Obstructed sensor.	Inspect elevator mount unit and clean as needed.
<b>Moisture Reading Inaccurate</b>	Clean grain elevator moisture sensor bypass motor is not running.	Check the electrical connector and verify that it is connected.
	Incorrect crop selected.	Select correct crop.
	Moisture sensor out of adjustment.	Change moisture correction.
<b>Moisture Reading Always Zero</b>	Empty bypass value has changed.	Calibrate Moisture Sensor. See Calibration section for further information.
	Clean grain elevator moisture sensor bypass is obstructed.	Clear obstructions from the bypass.

OUO6075,0004DB4-19-12NOV20

### **Mass Flow Sensor**

Symptom	Problem	Solution
<b>Yield Constantly Too High or Too Low</b>	System is out of calibration.	Change yield calibration.
	Incorrect header width.	Change header width.

## *Troubleshooting*

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Symptom	Problem	Solution
	Incorrect crop selection.	Select correct crop.
	Dirt, mud, or debris on the impact plate.	Clean the impact plate.
	Clean grain elevator chain tension is loose.	Adjust the clean grain elevator chain tension.
<b>Yield Reading Always Zero</b>	No ground speed.	See your John Deere dealer.
	Clean grain elevator speed is too low.	See your John Deere dealer.
	Recording problems.	Verify that the total accumulated wet weight is increasing. If the wet weight is not increasing, see your John Deere dealer for further information.

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OUO6075,0004DBC-19-12NOV20

# Storage

## Preparing Machine for Storage

Swing out condenser and oil cooler and clean radiator with air, water, or a vacuum cleaner.

Clean condenser and oil cooler after cleaning radiator. Clean charge air cooler.

Every 60—90 days start engine and turn air conditioning ON. Run engine at low idle for several minutes for compressor seal lubrication. Outside temperature should be above 5°C (40°F) for proper air conditioning operation.

Clean the surfaces of the engine with a safe solvent.



**CAUTION: Do not use gasoline.**

Clean inside the air cleaner and install new elements.

Drain the engine crankcase, while the engine is warm. Replace filter and fill with correct oil. Add 0.66 L (22 oz) of a corrosion inhibitor to the engine crankcase. Run engine to circulate.

Drain, flush, and refill cooling system with 50/50 mixture of antifreeze and water.

**IMPORTANT: Long-term storage in vehicle (over 12 months) is not recommended. If long-term storage is necessary, periodic testing of Diesel Exhaust Fluid (DEF) is recommended to ensure that urea concentration does not fall out of specification.**

**Final Tier 4/Stage V:** Diesel Exhaust Fluid (DEF) has a limited shelf life, but may be stored in the vehicle for as long as 12 months, depending upon storage conditions. See Storing Diesel Exhaust Fluid (DEF) and Refilling Diesel Exhaust Fluid (DEF) Tank in Fuels and Lubricants section for further information. See Diesel Exhaust Fluid (DEF) Tank—Filling and Diesel Exhaust Fluid (DEF) Tank—Draining in Maintenance—As Required (Engine Fluids and Filters) section for further information.

**IMPORTANT: Final Tier 4/Stage V: Do not disconnect battery for at least 90 seconds after machine is shut OFF. Selective Catalyst Reduction (SCR) system automatically purges lines of Diesel Exhaust Fluid (DEF) during this time, immediately after machine is shut OFF. If adequate time is not allowed for lines to be purged, any fluid remaining in lines can crystallize and plug lines. Fluid freezes and possibly burst lines in freezing weather conditions.**

*NOTE: Turn battery disconnect switch OFF if machine is stored longer than 25 days. If storage period is longer than 90 days, remove negative lead to batteries to minimize load to batteries.*

Charge batteries completely. Specific gravity equals

1.260 volts. To minimize load to the batteries, remove the negative lead to the batteries.

Drain water separator.

Clean machine inside and out. Leave elevator doors and drain covers open.

Cycle concave up and down several times to prevent material buildup in the concave area.

**IMPORTANT: Directing pressurized water at electronic/electrical components or connectors, bearings and hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure, and spray at a 45 to 90 degree angle.**

Repaint areas where needed.

*NOTE: It is not necessary to wax the machine. However, if desired, use a good clear wax that contains no abrasives. These types of waxes usually do not contain cleaners.*

Lubricate machine and grease adjusting bolt threads.

Perform all 400 hours (yearly) service.

To prevent condensation, fill fuel tank.

**IMPORTANT: To stabilize the fuel and prevent water condensation, add fuel conditioner when the following occurs:**

- **Fuel is stored in the fuel tanks (machine or farm storage) for extended periods of time. See your John Deere dealer for recommendations.**
- **A slow turn over of fuel is being used. See your John Deere dealer for recommendations.**

**For prolonged machine storage, the best practice is to drain biodiesel and fill machine with regular petroleum diesel fuel. Otherwise use biodiesel stabilizer (anti-oxidant) additives or fully formulated biodiesel conditioners. See your John Deere dealer for recommendations.**

If machine is to be stored for a long period, remove and clean the batteries. Store them in a cool, dry place and keep them fully charged.

Before storing the machine, the air compressor reservoir (if equipped) **MUST** be drained of water.

OUO6075,0004A72-19-10DEC18

## Removing Machine from Storage

Reconnect and/or charge batteries.

Charge batteries completely. Specific gravity equals 1.260 volts. To minimize load to the batteries, remove negative lead to the batteries.

Check oil and coolant levels. Inspect for leaks and add oil and coolant if needed.

**Final Tier 4/Stage V:** If diesel exhaust fluid (DEF) tank was not drained, test urea concentration. See Testing Diesel Exhaust Fluid (DEF) in Fuels and Lubricants section for further information. If concentration is not within specifications, drain and replace with new diesel exhaust fluid (DEF). If diesel exhaust fluid (DEF) tank was drained, fill tank. See Diesel Exhaust Fluid (DEF) Tank—Filling in Maintenance—As Required (Engine Fluids and Filters) section for further information.

Replace the ActiveVision™ clean grain elevator camera and tailings system camera desiccant cartridge (if equipped). See ActiveVision™ Camera Desiccant Cartridge in Maintenance—Every 400 Hours section for further information.

Close elevator doors and drain hole.

Check tension of drive belts. Adjust spring-loaded idlers until the washer is positioned between the end of the gauge and the bottom of the step.

Check tire inflation and review machine Operator's Manual.

Inspect fire extinguishers (front and left-hand side) by following maintenance instructions on the fire extinguisher label. Recharge or replace as necessary.

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OUO6075.0004D65-19-08JUL20

# Specifications

## Operating Speeds

Speeds shown are average and can vary from machine to machine.

*NOTE: Operating speed specifications and design subject to change without notice.*

Engine Speeds	
Slow Speed	1200 rpm
Medium Speed	1550 rpm
High Speed	1900 rpm

Separator Main Driver Speeds	
Slow Speed	1200 rpm
Medium Speed	1550 rpm
High Speed	1900 rpm

Separator Speeds (Rotor Gear Case)	Factory Belt Speed Ranges	Optimal Belt Life Speed Ranges <sup>a</sup>
First Gear (Low Range)	300—520 rpm	300—450 rpm
Second Gear (Medium Range)	420—800 rpm	450—720 rpm
Third Gear (High Range)	720—1300 rpm	720—1300 rpm

<sup>a</sup>Staying within the optimal belt life speed ranges will increase the rotor variable belt life because the variable sheaves operate closer to a 1:1 ratio.

Rethresher System Speed	904 rpm
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Feeder House Lower Shaft Speeds	
Fixed Speed (If Equipped)	520 rpm
Variable Speed (If Equipped)	520—780 rpm

Feed Accelerator Speeds (Standard Speed)	
1st Gear (Low Range)	440 rpm
2nd Gear (High Range)	990 rpm

Feed Accelerator Speeds (Optional Slow Speed)	
First Gear (Low Range)	310 rpm
Second Gear (High Range)	700 rpm

Discharge Beater Speed and Jackshaft Speed	1000 rpm
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Cleaning Shoe Speeds	
Standard Cleaning Fan Speed	570—1430 rpm
Optional Slow Cleaning Fan Speed	350—800 rpm
Shoe Drive Speed	292 rpm

Elevator Speeds	
Clean Grain Elevator	415 rpm
Clean Grain Loading Auger	432 rpm
Tailings Elevator, Lower Auger	408 rpm
Tailings Elevator, Upper Auger	408 rpm

Unloading System Speeds (Separator Engaged)	X9 1000 162 L/s (4.6 bu/s) Unload Rate	X9 1100 186 L/s (5.3 bu/s) Unload Rate
Unloading System Countershaft	1721 rpm	1721 rpm
Unloading Auger Gearbox, Input Shaft	827 rpm	902 rpm
Unloading Vertical Auger	480 rpm	523 rpm
Unloading Outer Auger	480 rpm	523 rpm
Grain Tank Horizontal Augers (Front and Rear)	466 rpm	508 rpm

### Specifications

<b>Chopper Speeds</b>	<b>Fine Cut Chopper</b>	<b>Extra-Fine Cut Chopper</b>
Chopper (Fixed Speed)	2400 rpm	3000 rpm
Chopper (Two-Speed)	1550/2400 rpm	1600/3000 rpm

<b>Spreader Speeds</b>	<b>Fine Cut Chopper (Spreader)</b>	<b>Extra-Fine Cut Chopper (Spreader)</b>
Spreader (Fixed Speed)	562 rpm	562 rpm
Spreader (Two-Speed)	360/562 rpm	300/562 rpm

OUO6075,0004CC9-19-08JUL20

## Specifications

*NOTE: Specifications and design subject to change without notice.*

Engine		
Make	John Deere	
Model	6136HX304 (13.6 L, Single Turbo, Tier 3/Stage IIIA) 6136HX303 (13.6 L, Series Turbos, Tier 3/Stage IIIA) 6136HX404 (13.6 L, Single Turbo, Final Tier 4) 6136HX403 (13.6 L, Series Turbos, Final Tier 4) 6136HX504 (13.6 L, Single Turbo, Stage V) 6136HX503 (13.6 L, Series Turbos, Stage V)	
Type	Six-Cylinder, In-Line, Valve-in-Head, Air-to-Air Aftercooled Diesel Turbocharged	
	<b>X9 1000</b>	<b>X9 1100</b>
Rated Power	410 kW (550 hp)	450 kW (603 hp)
Rated Speed	1900 rpm	1900 rpm
Power Boost at Rated Speed	40 kW (54 hp)	40 kW (54 hp)
Peak Power	470 kW (630 hp)	515 kW (690 hp)
Peak Power Speed (Rated Speed -200 rpm)	1700 rpm	
Displacement	13.6 L (830 in³)	
Firing Order	1-5-3-6-2-4	
Air Cleaner	Dry Type with Safety Element	

Electrical System	
Battery Voltage	12 V
Battery Terminal Grounded	Negative
Alternator	330 A

Transmission	
Speeds	ProDrive™ XL Transmission (Multi-Motor Transmission)

*ProDrive is a trademark of Deere & Company*

Brakes	
Type	Multiple Wet Discs

Feed Accelerator	
Number of Wings	40

Separator Elements	Left Rotor	Right Rotor
Threshing Elements	15	15
Tines	26	26

Concave	
Number of Concaves	6 Coarse Grain 12 Small Grain
Number of Bars Per Concave	23 Coarse Grain 19 Small Grain

Separator	Left Rotor	Right Rotor
Number of Grates	4 Rows	4 Rows

Discharge Grate	
Number of Grates	1 Row

## Specifications

Discharge Beater	
Number of Wings	60

Grain Tank	X9 1000	X9 1100
Capacity	14 800 L (420 bu)	16 200 L (460 bu)
Peak Unloading Rate, 162 L/s (4.6 bu/s) Unload Rate	9540 L/min (270 bu/min)	Not Applicable
Peak Unloading Rate, 186 L/s (5.3 bu/s) Unload Rate	Not Applicable	11 160 L/min (318 bu/min)

Weight	X9 1000	X9 1100
Machine Weight <sup>a</sup>	27 000 kg (59 500 lb)	27 000 kg (59 500 lb)

<sup>a</sup>Weight is based on corn machine configuration with 1250 L (330 gal) of diesel fuel in the fuel tank, empty grain tank, with dual wheels, and no header attached.

Turning Radius <sup>b</sup>	
Rear Wheel Tread Width (Center-to-Center)	3.0—4.2 m (9 ft 10 in—13 ft 9 in)
Turning Radius (0—2 Steering Stop Washers)	5.5—7.2 m (18 ft 0 in—23 ft 7 in)

<sup>b</sup>For detailed information on a specific configuration, see your John Deere dealer.

Capacities		
Fuel Tank		1250 L (330 gal)
Diesel Exhaust Fluid (DEF) Tank (Final Tier 4 and Stage V)		83 L (22 gal)
Cooling System with Heater (Tier 3/Stage IIIA)		76 L (80.3 qt)
Cooling System with Heater (Final Tier 4 and Stage V)		84 L (88.8 qt)
Engine Crankcase with Filter		57 L (60.23 qt) <sup>c</sup>
Final Drive (Per Unit)	Wheel Machines	8 L (8.46 qt)
	Track Machines	13.5 L (14.27 qt)
Loading Auger Gear Case (Fixed)		0.9 L (0.95 qt)
Loading Auger Gear Case (Pivoting)		0.9 L (0.95 qt)
Feed Accelerator Gear Case		2 L (2.11 qt)
Main Engine Gear Case		53 L (56 qt)
Cleaning Fan Variable Speed Driven Bearing Cavity		0.1 L (0.11 qt)
Spreader Gear Case		1.2 L (1.27 qt)
Chopper Gear Case (Two-Speed)		1.9 L (2.01 qt)
Hydraulic/Hydrostatic Reservoir		91 L (96.16 qt)

<sup>c</sup>It is vital to maintain engine oil at correct levels. Always verify that oil level is at correct location on dipstick when servicing.

Air Compressor (If Equipped)		
Reservoir Size		60 L (16 gal)
Maximum Reservoir Pressure		827 kPa (8.27 bar) (120 psi)
Air Compressor Flow	Slow Engine Speed	315 L/min (11.1 ft <sup>3</sup> /min)
	High Engine Speed	500 L/min (17.7 ft <sup>3</sup> /min)

OUO6075,0004CCA-19-05NOV20



## Specifications

### Dimensions

**NOTE:** Dimensions are approximate and subject to change without notice.

Legend	Dimension	
A	11.69 m (38 ft 4 in) with 7.9 m (26 ft 0 in) Power Fold Unloading Auger 11.84 m (38 ft 10 in) with 8.2 m (26 ft 10 in) Power Fold Unloading Auger 12.45 m (40 ft 10 in) with 8.7 m (28 ft 6 in) Power Fold Unloading Auger 13.21 m (43 ft 4 in) with 9.4 m (30 ft 10 in) Power Fold Unloading Auger	
B	9.79 m (32 ft 1 in) with 7.9 m (26 ft 0 in) Power Fold Unloading Auger 9.79 m (32 ft 1 in) with 8.2 m (26 ft 10 in) Power Fold Unloading Auger 10.55 m (34 ft 7 in) with 8.7 m (28 ft 6 in) Power Fold Unloading Auger 11.31 m (37 ft 1 in) with 9.4 m (30 ft 10 in) Power Fold Unloading Auger	
C	9.25 m (30 ft 4 in)	
D	4.92—5.06 m (16 ft 2 in—16 ft 7 in) with 14 800 L (420 bu) Covers 4.92—5.06 m (16 ft 2 in—16 ft 7 in) with 16 200 L (460 bu) Covers	
E	Top of Front Beacon Lights	Top of StarFire™ Receiver
	3.88—4.02 m (12 ft 9 in—13 ft 2 in)	3.90—4.04 m (12 ft 10 in—13 ft 3 in)
F	0.46—0.60 m (1 ft 6 in—1 ft 11 in)	
G	4.10 m (13 ft 5 in)	
H	8.50 m (27 ft 11 in) with 7.9 m (26 ft 0 in) Power Fold Unloading Auger 8.64 m (28 ft 4 in) with 8.2 m (26 ft 10 in) Power Fold Unloading Auger 9.21 m (30 ft 3 in) with 8.7 m (28 ft 6 in) Power Fold Unloading Auger 9.92 m (32 ft 7 in) with 9.4 m (30 ft 10 in) Power Fold Unloading Auger	
I	5.80—5.94 m (19 ft 0 in—19 ft 6 in) with 7.9 m (26 ft 0 in) Power Fold Unloading Auger 5.84—5.98 m (19 ft 2 in—19 ft 7 in) with 8.2 m (26 ft 10 in) Power Fold Unloading Auger 6.01—6.15 m (19 ft 9 in—20 ft 2 in) with 8.7 m (28 ft 6 in) Power Fold Unloading Auger 6.23—6.36 m (20 ft 5 in—20 ft 10 in) with 9.4 m (30 ft 10 in) Power Fold Unloading Auger	
J	4.94—5.08 m (16 ft 3 in—16 ft 8 in) with 7.9 m (26 ft 0 in) Power Fold Unloading Auger 4.99—5.12 m (16 ft 5 in—16 ft 10 in) with 8.2 m (26 ft 10 in) Power Fold Unloading Auger 5.16—5.29 m (16 ft 11 in—17 ft 4 in) with 8.7 m (28 ft 6 in) Power Fold Unloading Auger 5.37—5.51 m (17 ft 7 in—18 ft 1 in) with 9.4 m (30 ft 10 in) Power Fold Unloading Auger	
K <sup>a</sup>	5.09—5.22 m (16 ft 8 in—17 ft 2 in) with 7.9 m (26 ft 0 in) Power Fold Unloading Auger 5.13—5.26 m (16 ft 10 in—17 ft 3 in) with 8.2 m (26 ft 10 in) Power Fold Unloading Auger 5.30—5.44 m (17 ft 5 in—17 ft 10 in) with 8.7 m (28 ft 6 in) Power Fold Unloading Auger 5.51—5.65 m (18 ft 1 in—18 ft 6 in) with 9.4 m (30 ft 10 in) Power Fold Unloading Auger	
L <sup>b</sup>	Front Tires	Rear Tires
	3.92—5.68 m (12 ft 10 in—18 ft 8 in)	3.83—4.92 m (12 ft 7 in—16 ft 2 in)

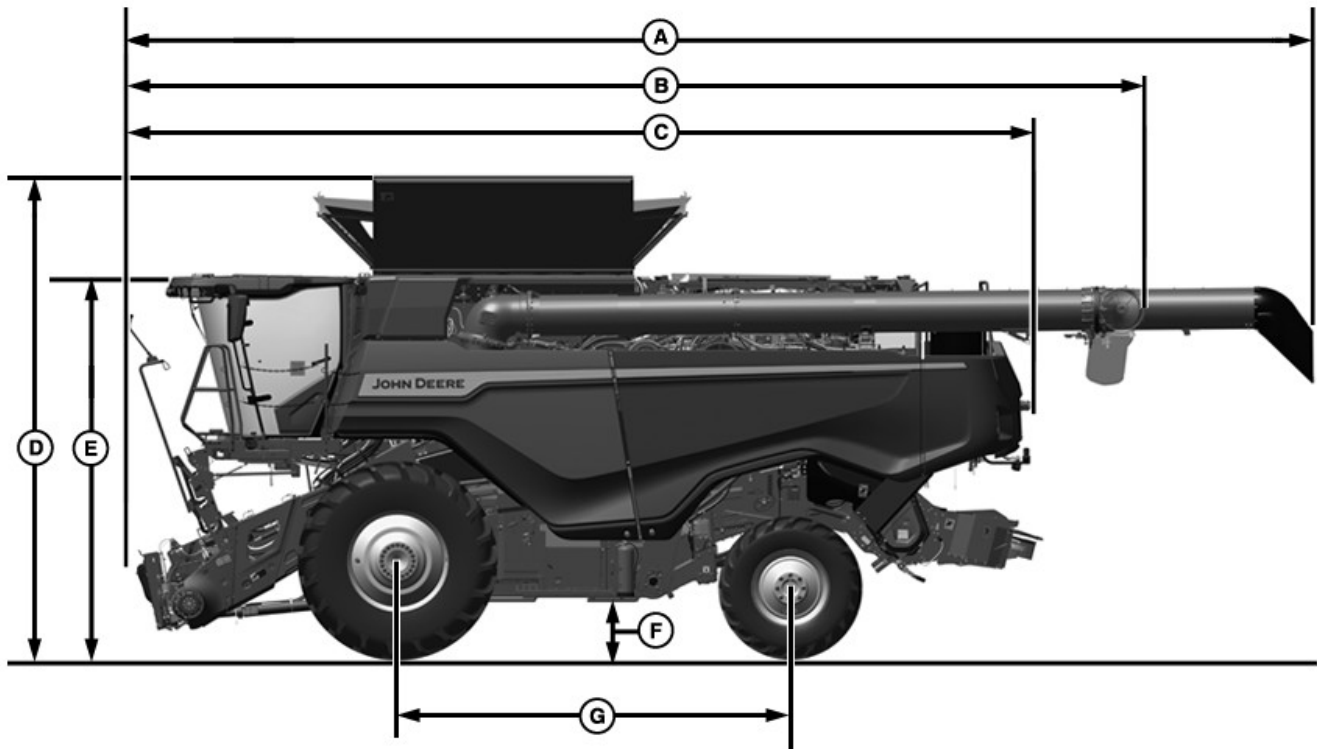
StarFire is a trademark of Deere & Company

<sup>a</sup>Dimension is measured 1.22 m (4 ft) from the grain spill point. This represents the unloading auger when centered over the grain cart.

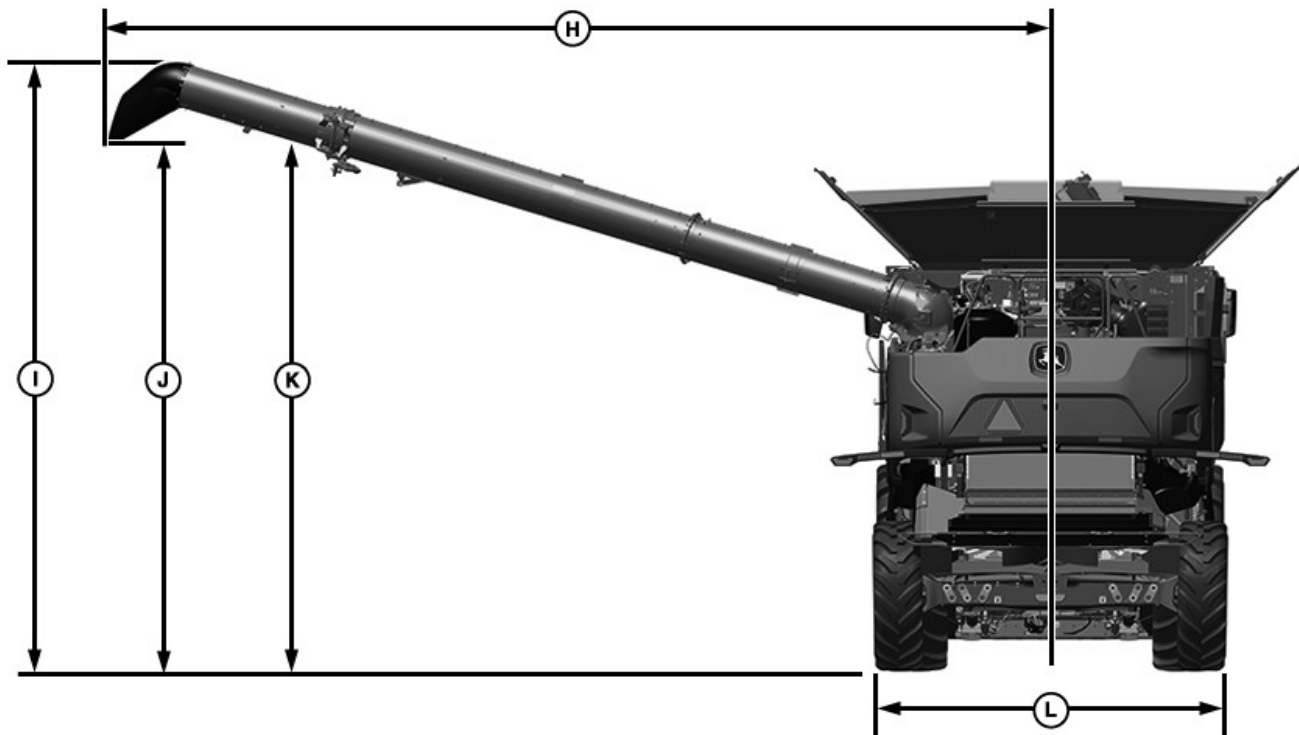
<sup>b</sup>Due to the different tire configurations, row spacings, axle configurations, wheel offsets, axle positions, and spindles types, machine widths vary. Measurements given in chart are for minimum and maximum widths. For more detailed width information, see your John Deere dealer.

QUO6075,0004CCB-19-20MAY20

## Dimension Reference Points

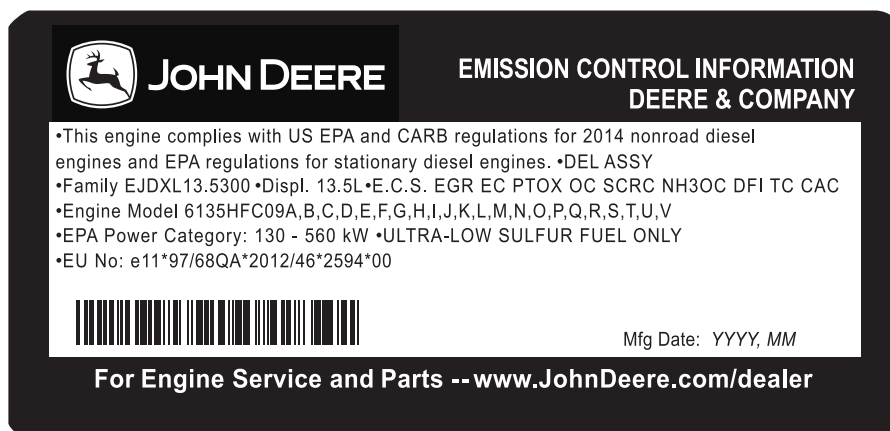


H128018—UN—15NOV19



H128019—UN—15NOV19  
OUO6075,0004CCC-19-23JAN20

## Emissions Control System Certification Label



Engine Emissions Label

RG24291—UN—18SEP13

**CAUTION:** Statutes providing severe penalties for tampering with emissions controls may apply to the user or dealer.

The emissions warranty applies to those engines marketed by John Deere that have been certified by the United States Environmental Protection Agency (EPA) and/or California Air Resources Board (CARB); and used in the United States and Canada in Non-road equipment. The presence of an emissions label like the one shown signifies that the engine has been certified with the EPA and/or CARB. The EPA and CARB warranties only apply to new engines having the certification label affixed to the engine and sold as stated above in the geographic areas. The presence of an EU number signifies that the engine has been certified with the European Union countries per Directive 97/68/EC. The EPA and/or CARB emissions warranties do not apply to the EU countries.

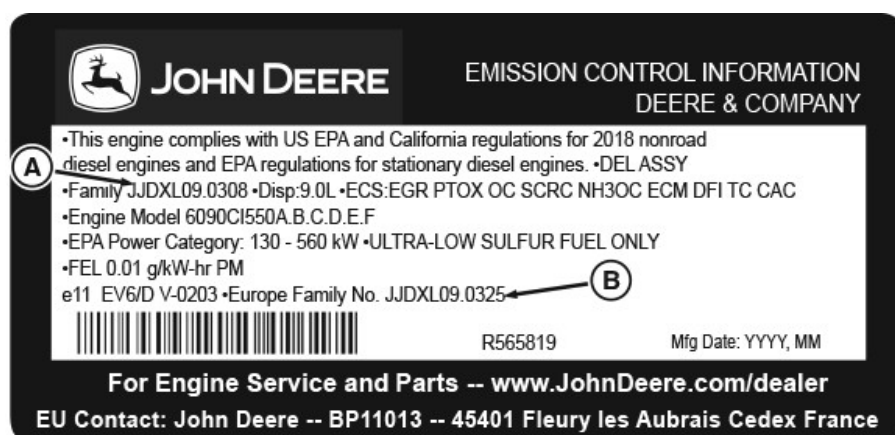
The emissions label has applicable US EPA and/or CARB regulatory year. The regulatory year determines which warranty statement is applicable to engine. See "EPA Non-road Emissions Control Warranty Statement—Compression Ignition" and "CARB Non-road Emissions Control Warranty Statement—Compression Ignition". For additional regulatory year warranty statements, see [www.JohnDeere.com](http://www.JohnDeere.com) or contact the nearest John Deere service dealer for assistance.

### Emission Control System(s) Laws

The U.S. EPA and California ARB prohibit the removal or rendering inoperative of any device or element of design installed on or in engines/equipment in compliance with applicable emission regulations prior to or after the sale and delivery of the engines/equipment to the ultimate purchaser.

DX,EMISSIONS,LABEL-19-01AUG14

## Carbon Dioxide Emissions (CO<sub>2</sub>)



Engine Emissions Label

RG29997—UN—27FEB18

**A—Family**

**NOTE:** If your engine emissions label lists both a family number (A) and a Europe family number (B), reference the Europe family number using the chart.

**NOTE:** The first letter of the family number is not utilized for family identification on the chart.

To identify the carbon dioxide (CO<sub>2</sub>) output, locate the engine emissions label. Find the appropriate family on the emissions label and reference the chart.

Emissions Label Family	CO <sub>2</sub> Result
_JDXL02.9323	952 g/kW-hr
_JDXL02.9327	784 g/kW-hr
_JDXL04.5337	819 g/kW-hr
_JDXL04.5338	682 g/kW-hr
_JDXL04.5304	1004 g/kW-hr
_JDXN04.5174	792 g/kW-hr

**B—Europe Family**

Emissions Label Family	CO <sub>2</sub> Result
_JDXL06.8324	720 g/kW-hr
_JDXL06.8328	683 g/kW-hr
_JDXL06.8336	701 g/kW-hr
_JDXN06.8175	771 g/kW-hr
_JDXL09.0319	646 g/kW-hr
_JDXL09.0325	695 g/kW-hr
_JDXL09.0329	657 g/kW-hr
_JDXL09.0333	650 g/kW-hr
_JDXL13.5326	684 g/kW-hr
_JDXL13.6320	651 g/kW-hr
_JDXL13.6339	604 g/kW-hr

This CO<sub>2</sub> measurement results from testing over a fixed test cycle under laboratory conditions a(n) (parent) engine representative of the engine type (engine family) and shall not imply or express any guarantee of the performance of a particular engine.

DX,EMISSIONS,CO2-19-22OCT20

## CARB Non-road Emissions Control Warranty Statement—Compression Ignition

### Emissions Control Warranty Statement 2019 through 2021



JOHN DEERE

DXLOGOV1—UN—28APR09

#### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

**CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:**

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

**EMISSIONS WARRANTY EXCLUSIONS:**

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

**JOHN DEERE'S WARRANTY RESPONSIBILITY:**

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

**Air Induction System**

- Intake manifold
- Turbocharger
- Charge air cooler

**Fuel Metering system**

- Fuel injection system

**Exhaust Gas Recirculation**

- EGR valve

**Catalyst or Thermal Reactor Systems**

- Catalytic converter
- Exhaust manifold

**Emission control labels**

**Particulate Controls**

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

**Positive Crankcase Ventilation (PCV) System**

- PCV valve
- Oil filler cap

**Advanced Oxides of Nitrogen (NOx) Controls**

- NOx absorbers and catalysts

**SCR systems and urea containers/dispensing systems**

**Miscellaneous Items used in Above Systems**

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

### OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission\_CI\_CARB (01Feb17)

### Emissions Control Warranty Statement 2019 through 2021

DXLOGOV1 —UN—28APR09



**JOHN DEERE**

#### **CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS**

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

#### **CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:**

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

#### **EMISSIONS WARRANTY EXCLUSIONS:**

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

RG29280—UN—02FEB17

#### JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System	Emission control labels	Advanced Oxides of Nitrogen (NOx) Controls
<ul style="list-style-type: none"> <li>• Intake manifold</li> <li>• Turbocharger</li> <li>• Charge air cooler</li> </ul>	Particulate Controls	<ul style="list-style-type: none"> <li>• NOx absorbers and catalysts</li> </ul>
Fuel Metering system	<ul style="list-style-type: none"> <li>• Any device used to capture particulate emissions</li> <li>• Any device used in the regeneration of the capturing system</li> <li>• Enclosures and manifolding</li> <li>• Smoke Puff Limiters</li> </ul>	SCR systems and urea containers/dispensing systems
<ul style="list-style-type: none"> <li>• Fuel injection system</li> </ul>	Positive Crankcase Ventilation (PCV) System	Miscellaneous Items used in Above Systems
Exhaust Gas Recirculation	<ul style="list-style-type: none"> <li>• PCV valve</li> <li>• Oil filler cap</li> </ul>	<ul style="list-style-type: none"> <li>• Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware</li> </ul>
<ul style="list-style-type: none"> <li>• EGR valve</li> </ul>		
Catalyst or Thermal Reactor Systems		
<ul style="list-style-type: none"> <li>• Catalytic converter</li> <li>• Exhaust manifold</li> </ul>		

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

#### OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission\_CI\_CARB (01Feb17)

RG29281—UN—27FEB17

### Emissions Control Warranty Statement 2022 through 2024



JOHN DEERE

DXLOGOV1—UN—28APR09

#### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and California regulations for nonroad/off-road diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you

should contact John Deere at 1-319-292-5400.

### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2022 through 2024 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB. John Deere warrants that this engine is free from defects in materials and workmanship which would cause the failure of emissions warranted parts to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. This applies to all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

### EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

### JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

#### Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

#### Fuel Metering system

- Fuel injection system

#### Exhaust Gas Recirculation

- EGR valve

#### Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

#### Emission control labels

#### Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

#### Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

#### Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

#### SCR systems and urea containers/dispensing systems

#### Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware



Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

### **OWNER'S WARRANTY RESPONSIBILITIES:**

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission\_CI\_CARB (14Apr20)

## Emissions Control Warranty Statement 2022 through 2024

DXLOGOV1 —UN—28APR09



**JOHN DEERE**

### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and California regulations for nonroad/off-road diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

#### CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2022 through 2024 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB. John Deere warrants that this engine is free from defects in materials and workmanship which would cause the failure of emissions warranted parts to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. This applies to all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

#### EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

RG32758—UN—19AUG20

#### JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

<b>Air Induction System</b>	<b>Emission control labels</b>	<b>Advanced Oxides of Nitrogen (NOx) Controls</b>
<ul style="list-style-type: none"> <li>• Intake manifold</li> <li>• Turbocharger</li> <li>• Charge air cooler</li> </ul>	<b>Particulate Controls</b> <ul style="list-style-type: none"> <li>• Any device used to capture particulate emissions</li> <li>• Any device used in the regeneration of the capturing system</li> <li>• Enclosures and manifolding</li> <li>• Smoke Puff Limiters</li> </ul>	<ul style="list-style-type: none"> <li>• NOx absorbers and catalysts</li> </ul>
<b>Fuel Metering system</b>		<b>SCR systems and urea containers/dispensing systems</b>
<ul style="list-style-type: none"> <li>• Fuel injection system</li> </ul>		<b>Miscellaneous Items used in Above Systems</b>
<b>Exhaust Gas Recirculation</b>	<b>Positive Crankcase Ventilation (PCV) System</b>	<ul style="list-style-type: none"> <li>• Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware</li> </ul>
<ul style="list-style-type: none"> <li>• EGR valve</li> </ul>	<ul style="list-style-type: none"> <li>• PCV valve</li> <li>• Oil filler cap</li> </ul>	
<b>Catalyst or Thermal Reactor Systems</b>		
<ul style="list-style-type: none"> <li>• Catalytic converter</li> <li>• Exhaust manifold</li> </ul>		

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

#### OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

Emission\_CI\_CARB (14Apr20)

RG32759—UN—19AUG20  
DX,EMISSIONS,CARB-19-26AUG20

## EPA Non-road Emissions Control Warranty Statement—Compression Ignition



JOHN DEERE

DXLOGOV1—UN—28APR09

### U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you

should contact John Deere at 1-319-292-5400.

### JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission-related components include engine parts developed to control emissions related to the following:

Air-Induction System	Aftertreatment Devices
Fuel System	Crankcase Ventilation Valves
Ignition System	Sensors
Exhaust Gas Recirculation Systems	Engine Electronic Control Units

### EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Emission\_CI\_EPA (18Dec09)



JOHN DEERE

**U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT  
YOUR WARRANTY RIGHTS AND OBLIGATIONS**

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

**JOHN DEERE'S WARRANTY RESPONSIBILITY**

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission-related components include engine parts developed to control emissions related to the following:

Air-Induction System

Fuel System

Ignition System

Exhaust Gas Recirculation Systems

Aftertreatment Devices

Crankcase Ventilation Valves

Sensors

Engine Electronic Control Units

**EMISSION WARRANTY EXCLUSIONS**

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Emission\_CI\_EPA (18Dec09)

TS1721—UN—15JUL13  
DX,EMISSIONS,EPA-19-12DEC12

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**Limited Battery Warranty**

*NOTE: Applicable in North America only. For complete machine warranty, reference a copy of the John Deere warranty statement. Contact your John Deere dealer to obtain a copy.*

**To Secure Warranty Service**

The purchaser must request warranty service from a

John Deere dealer authorized to sell John Deere batteries, and present the battery to the dealer with the top cover plate codes intact.

**Free Replacement**

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or workmanship within 90 days of purchase will be replaced free of charge. Installation costs will be covered by warranty if (1) the unserviceable battery was

installed by a John Deere factory or dealer, (2) failure occurs within 90 days of purchase, and (3) the replacement battery is installed by a John Deere dealer.

### Pro Rata Adjustment

Any new battery which becomes unserviceable (not merely discharged) due to defects in material or workmanship more than 90 days after purchase, but before the expiration of the applicable adjustment period, will be replaced upon payment of the battery's current list price less a pro rata credit for unused months of service. The applicable adjustment period is determined from the Warranty Code printed at the top of the battery and chart below. Installation costs are not covered by warranty after 90 days from the date of purchase.

### This Warranty Does Not Cover

Breakage of the container, cover, or terminals.

Depreciation or damage caused by lack of reasonable and necessary maintenance or by improper maintenance.

Transportation, mailing, or service call charges for warranty service.

### Limitation of Implied Warranties and Purchaser's Remedies

To the extent permitted by law, neither John Deere nor any company affiliated with it makes any warranties, representations or promises as to the quality, performance or freedom from defect of the products covered by this warranty. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TO THE EXTENT APPLICABLE, SHALL BE LIMITED IN DURATION TO THE APPLICABLE ADJUSTMENT PERIOD SET FORTH HERE. THE PURCHASER'S ONLY REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON JOHN DEERE BATTERIES ARE THOSE SET FORTH HERE. IN NO EVENT WILL THE DEALER, JOHN DEERE OR ANY COMPANY AFFILIATED WITH JOHN DEERE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. (Note: Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages. So these limitations and exclusions may not apply to you.) This warranty gives you specific legal rights, and you may also have some rights which vary from state to state.

### No Dealer Warranty

The selling dealer makes no warranty of it's own and the dealer has no authority to make any representation or promise on behalf of John Deere, or to modify the terms or limitations of this warranty in any way.

### Pro Rata Months of Adjustment

Warranty Code	Warranty Period
A	40 Months
B	36 Months
C	24 Months

*NOTE: If your battery is not labeled with a warranty code, it is a warranty code "B".*

DX,BATWAR,NA-19-16APR92

## **LICENSE AGREEMENT FOR JOHN DEERE IMAGE PROCESSING MODULE SOFTWARE**

**IMPORTANT -- READ CAREFULLY: THIS LICENSE AGREEMENT (THE "AGREEMENT") IS A LEGAL CONTRACT BETWEEN YOU AND JOHN DEERE SHARED SERVICES, INC., A CORPORATION HAVING A PRINCIPAL ADDRESS OF ONE JOHN DEERE PLACE, MOLINE, IL 61265 ("JOHN DEERE") AND GOVERNS YOUR USE OF THE JOHN DEERE IMAGE PROCESING MODULE (THE "IPM").**

**BY USING THE IPM, YOU ARE ACCEPTING AND AGREEING TO THE TERMS OF THIS LICENSE AGREEMENT WITH RESPECT TO THE SOFTWARE (THE "SOFTWARE") THAT HAS BEEN PRE-INSTALLED ON THE IPM. YOU AGREE THAT THIS LICENSE AGREEMENT, INCLUDING THE WARRANTY DISCLAIMERS, LIMITATIONS OF LIABILITY, TERMINATION, AND ARBITRATION PROVISIONS BELOW, IS BINDING UPON YOU AS OF THE DATE YOU FIRST USE THE IPM (THE "EFFECTIVE DATE"), AND UPON ANY COMPANY ON WHOSE BEHALF YOU USE THE SOFTWARE AND IPM AS WELL AS THE EMPLOYEES OF ANY SUCH COMPANY (COLLECTIVELY REFERRED TO AS "YOU" IN THIS LICENSE AGREEMENT). IF YOU ARE UNABLE OR UNWILLING TO COMPLY WITH ANY OF THESE TERMS, YOU MUST IMMEDIATELY DISCONTINUE USING THE SOFTWARE, AND CONTACT JOHN DEERE OR YOUR DEALER. THIS CONTRACT IS BETWEEN YOU AND JOHN DEERE ONLY. NO THIRD PARTY – INCLUDING BUT NOT LIMITED TO ANY JOHN DEERE DEALER – HAS THE AUTHORITY TO CHANGE OR SUPPLEMENT THIS LICENSE AGREEMENT. IF YOU WERE ASSIGNED THIS LICENSE AGREEMENT FROM A THIRD PARTY (SUCH AS A JOHN DEERE DEALER), YOU UNDERSTAND AND AGREE THAT NO AGENCY RELATIONSHIP BETWEEN JOHN DEERE AND THAT THIRD PARTY IS IMPLIED OR SUGGESTED BY THE FACT THAT SUCH THIRD PARTY ASSIGNED THIS LICENSE AGREEMENT TO YOU. THIS LICENSE AGREEMENT REPRESENTS THE ENTIRE AGREEMENT CONCERNING THE SOFTWARE BETWEEN YOU AND JOHN DEERE AND IT REPLACES ANY PRIOR PROPOSAL, REPRESENTATION, OR UNDERSTANDING BETWEEN YOU AND JOHN DEERE.**

**1. Description of Software.** Your IPM comes with all Software pre-installed. The Software enables the IPM to receive images, process them, and transmit images and other information to a display on a John Deere machine in support of a software application.

**2. Use of Images.** The images received, processed and transmitted by the IPM are directed at the field, crop, machine or ancillary machines. The camera devices creating these images may also capture images of the machine operator or bystanders during system

operation. These images may be shown to the operator in the operator station, recorded within the system for troubleshooting, or recorded within the system for improving system performance. By using the IPM, you hereby consent to such collection, storage, and use of these images. To prevent images from being captured by the camera devices, refer to the operator manual for the applicable machine for instruction on how to turn off the system.

**3. License.** John Deere hereby grants to you, and you accept, a nonexclusive license to use the Software in machine-readable, object code form, only in a country authorized by John Deere and only as otherwise authorized in this Agreement and the applicable provisions of the applicable machine operators' manual, which you agree to review carefully prior to using the Software. The Software may be used only on the IPM on which it was initially installed. You agree that you will not assign, sublicense, transfer, pledge, lease, rent, or share your rights under this Agreement, except that you may permanently transfer all of your rights under this Agreement in connection with the sale of the IPM on which the Software covered by this Agreement is installed to a new owner for use solely in a country authorized by John Deere. If you sell or otherwise transfer the ownership of the IPM, you agree that you will require such transferee to accept terms no less restrictive than those in this Agreement. In addition to the foregoing, you agree that you will not obtain or attempt to obtain the Software using false or untrue information or without paying the appropriate fees and charges, nor will you knowingly permit others to do so, and you agree to pay any license fees and charges that would otherwise have been due. No other use of the Software is permitted by this Agreement except as set forth in this Paragraph 3.

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**5. License Fees.** In consideration of the licenses granted under this Agreement, you agree to pay all applicable license fees. Such fees will be paid via a John Deere-approved payment method. All reasonable costs and expenses, including but not limited to attorneys' fees, court costs and service charges incurred by John Deere in collecting payment will be an expense of and charged to you. John Deere may change payment terms at any time. If you become delinquent in the payment of any sum due, John Deere will not be obligated to continue performance under this Agreement. If you purchased or received this Agreement from a third party (such as a John Deere dealer), you are responsible to pay any license fees due under this Agreement to the extent the third party has not paid, or does not pay, John Deere, regardless of whether you have paid the third party for the assignment of this Agreement. Should any taxes and/or penalties become due as a result of your submission of false or inaccurate information in conjunction with the execution of this Agreement or your use of the Software, you agree that you will be responsible for payment of any such taxes or penalties or for reimbursement of such taxes or penalties, in case they were already incurred by John Deere or any of John Deere's affiliates or suppliers. John Deere reserves the right to refer your account to a third party for collection in the event of an ongoing default in payment.

**6. Limited Warranty.** John Deere warrants, for your benefit alone and not for the benefit of any other party, that during the **"Warranty Period"** defined below, the Software will operate substantially in accordance with the applicable functional specifications (**"Specifications"**) set forth in the Receiver documentation. **JOHN DEERE DOES NOT WARRANT THAT THE OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR FREE OR THAT IT WILL MEET YOUR NEEDS.** Your exclusive remedy and the sole obligation of John Deere and (as applicable) its service partners in the event of any warranty claim or any other contract deficiency shall be for John Deere or (as applicable) its service partners to use commercially reasonable efforts to correct the deficiency or, if correction cannot be accomplished in thirty (30) days, to refund an equitable part of any license fees for the Software determined in reference to your prior use of the Software and the impact of the deficiency. You acknowledge that this warranty does not apply where a deficiency in the operation of the Software is due to circumstances beyond John Deere's reasonable control and/or is caused by an act or omission of a third party, including, but not limited to, equipment failure, acts of God, strikes, or other similar causes. The **"Warranty Period"** is one (1) year from the date you take delivery of the IPM.

**7. DISCLAIMER OF WARRANTIES.** YOU HEREBY AGREE THAT THE LIMITED WARRANTY PROVIDED ABOVE (THE **"LIMITED WARRANTY"**) CONSTITUTES YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY PROBLEM WHATSOEVER WITH THE SOFTWARE. EXCEPT AS PROVIDED IN THE LIMITED WARRANTY, THE SOFTWARE IS LICENSED **"AS IS"** AND **"AS AVAILABLE"** AND JOHN DEERE, ITS AFFILIATES AND THIRD PARTY SUPPLIERS EXPRESSLY DISCLAIM AND YOU EXPRESSLY WAIVE, RELEASE AND RENOUNCE ALL WARRANTIES ARISING BY LAW OR OTHERWISE WITH RESPECT TO THE SOFTWARE, INCLUDING, BUT NOT LIMITED TO: ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE; ANY WARRANTY OF TITLE OR NON-INFRINGEMENT; AND, ANY OTHER WARRANTY ARISING UNDER ANY THEORY OF LAW, INCLUDING TORT, NEGLIGENCE, STRICT LIABILITY, CONTRACT OR OTHER LEGAL OR EQUITABLE THEORY. NO REPRESENTATION OR OTHER AFFIRMATION OF FACT INCLUDING, BUT NOT LIMITED TO, STATEMENTS REGARDING CAPACITY OR SUITABILITY FOR USE, SHALL BE DEEMED TO BE A WARRANTY BY JOHN DEERE OR ANY OF ITS AFFILIATES OR THIRD-PARTY SUPPLIERS.

**8. LIMITATION OF LIABILITY.** EXCEPT AS SET FORTH IN THE LIMITED WARRANTY, UNDER NO CIRCUMSTANCES SHALL JOHN DEERE, ITS AFFILIATES OR ITS THIRD PARTY SUPPLIERS BE LIABLE TO YOU OR TO ANY THIRD PARTIES FOR DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ANY LOSS OR DAMAGE CAUSED BY THE SOFTWARE; ANY PARTIAL OR TOTAL FAILURE OF THE SOFTWARE; PERFORMANCE, NONPERFORMANCE OR DELAYS IN CONNECTION WITH ANY INSTALLATION, MAINTENANCE, WARRANTY OR REPAIRS OF THE SOFTWARE, DAMAGES FOR CROP LOSS, DAMAGE TO LAND, DAMAGE TO MACHINES, LOST PROFITS, LOSS OF BUSINESS OR LOSS OF GOODWILL, LOSS OF USE OF EQUIPMENT OR SERVICES OR DAMAGES TO BUSINESS OR REPUTATION ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY ASPECT OF THIS AGREEMENT, WHETHER IN CONTRACT, TORT OR OTHERWISE, AND WHETHER OR NOT JOHN DEERE, ITS AFFILIATES OR ITS THIRD PARTY SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL JOHN DEERE'S CUMULATIVE LIABILITY TO YOU OR TO ANY OTHER PARTY FOR ANY LOSSES OR DAMAGES RESULTING FROM ANY CLAIMS, LAWSUITS, DEMANDS, OR ACTIONS ARISING FROM OR RELATING TO USE OF THE SOFTWARE EXCEED YOUR TOTAL PAYMENT FOR THE IPM AND THE LICENSE OF THE SOFTWARE.



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**10. Term and Termination.**

a. Term. This Agreement will commence as of the Effective Date and expire upon the earlier of i) the useful life of the IPM or ii) the date John Deere terminates this Agreement in accordance with the terms of this Paragraph 10. This Agreement does not automatically renew.

b. Termination. John Deere may terminate the license granted under this Agreement upon written notice of termination provided to you if you violate any material term of this Agreement pertaining to your use of the Software or John Deere's rights, including, without limitation, the provisions of Sections 3 and 4 above.

**11. Compliance with Law.** You agree that you will use the Software in accordance with United States law and the laws of the country in which you are located, as applicable, including foreign trade control laws and regulations. The Software may be subject to export and other foreign trade controls restricting re-sales and/or transfers to other countries and parties. By accepting the terms of this Agreement, you acknowledge that you understand that the Software may be so controlled, including, but not limited to, by the Export Administration Regulations and/or the foreign trade control regulations of the Treasury Department of the United States. The Software remains subject to applicable U.S. laws.

**12. Indemnification.** You agree to defend, indemnify and hold John Deere, its affiliates and third party supplier, and their, officers, directors, employees, agents and representatives (each an "**Indemnified Party**"), harmless from and against all claims, demands proceedings, injuries, liabilities, losses, or costs and expenses (including reasonable legal fees) brought by any third party against any such persons arising from or in connection with your misuse of the IPM or the Software or your breach of any term of this Agreement.

**13. Trademark.** No right, license, or interest to any trademark is granted hereunder, and you agree that no such right, license, or interest shall be asserted by you with respect to any John Deere trademarks.

**14. Costs of Litigation.** If any claim or action is brought by either party to this Agreement against the other party regarding the subject matter hereof, the prevailing party

shall be entitled to recover, in addition to any other relief granted, reasonable attorney, arbitrators, and dispute resolution center administrative fees and expenses of litigation.

**15. Severability and Waiver** Should any term of this Agreement be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms hereof. The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights of subsequent actions in the event of future breaches.

**16. Language Clause.** Unless the laws of the location in which you reside require otherwise, the parties hereby acknowledge that they have required this Agreement, and all other documents relating hereto, be drawn up in the English language only. There may be a translated version of this License Agreement. If there is an inconsistency or contradiction between the translated version and the English version of this Agreement, the English version of this Agreement shall control unless the laws of the location in which you reside require that a different version control.

**17. Assignment by John Deere.** John Deere may assign this Agreement without your prior consent to any company or entity affiliated with John Deere or by an assignment associated with a corporate restructuring, merger or acquisition.

**18. Governing Law and Forum.** This Agreement will be governed by and construed in accordance with the substantive laws in force in the State of Illinois, U.S.A. The respective courts of Rock Island County, Illinois, have exclusive jurisdiction over all disputes relating to this Agreement. The rights and obligations of the parties under this Agreement will not be governed by the United Nations Convention on Contracts for the International Sale of Goods ("CISG") and the parties hereto expressly exclude the applicability of the CISG to this License Agreement.

**19. Arbitration.** IF YOU RESIDE IN A JURISDICTION WHEREIN THE ENFORCEABILITY OF THE TERMS OF SECTION 18 IS DEPENDENT UPON THE PARTIES AGREEING TO SUBMIT TO ARBITRATION, THEN ANY CONTROVERSY OR CLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT SHALL BE DETERMINED BY ARBITRATION IN ACCORDANCE WITH THE INTERNATIONAL ARBITRATION RULES OF THE INTERNATIONAL CENTRE FOR DISPUTE RESOLUTION ("**ICDR**") IN EFFECT AT THE TIME OF ITS INITIATION. THE ARBITRATION SHALL BE HELD BEFORE ONLY ONE ARBITRATOR APPOINTED BY THE ICDR. THE PLACE OF ARBITRATION SHALL BE CHICAGO, ILLINOIS, USA AND THE LANGUAGE OF THE ARBITRATION SHALL BE ENGLISH.

**20. Representations of Licensee.** BY ACCEPTING THIS AGREEMENT, YOU: (A) ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTAND THIS AGREEMENT; (B) REPRESENT THAT YOU HAVE THE AUTHORITY TO ENTER INTO THIS AGREEMENT; (C) AGREE THAT THIS AGREEMENT IS ENFORCEABLE AGAINST YOU AND ANY LEGAL ENTITY THAT OBTAINED THE SOFTWARE AND ON WHOSE BEHALF IT IS USED; (D) AGREE TO PERFORM THE OBLIGATIONS OF THIS AGREEMENT; AND (E) REPRESENT AND AGREE THAT ALL INFORMATION PROVIDED BY YOU IS TRUE AND ACCURATE TO THE BEST OF YOUR KNOWLEDGE.

**21. Notices.** All notices to John Deere shall be sent by certified or registered mail to John Deere Shared Services, Inc., One John Deere Place, Moline, IL 61265 U.S.A. In addition, a copy of the notice shall be sent to John Deere Intelligent Solutions Group, ATTN: John Deere Image Processing Module, 9505 Northpark Drive, Urbandale, Iowa 50131, U.S.A. All notices to John Deere shall be effective upon receipt. All notices required to be given to you shall, in John Deere's sole discretion, either be sent via certified or registered mail to the address given to John Deere, a John Deere dealer, or another distribution partner of John Deere in connection with your purchase of the IPM. Either method of notification used by John Deere shall be effective upon dispatch. You agree to notify John Deere of any change in your address in the manner set forth above.

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OJ06075,0004F8F-19-02DEC20

## Third-Party Software Notifications and Licenses for Image Processing Module

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Third-Party Notices are available electronically by following these steps:

Connect a mobile device using the Mobile to Machine feature of the MTG 4G LTE. Directions for the using the Mobile to Machine feature can be found in the MTG 4G LTE Operator's Manual.

Find the current Image Processing Module IP address which is viewable by accessing the Diagnostic Addresses on your display. Navigate to the GQM Diagnostic Addresses and find the IP address text located in Diagnostic Address 8.

Open a web browser on your connected mobile device and navigate to the IP address shown in Diagnostic Address 8.

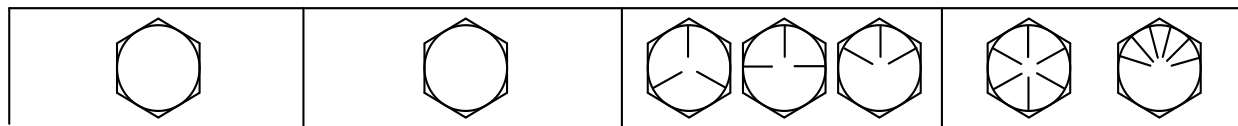
You may obtain the complete Corresponding Source Code from us for a period of three years after our last shipment of the Software by sending a request letter to:

Deere Open Source Compliance Team  
P.O. Box 1202  
Moline, IL 61266-1202 USA

Please include "source for John Deere Image Processing Module GQM" and the version number of the software in the request letter. This offer is valid to anyone in receipt of this information.

OJ06075,0004F93-19-02DEC20

## Unified Inch Bolt and Screw Torque Values



TS1671—UN—01MAY03

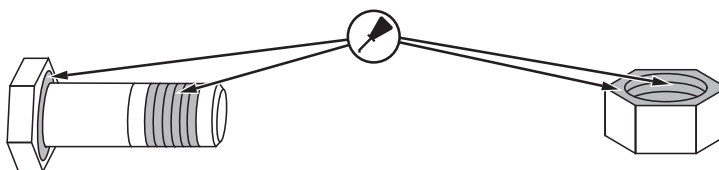
## Specifications

Bolt or Screw Size	SAE Grade 1 <sup>a</sup>				SAE Grade 2 <sup>b</sup>				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head <sup>c</sup>		Flange Head <sup>d</sup>		Hex Head <sup>c</sup>		Flange Head <sup>d</sup>		Hex Head <sup>c</sup>		Flange Head <sup>d</sup>		Hex Head <sup>c</sup>		Flange Head <sup>d</sup>	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
1/4	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.



TS1741—UN—22MAY18

<sup>a</sup>Grade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.

<sup>b</sup>Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.

<sup>c</sup>Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

<sup>d</sup>Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1-19-30MAY18

## Metric Bolt and Screw Torque Values

	4.8	8.8	9.8	10.9	12.9

TS1742—UN—31MAY18

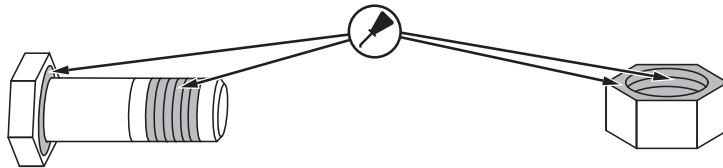
## Specifications

Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head <sup>a</sup>		Flange Head <sup>b</sup>		Hex Head <sup>a</sup>		Flange Head <sup>b</sup>		Hex Head <sup>a</sup>		Flange Head <sup>b</sup>		Hex Head <sup>a</sup>		Flange Head <sup>b</sup>	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.



TS1741—UN—22MAY18

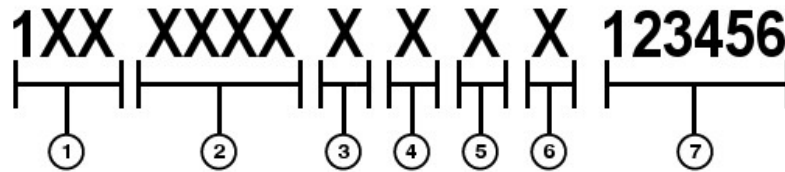
<sup>a</sup>Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.

<sup>b</sup>Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2-19-30MAY18

# Machine Identification Numbers

## Interpreting Machine Serial Number



H105725—UN—22AUG12

1	Manufacturer Code	Harvesting Manufacturing Facilities	
		CQ - John Deere Horizontina H0 - John Deere Harvester Works EK - John Deere Orenburg KM - Maschinenfabrik Kemper GmbH & Co. KG PY - John Deere India Pvt. Ltd	SA - SABO Maschinenfabrik GmbH YC - John Deere (Jiamusi) Agricultural Machinery Co., Ltd. YH - John Deere (Harbin) Agriculture Machinery Co., Ltd Z0 - John Deere Werke Zweibrücken
2	Machine Model Identifier		
3	Model Identifier Suffix Machine Configuration Code Additional Machine Information	Example: N, T, W, etc.	
4	Check Letter	Example: A, B, C, D, etc.	
5	Calendar Year of Manufacture	Refer to Year of Manufacture Code table	
6	Additional Information		
7	Manufacturing Serial Number	Example: 000001, 000127, etc.	

Year of Manufacture Code							
Year	Code	Year	Code	Year	Code	Year	Code
2008	8	2018	J	2028	W	2038	8
2009	9	2019	K	2029	X	2039	9
2010	A	2020	L	2030	Y	2040	A
2011	B	2021	M	2031	1	2041	B
2012	C	2022	N	2032	2	2042	C
2013	D	2023	P	2033	3	2043	D
2014	E	2024	R	2034	4	2044	E
2015	F	2025	S	2035	5	2045	F
2016	G	2026	T	2036	6	2046	G
2017	H	2027	V	2037	7	2047	H

OOU6075,0004F74-19-22OCT20

## Identification Numbers

Your machine has these various identification plates. The letters and numbers stamped on these plates identify a component or assembly. ALL of these characters are needed when ordering parts or identifying a machine or component for any John Deere product support program. Also, they are needed for law enforcement to trace your machine if it is ever stolen. ACCURATELY record these characters in the spaces provided in each of the following photographs.

OOU6075,0000BE0-19-04MAY11

## Machine Identification Plate



H129092—UN—26FEB20

Sample Identification Plate

<b>JOHN DEERE</b>		Constr. date		HXE134618
Type / Model		Model year		
Typ Approval Nr.		Power rat. KW		
Product Identification Number		Version		
✱XXXXXXXXXXXXXXXXXXXX✱		PTAC	KG	
		PTRA	KG	
<input type="radio"/> Permissible Mass: Max. total weight KG Max. axle 1 load KG Max. axle 2 load KG Max. axle 3 load KG Permissible Towable Mass: Non braked KG Inertia-braked KG Vertical hitch load daN		Réception par la DREAL Orléans le		
		<b>EAC</b> INSPECTION CODES DEERE & COMPANY MOLINE, ILLINOIS, USA MADE IN U.S.A.		

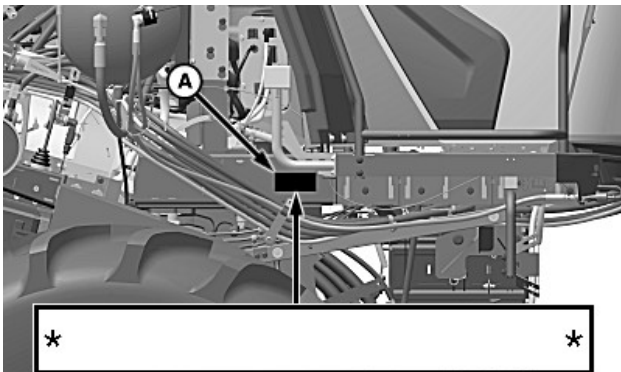
H128729—UN—31JAN20

Sample Identification Plate

**NOTE:** Machine identification plate varies depending on where machine is shipped. Locate identification plate on machine and compare with information shown here.

OUO6075,0004D77-19-20FEB20

## Machine Identification Plate Location



H128628—UN—23JAN20

A—Machine Identification Plate/Compliance Label

The machine identification plate (A) is located on right-hand side of machine mainframe.

## Eurasian Economic Union Compliance Label (If Required)

**NOTE:** This information applies only to products which bear the EAC conformity mark of the Eurasian Economic Union member states.

The compliance label (A) is located on the right-hand side of the machine mainframe.

OUO6075,0004D78-19-04FEB20

## Interpreting Engine Serial Number



H112201—UN—06NOV14

Sample Engine Serial Number Plate

Each engine has a 13 digit John Deere engine serial number identifying the producing factory, engine model designation, and a 6 digit sequential number.

## Engine Serial Number (A)

13.6 L Example (RG6136U123456)	
RG .....	Factory Code Producing Engine
• RG .....	Waterloo, Iowa, USA
6136 .....	Number of Cylinders and Total Displacement
• 6136 .....	6 Cylinders, 13.6 liters
U .....	Emission Certification
• B .....	Non-Certified
• C .....	Tier 1/Stage 1
• D .....	Tier 2/Stage II
• L .....	Tier 3/Stage III A
• R .....	Interim Tier 4/Stage III B
• U or V .....	Final Tier 4/Stage IV and Stage V
123456 .....	Engine Serial Number

## Engine Model Number (B)

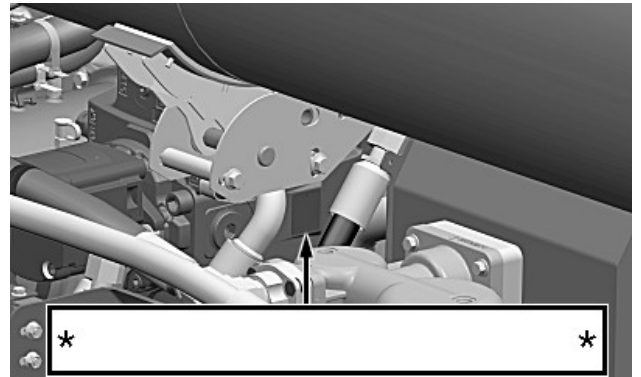
13.6 L Example (6136HFC09)	
6136 .....	Number of Cylinders and Total Displacement
• 6136 .....	6 Cylinders, 13.6 liters
H .....	Engine Aspiration
• D .....	Naturally aspirated
• T .....	Turbocharged
• A .....	Turbocharged and aftercooled, air-to-coolant

### 13.6 L Example (6136HFC09)

- H. . . . . Turbocharged and aftercooled, air-to-air
  - S. . . . . Turbocharged and aftercooled, air-to-sea water
- F. . . . . User Type
- F. . . . . OEM (John Deere Power Systems)
  - XX. . . Other letters are used to identify John Deere Equipment manufacturing locations
- C. . . . . Industrial
- C. . . . . Industrial
  - G. . . . . Gen-Set
09. . . . . Engine Configuration
- 09. . . . . PSS (Series Turbochargers, DOC/DPF and SCR)
  - 94. . . . . PVX (Single VGT Turbocharger)
  - 95. . . . . PSX (Series Turbochargers and Aftertreatment)

MH69740,000090C-19-29OCT19

## Hydrostatic Drive Pump

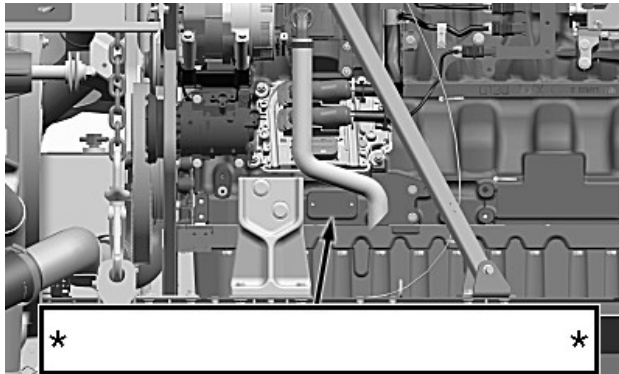


H127932—UN—29OCT19

Located on the side of the hydrostatic drive pump.

MH69740,000090E-19-02DEC19

## Engine Serial Number

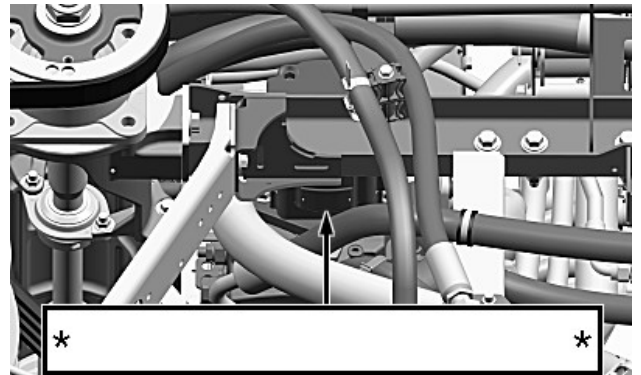


H127943—UN—30OCT19

Located on the front side of the engine.

MH69740,0000918-19-30OCT19

## Hydrostatic Drive Motor

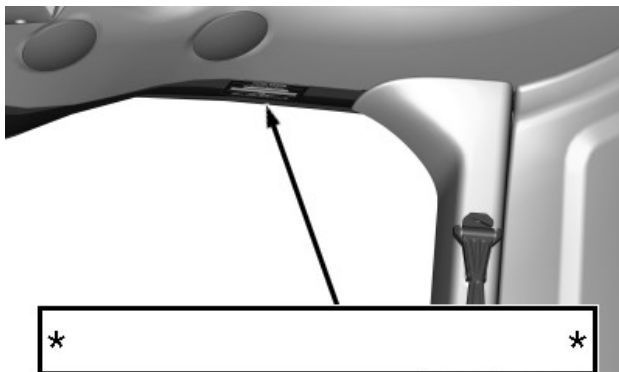


H127933—UN—29OCT19

Located on the bottom side of the hydrostatic drive motor.

MH69740,000090F-19-29OCT19

## Cab Serial Number

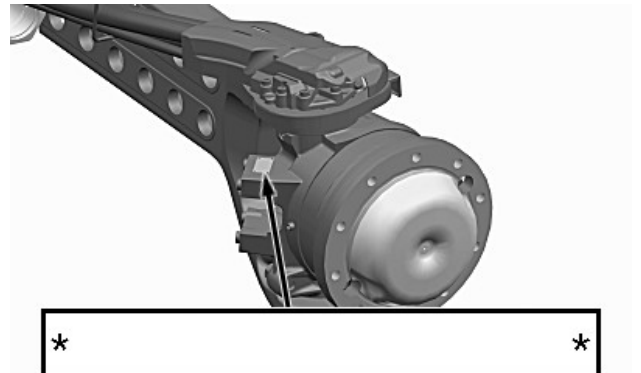


H121251—UN—24APR17

Located in the upper rear right-hand corner of the cab.

OOU6075,0004716-19-13APR17

## Two-Speed Four-Wheel Drive Motor

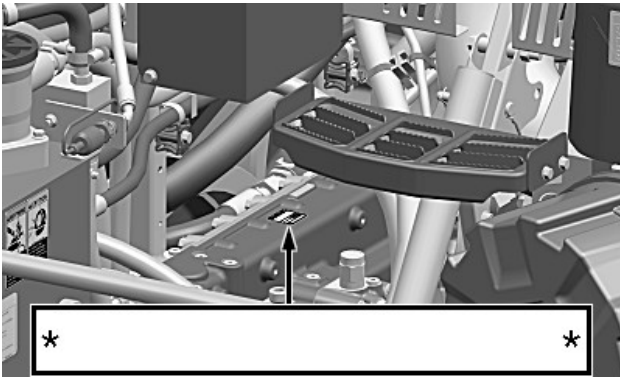


H127934—UN—29OCT19

Located on the top side of the four-wheel drive motor.

MH69740,0000910-19-28APR20

## Engine Gear Case

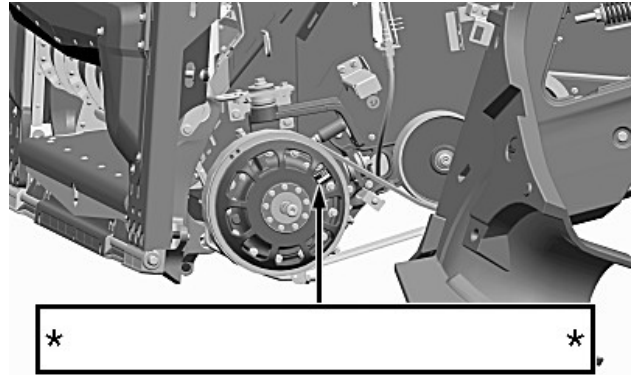


H127935—UN—29OCT19

Located on the rear side of the engine gear case.

MH69740,0000911-19-29OCT19

## Feeder House Reverser

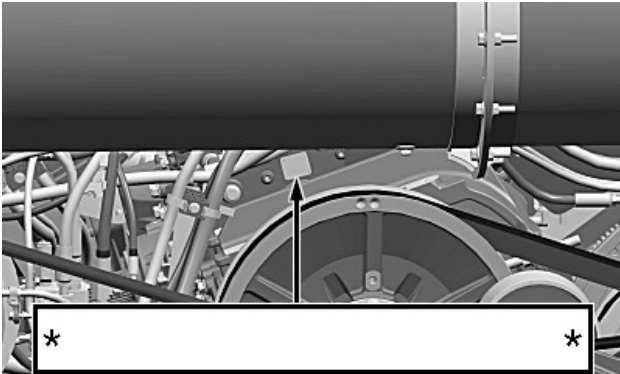


H127939—UN—30OCT19

Located on the front of the feeder house reverser.

MH69740,0000914-19-30OCT19

## Rotor Drive Gear Case

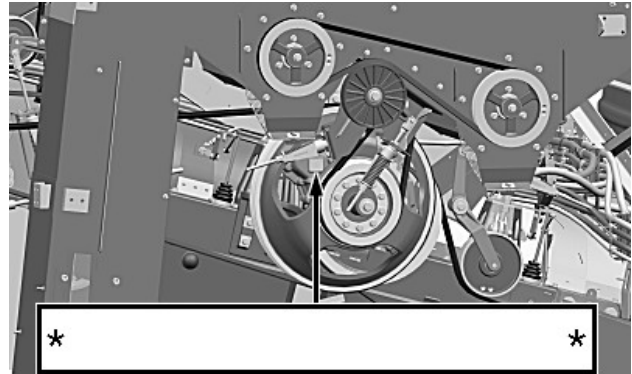


H127937—UN—30OCT19

Located on the left-hand side of the rotor drive gear case.

MH69740,0000912-19-30OCT19

## Feed Accelerator Gear Case

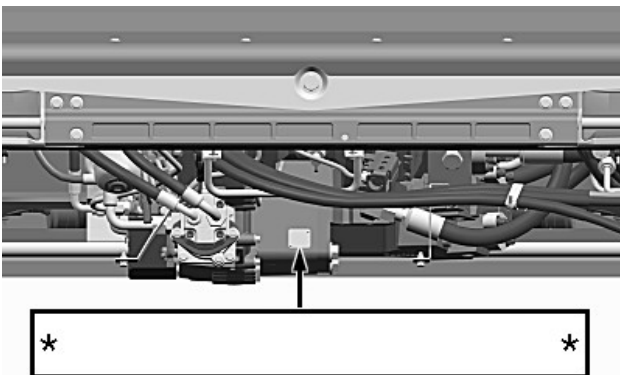


H127940—UN—30OCT19

Located on the front of the feed accelerator gear case.

MH69740,0000915-19-30OCT19

## Transmission



H127938—UN—30OCT19

Located on the front side of the transmission.

MH69740,0000913-19-30OCT19

## Chopper



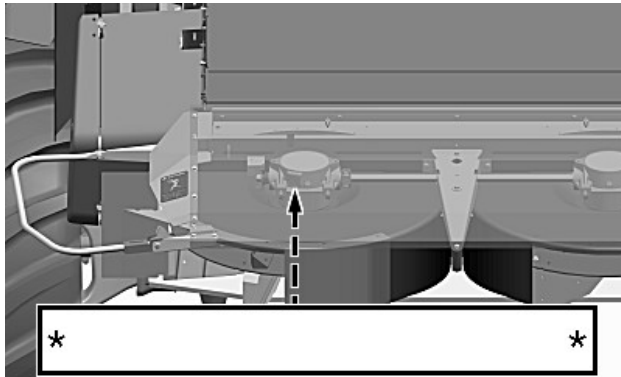
H127941—UN—30OCT19

Located on the left-hand side of the chopper.

MH69740,0000916-19-30OCT19



## Spreader



H127942—UN—30OCT19

Located on the left-hand inside of the spreader.

MH69740,0000917-19-30OCT19

## Keep Proof of Ownership

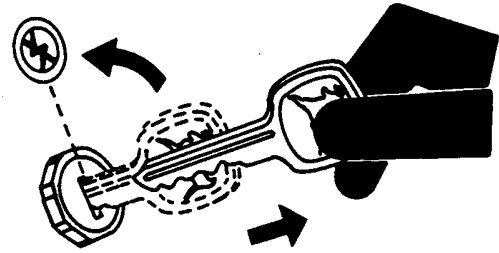


TS1680—UN—09DEC03

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
  - Mark your machine with your own numbering system
  - Take color photographs from several angles of each machine

DX,SECURE1-19-18NOV03

## Keep Machines Secure



TS230—UN—24MAY89

1. Install vandal-proof devices.
2. When machine is in storage:
  - Lower equipment to the ground
  - Set wheels to widest position to make loading more difficult
  - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.

DX,SECURE2-19-18NOV03

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# John Deere Service Literature Available

## Technical Information

Technical information can be purchased from John Deere. Publications are available in print or CD-ROM format.

Orders can be made using one of the following:

- John Deere Technical Information Store: **www.JohnDeere.com/TechInfoStore**
- Call 1-800-522-7448
- Contact your John Deere dealer

Available information includes:



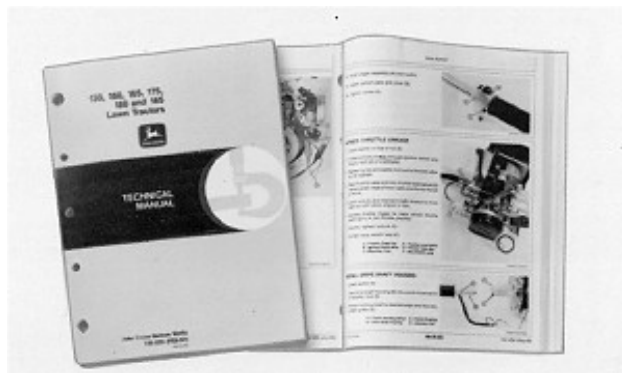
TS189—UN—17JAN89

**PARTS CATALOGS** list service parts available for your machine with exploded view illustrations to help you identify the correct parts. It is also useful in assembling and disassembling.



TS191—UN—02DEC88

**OPERATOR'S MANUALS** providing safety, operating, maintenance, and service information.



TS224—UN—17JAN89

**TECHNICAL MANUALS** outlining service information for your machine. Included are specifications, illustrated assembly and disassembly procedures, hydraulic oil flow diagrams, and wiring diagrams. Some products have separate manuals for repair and diagnostic information. Some components, such as engines, are available in a separate component technical manual.



TS1663—UN—10OCT97

**EDUCATIONAL CURRICULUM** including five comprehensive series of books detailing basic information regardless of manufacturer:

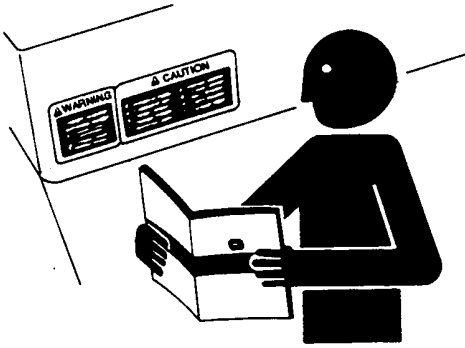
- Agricultural Primer series covers technology in farming and ranching.
- Farm Business Management series examines “real-world” problems and offers practical solutions in the areas of marketing, financing, equipment selection, and compliance.
- Fundamentals of Services manuals show you how to repair and maintain off-road equipment.
- Fundamentals of Machine Operation manuals explain machine capacities and adjustments, how to improve machine performance, and how to eliminate unnecessary field operations.
- Fundamentals of Compact Equipment manuals provide instruction in servicing and maintaining equipment up to 40 PTO horsepower.

DX,SERVIT-19-07DEC16

# John Deere Service Keeps You on the Job

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## John Deere Is At Your Service



TS201—UN—15APR13

CUSTOMER SATISFACTION is important to John Deere.

Our dealers strive to provide you with prompt, efficient parts and service:

- Maintenance and service parts to support your equipment.
- Trained service technicians and the necessary diagnostic and repair tools to service your equipment.

## CUSTOMER SATISFACTION PROBLEM RESOLUTION PROCESS

Your John Deere dealer is dedicated to supporting your equipment and resolving any problem you may experience.

1. When contacting your dealer, be prepared with the following information:

- Machine model and product identification number
- Date of purchase
- Nature of problem

2. Discuss problem with dealer service manager.

3. If unable to resolve, explain problem to dealership manager and request assistance.

4. If you have a persistent problem your dealership is unable to resolve, ask your dealer to contact John Deere for assistance. Or contact the Ag Customer Assistance Center at 1-866-99DEERE (866-993-3373) or e-mail us at [www.deere.com/en\\_US/ag/contactus/](http://www.deere.com/en_US/ag/contactus/).

DX,IBC,2-19-02APR02



