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8100—8800 Self-Propelled Forage Harvesters

OPERATOR'S MANUAL

8100—8800 Self-Propelled Forage Harvesters

OMZ93144 ISSUE H6 (ENGLISCH)

John Deere GmbH & Co. KG
John Deere Werk Zweibrücken
European Edition
PRINTED IN U.S.A.

Introduction

Foreword

Identification View

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 the 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 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.

SETTING FUEL DELIVERY BEYOND PUBLISHED factory specifications or otherwise overpowering will result in loss of warranty protection for this machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a predelivery inspection. After operating for the first 20 to 50 hours, schedule an after-sale inspection with your dealer to ensure best performance.

THIS FORAGE-HARVESTER IS DESIGNED SOLELY for use in customary agricultural or similar operations (”INTENDED USE”). Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

THIS FORAGE-HARVESTER SHOULD BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). The accident prevention regulations, all other generally recognized regulations on safety and occupational medicine and the road traffic regulations must be observed at all times. Any arbitrary modifications carried out on this forage-harvester will relieve the manufacturer of all liability for any resulting damage or injury.

REGISTER USED PRODUCTS. If you purchased used John Deere products from an authorized John Deere dealer, the warranty registration information was updated by the dealer and requires no further information on your part.

Continued on next page

If you purchased any used John Deere product from an auction, through a trader or from a farmer, please register it now. John Deere and John Deere dealers value their customer's safety and satisfaction. Your local John Deere dealer is best equipped and anxious to provide you superior levels of support for your machine. Please enter your product details and your address online, using the John Deere website corresponding to your country. Then select the dealer of your choice and you will receive a voucher for a discount towards a qualifying purchase of John Deere parts.

OUCC002,0003AE2 -19-23OCT13-2/2

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Plus-50™ II	Trademark of Deere & Company
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OUCC002,0004C40 -19-07JUN16-1/1

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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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Safety

Recognize Safety Information

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.

T81389 —UN—28JUN13

DX,ALERT -19-29SEP98-1/1

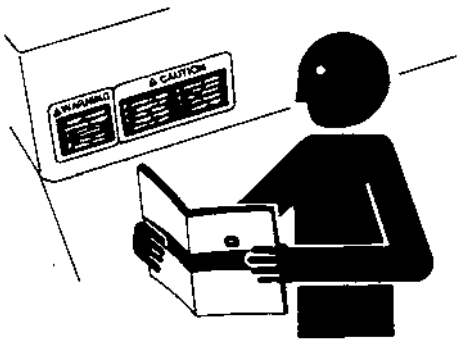
Follow Safety Instructions

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.



TS201 —UN—15APR13

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

DX,READ -19-16JUN09-1/1

Understand Signal Words

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.

TS187 —19—30SEP88

DX,SIGNAL -19-03MAR93-1/1

Observe Road Traffic Regulations

Always observe local road traffic regulations when using public roads.

H28930 —UN—30JUN89

FX,ROAD -19-01MAY91-1/1

Parking and Leaving the Machine

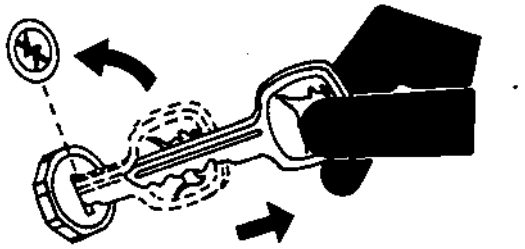
Lower header to the ground.

Before leaving the machine, disengage main clutch and shut off engine. Apply park brake, remove key and lock the operator's cab. Position chock blocks.

NOTE: Use only chock blocks provided with the machine.

Never leave machine unattended as long as engine is still running.

Never leave the operator's cab when driving.



TS230 —UN—24MAY89

OUCC002,0004221 -19-15DEC14-1/1

Prevent Machine Runaway

Avoid possible injury or death from machinery runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator’s seat, with transmission in neutral or park.

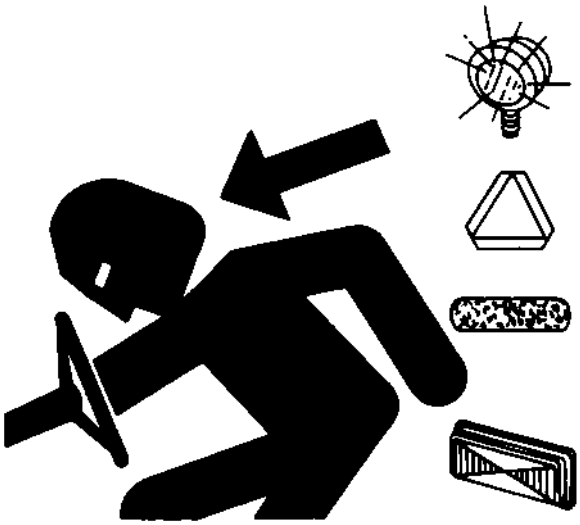
TS177 —UN—11JAN89

DX,BYPAS1 -19-29SEP98-1/1

Use Safety Lights and Devices

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. An implement safety lighting kit is available from your John Deere dealer.



TS951 —UN—12APR90

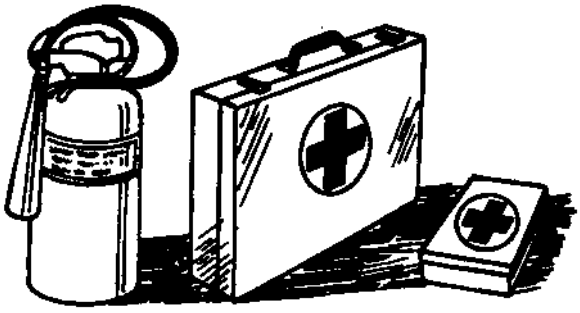
DX,FLASH -19-07JUL99-1/1

Prepare for Emergencies

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.



TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

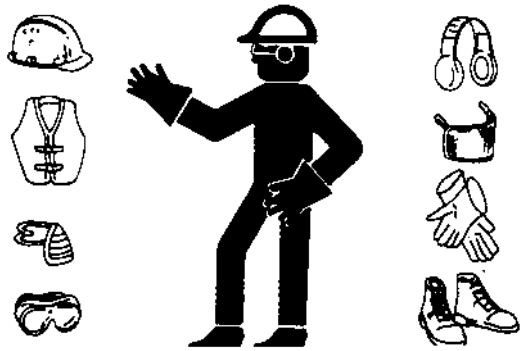
Wear Protective Clothing

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

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

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



TS206 —UN—15APR13

DX,WEAR -19-10SEP90-1/1

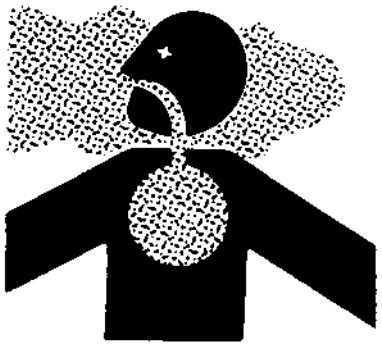
Handle Agricultural Chemicals Safely

Chemicals used in agricultural applications such as fungicides, herbicides, insecticides, pesticides, rodenticides, and fertilizers can be harmful to your health or the environment if not used carefully.

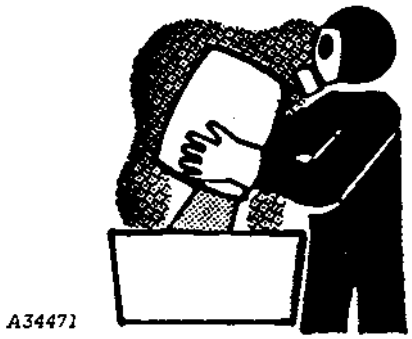
Always follow all label directions for effective, safe, and legal use of agricultural chemicals.

Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
  - Chemicals labeled **'Danger'**: Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
  - Chemicals labeled **'Warning'**: Less toxic. Generally require use of goggles, gloves, and skin protections.
  - Chemicals labeled **'Caution'**: Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.



TS220 —UN—15APR13



A34471 —UN—11OCT88

- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01 -19-24AUG10-1/1

Handle Fuel Safely—Avoid Fires

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.

TS202 —UN—23AUG88

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 -19-12OCT11-1/1

Store Attachments Safely

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.

TS219 —UN—23AUG88

DX,STORE -19-03MAR93-1/1

Check Machine Safety

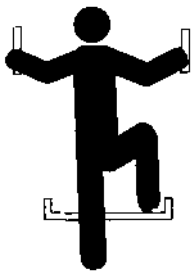
Always check the road and general operating safety of the machine before using.

FX,READY -19-28FEB91-1/1

Use Steps and Handholds Correctly

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.



T133468 —UN—15APR13

DX,WW,MOUNT -19-12OCT11-1/1

Handle Electronic Components and Brackets Safely

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 mast 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.

TS249 —UN—23AUG88

DX,WW,RECEIVER -19-24AUG10-1/1

Use Electronic Display Properly

Electronic Displays are secondary devices intended to aid the operator in performing field operations, increase comfort and provide entertainment. Displays can offer a wide range of functionality, are used in many different machine system applications and can be used with other secondary devices such as handheld electronic devices.

A secondary device is any device that is not required to operate your machine for its primary use. The operator is always responsible for safe operation and control of the machine.

To prevent injury while operating the machine:

- Position the display according to the installation instructions. Ensure the device is secured and does not obstruct the driver's view or interfere with the machine operating controls.
- Do not become distracted by the display. Stay alert. Pay attention to the machine and surrounding environment.
- Do not change settings or access any functions that require prolonged use of the display controls while machine is moving. Stop the machine in a safe location and place in park position before attempting such operations.
- Never set the volume so high that you cannot hear outside traffic and emergency vehicles.

To promote safe operation, certain functions of displays may be disabled unless the machine movement is restricted and/or has been placed in the park position. Overriding this safety feature may violate applicable law and can result in damage, serious injury or death.

Only use available display functionality when conditions permit you to do so safely and in accordance with instructions provided. Always observe safe driving rules, state or local laws and traffic regulations when using any secondary device.

RR94114,0001FFA -19-18DEC14-1/1

Operate Guidance Systems Safely

Do not use AutoTrac system on roadways.

- Always turn off (Deactivate and Disable) AutoTrac™ system before entering a roadway.
- Do not attempt to turn on (Activate) AutoTrac™ system while transporting on a roadway.

The AutoTrac™ system is intended to aid operator in performing field operations more efficiently. Operator is always responsible for machine path. To prevent injury to operator and bystanders:

- Remain alert and pay attention to surrounding environment.
- Take control of steering wheel when necessary to avoid field hazards, bystanders, equipment, or other obstacles.
- Stop operation if poor visibility conditions impair your ability to operate the machine or identify people or obstacles in machine path.

OUCC002,0004252 -19-07JAN15-1/1

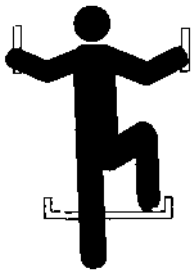
Read The Guidance Manual

Before attempting to operate AutoTrac™, fully read the Guidance manual to understand components and procedures required for safe and proper operation.

The Guidance manual is for AutoTrac™ guidance systems applications.

OUCC002,0004251 -19-07JAN15-1/1

Engine Compartment Access Ladder (8100—8600 Only)



T133468 —UN—15APR13

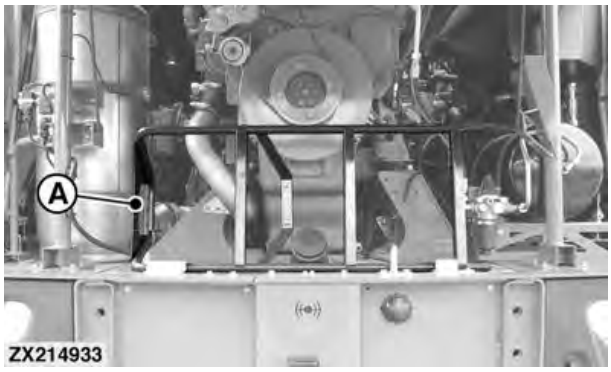
CAUTION: Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

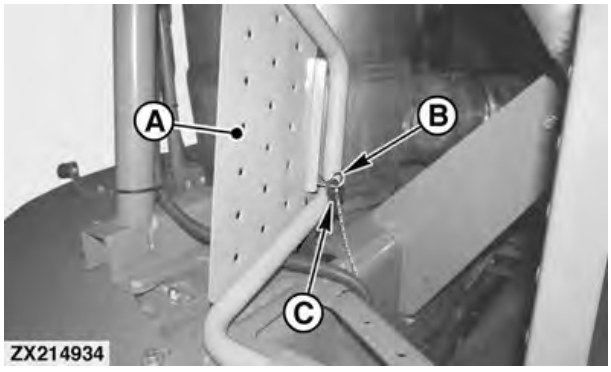
To access engine compartment, use ladder (A) as follows:

1. Remove quick-lock pin (B) from holder (C).
2. Slide ladder (A) away from holder (D).

A—Ladder
B—Quick-lock Pin
C—Holder
D—Holder



ZX214933 —UN—06OCT14



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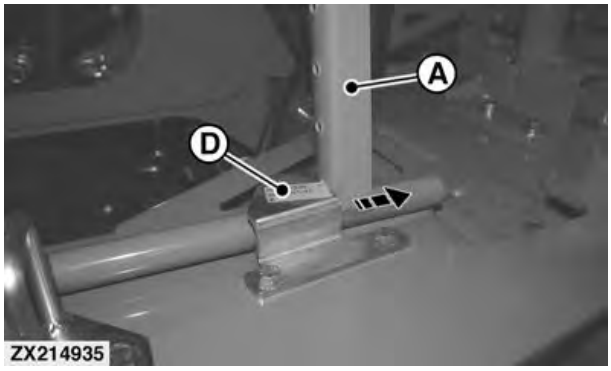

ZX214935 —UN—06OCT14

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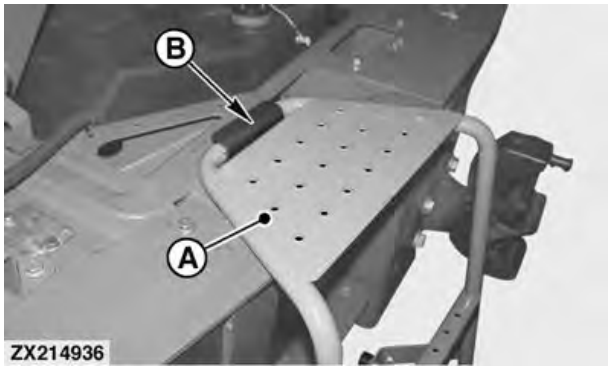
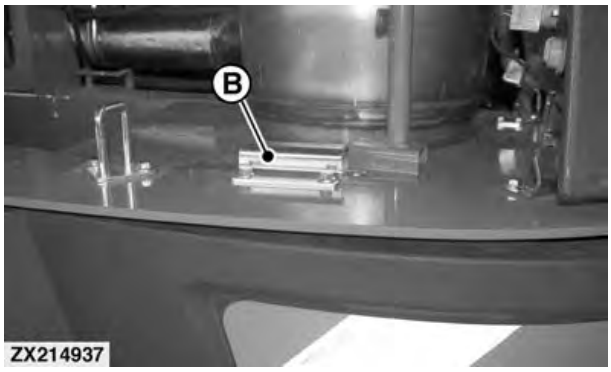
OUCC002,00046AE -19-01SEP15-1/3

3. Insert top of ladder (A) into one of the three brackets (B) to access left, right or rear side of the engine compartment, as shown.

A—Ladder **B—Bracket**



ZX214936 —UN—06OCT14



ZX214937 —UN—06OCT14

Left-hand Side Bracket

ZX214938 —UN—06OCT14

Ladder on Left-hand Side Bracket

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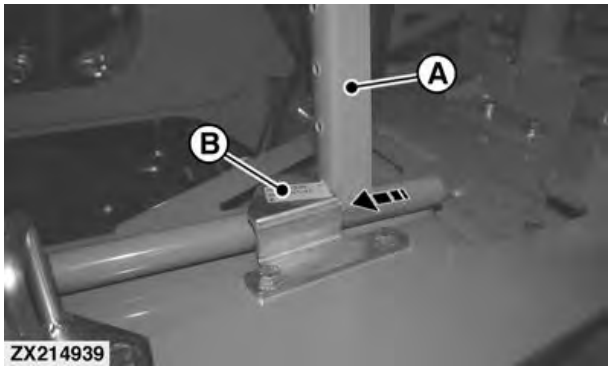
OUCC002,00046AE -19-01SEP15-2/3

Store ladder (A) back in holders (B) and (C) then secure with quick-lock pin (D), as shown.

A—Ladder
B—Holder
C—Holder
D—Quick-lock Pin



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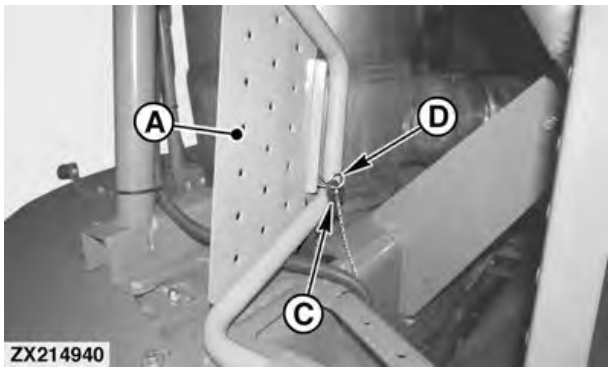
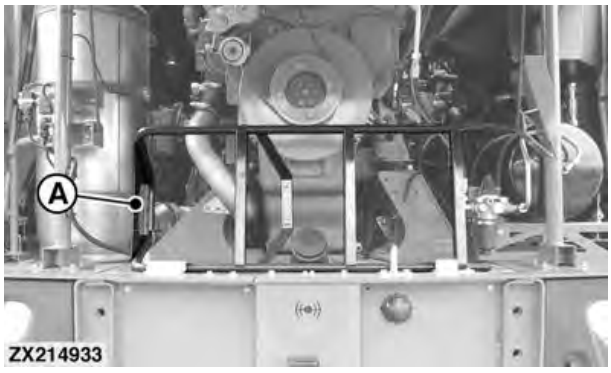


ZX214940 —UN—06OCT14



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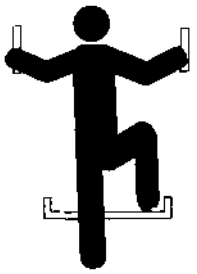
OUCC002,00046AE -19-01SEP15-3/3

Engine Compartment Access Ladder (8700 and 8800 Only)



T133468 —UN—15APR13

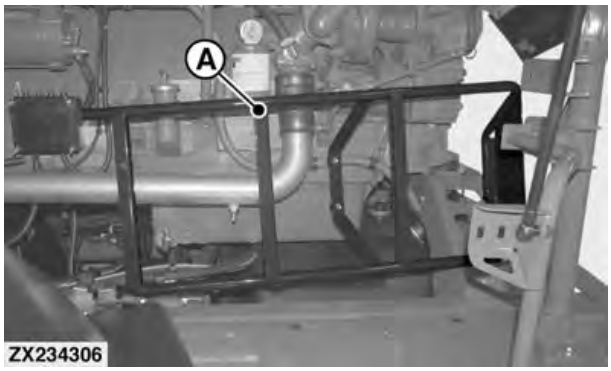
CAUTION: Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

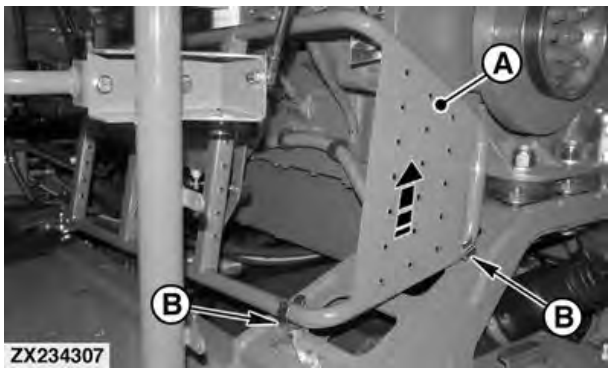
To access engine compartment, use ladder (A) as follows:

1. Unlatch ladder (A) from clamps (B).
2. Slide ladder (A) away from holder (C).

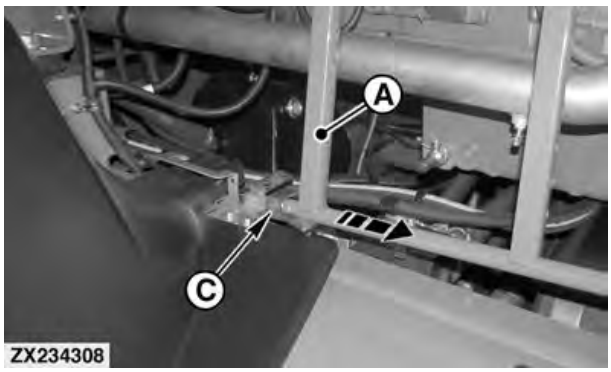
A—Ladder
B—Clamp
C—Holder



ZX234306 —UN—23MAR15



ZX234307 —UN—23MAR15



ZX234308 —UN—23MAR15

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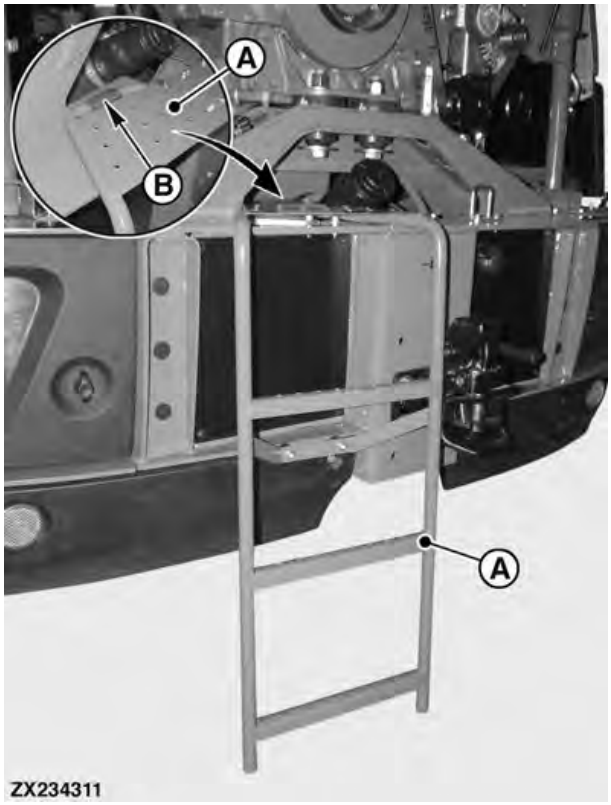
OUCC002,00044E7 -19-20MAR15-1/3

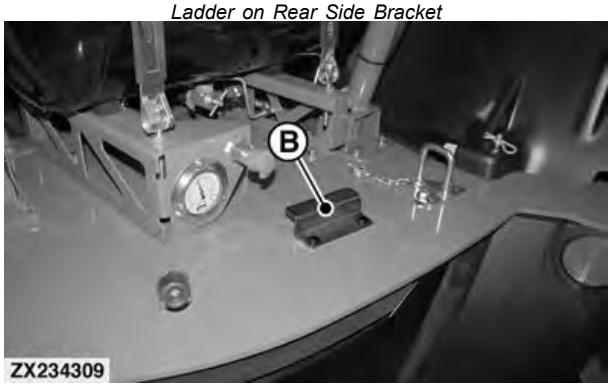
3. Insert top of ladder (A) into one of the three brackets (B) to access left, right or rear side of the engine compartment, as shown.

A—Ladder **B—Bracket**



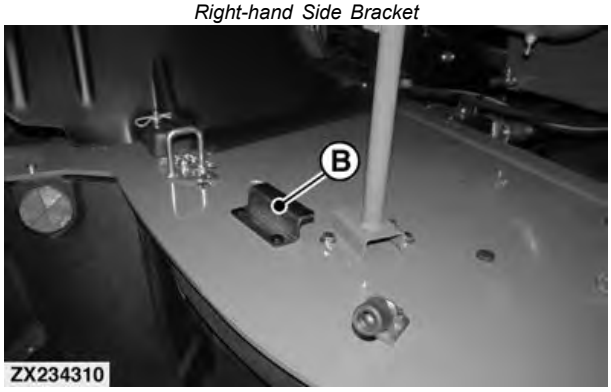
ZX234311 —UN—23MAR15

Ladder on Rear Side Bracket



ZX234309 —UN—23MAR15

Right-hand Side Bracket



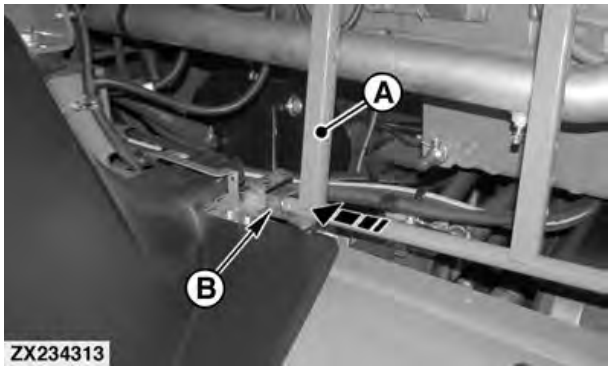
ZX234310 —UN—23MAR15

Left-hand Side Bracket

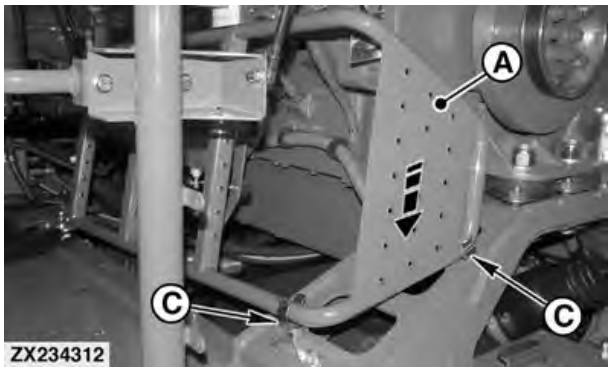
Continued on next page

Store ladder (A) back in holder (B) then secure with clamps (C), as shown.

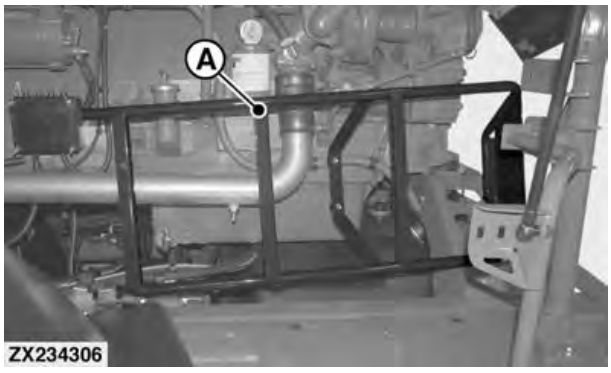
A—Ladder
B—Holder
C—Clamp



ZX234313 —UN—23MAR15



ZX234312 —UN—23MAR15



ZX234306 —UN—23MAR15

OUCC002,00044E7 -19-20MAR15-3/3

Keep Riders and Children Off Machine

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

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

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

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

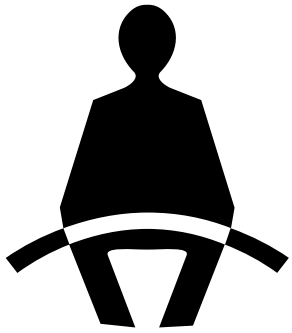
TS253 —UN—23AUG88

OUCC002,00042EC -19-31JAN15-1/1

Instructional Seat

The instructional seat is intended only for transport of a passenger riding as an observer/instructor in on-road operations (that is, transport from farm to field).

If it is necessary to transport a passenger, the instructional seat is the only means of transport of a passenger condoned by John Deere.

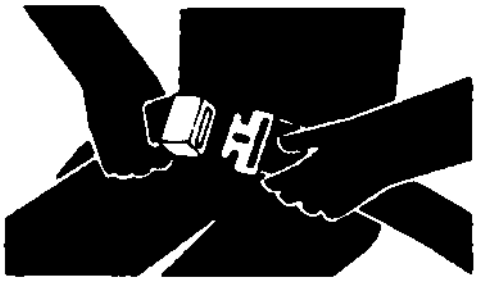


TS1730 —UN—24MAY13

OUCC002,0004223 -19-15DEC14-1/1

Use Seat Belts

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



H47137 —UN—25OCT95

PP98408,0000059 -19-26AUG13-1/1

Road Safety Mode Button

IMPORTANT: Before driving forage harvester on public roads, make sure that the road safety mode button is in the road mode (see Road Safety Mode Button in Operating the Controls and Displays section).

This ensures that all the hydraulic functions with the exception of the steering are switched off.

ZX1050673 —UN—20JUN13

OUCC002,0003D17 -19-23OCT13-1/1

Drive the Machine

Operate machine only when all guards are correctly installed.

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

Always adapt ground speed to road or field conditions. Avoid making sharp turns on slopes.

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 machine.

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.

ZX1050674 —UN—21NOV14

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

OUCC002,00042EE -19-31JAN15-1/1

Avoid Backover Accidents

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.

PC10857XW —UN—15APR13

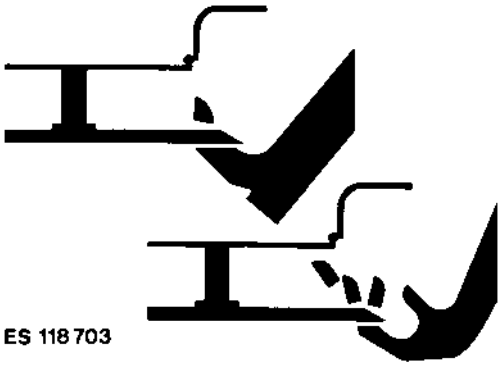
DX,AVOID,BACKOVER,ACCIDENTS -19-30AUG10-1/1

Guards and Shields

Keep guards and shields in place at all times. Ensure that they are serviceable and installed correctly.

Always disengage main clutch, shut off engine and remove key before removing any guards or shields.

Keep hands, feet and clothing away from moving parts.

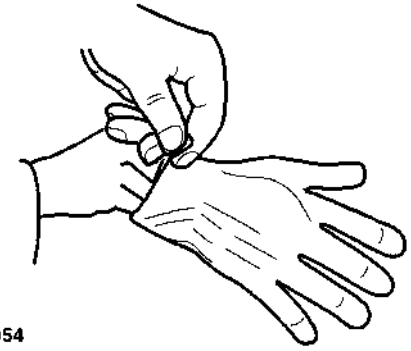


ES118703 —UN—21MAR95

OUCC002,0003D19 -19-26JUL13-1/1

Handle Knives

Prevent personal injury by wearing safety gloves to handle knives.



CC1026928 —UN—26JAN05

OUCC002,0003D1A -19-26JUL13-1/1

Stay Clear of Harvesting Units

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 and remove key before servicing or unclogging machine.

ES118704 —UN—21MAR95

FX,CUT -19-21DEC90-1/1

Keep Hands Away From Knives

Never attempt to clear obstructions in front of or on harvesting unit unless main clutch is disengaged, engine shut off and key removed.

Everyone must be clear of the forage harvester before starting the engine.

TS254 —UN—23AUG88

FX,KNIFE -19-21DEC90-1/1

Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep guards and shields in place at all times. Ensure that they are serviceable and installed correctly. Make sure rotating shields turn freely.

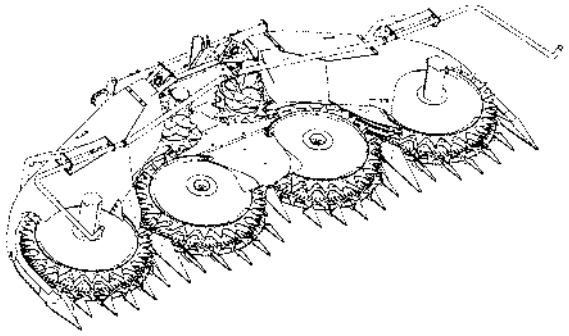
Wear close fitting clothing. Stop the engine and make sure all moving parts have stopped before making adjustments, connections, or cleaning out shaft-driven equipment.

TS1644 —UN—22AUG95

OUCC002,00042F0 -19-31JAN15-1/1

Avoid Entanglement

To avoid entanglement, do not feed crop into machine by hand or attempt to manually unplug machine while it is running. The feed rolls can feed crop material in faster than you can release your grip on the material.



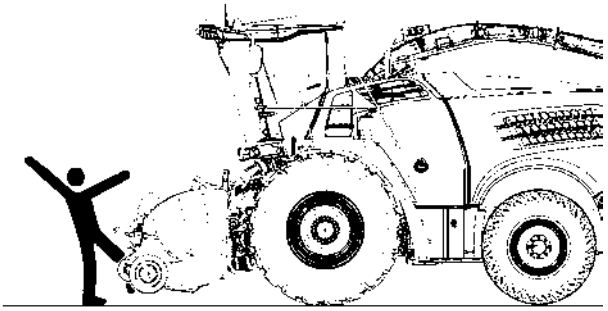
KM1001803

KM1001803 —UN—06DEC11

OUCC002,0003D1B -19-26JUL13-1/1

Transport With Header Installed

Before driving machine on public roads, header must be raised. It must not, however, obstruct operator's view of the road. Remove crop dividers (if equipped) and install protective cover.



ZX1050675

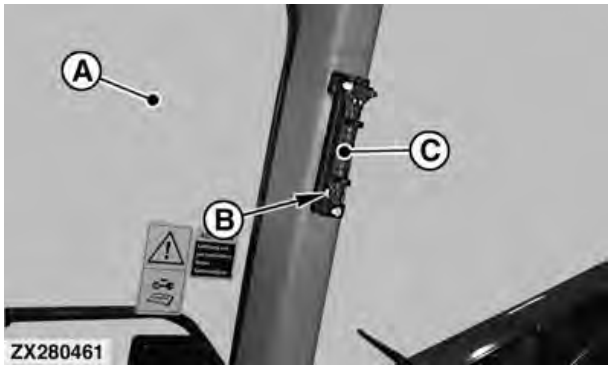
ZX1050675 —UN—06DEC13

OUCC002,0003D1C -19-26JUL13-1/1

Emergency Exit

The right-hand cab window (A) may be opened and used as an emergency exit. Seat belt may be cut with knife (B) of hammer (C) to exit cab in an emergency.

A—Window
B—Knife
C—Hammer



ZX280461 —UN—06JUL16

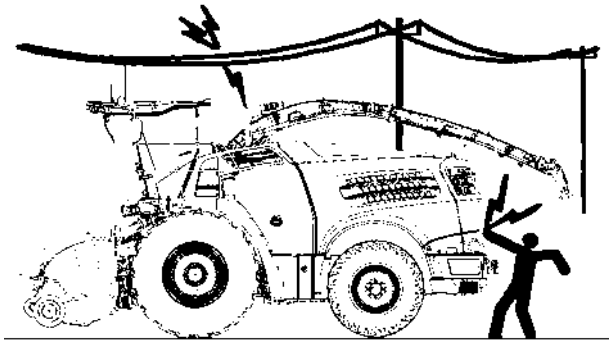
OUCC002,0004C53 -19-05JUL16-1/1

Radio Aerial

If radio aerial is not secured 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.

To avoid electrical shock, no portion of the machine should be higher than 4 m (13 ft).

Before transporting machine, bend aerial or remove it.



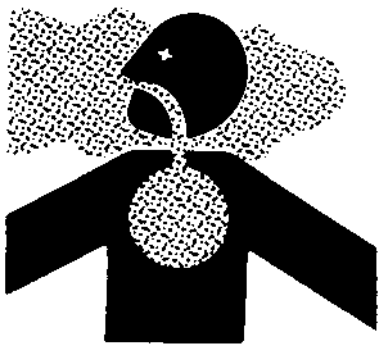
ZX1050676 —UN—06DEC13

OUCC002,0003AED -19-10SEP12-1/1

Work In Ventilated Area

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.



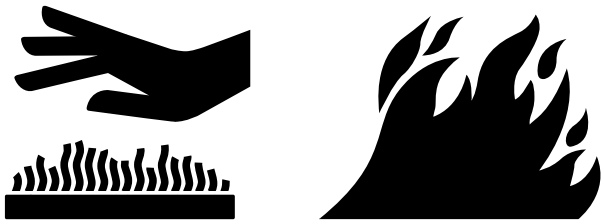
TS220 —UN—15APR13

DX,AIR -19-17FEB99-1/1

Avoid Hot Exhaust

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.



RG17488 —UN—21AUG09

DX,EXHAUST -19-20AUG09-1/1

Clean Exhaust Filter Safely

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.

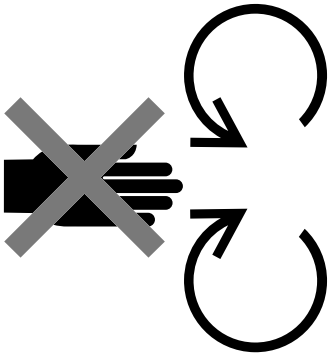
If service procedure requires engine to be running:

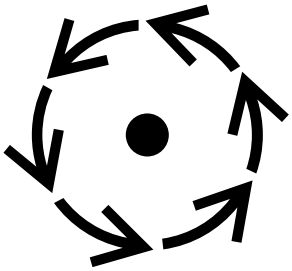
- Only engage power-driven parts required by service procedure
- Ensure that other people are clear of operator station and machine

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.





TS227 —UN—15APR13

TS271 —UN—23AUG88

TS1693 —UN—09DEC09

TS1695 —UN—07DEC09

DX,EXHAUST,FILTER -19-12JAN11-1/1

Avoid Static Electricity Risk When Refueling

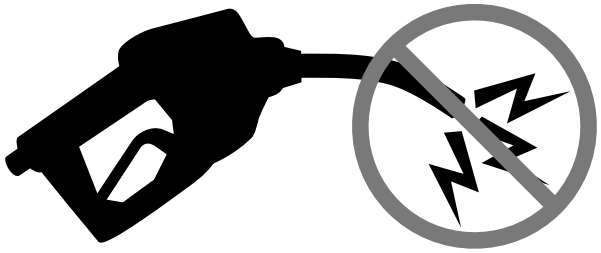
The removal of sulfur and other compounds in Ultra-Low Sulfur Diesel (ULSD) fuel decreases its conductivity and increases its ability to store a static charge.

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.

RG22142 —UN—17MAR14



RG21992 —UN—21AUG13

DX,FUEL,STATIC,ELEC -19-12JUL13-1/1

Practice Safe Maintenance

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 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.

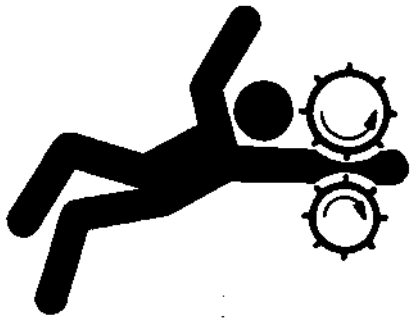
TS218 —UN—23AUG88

DX,SERV -19-17FEB99-1/1

Service Machines Safely

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



TS228 —UN—23AUG88

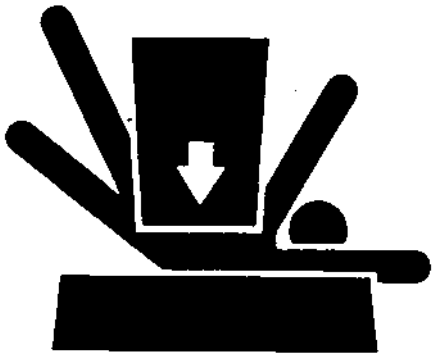
DX,LOOSE -19-04JUN90-1/1

Support Machine Properly

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.



TS229 —UN—23AUG88

DX,LOWER -19-24FEB00-1/1

Service Accumulator Systems Safely

Escaping fluid or gas from pressurized hydraulic accumulator 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 hydraulic system before removing accumulator. Never attempt to relieve hydraulic system or accumulator pressure by loosening a fitting.

Accumulators cannot be repaired.

TS281 —UN—15APR13

DX,WW,ACCLA -19-15APR03-1/1

Avoid High-Pressure Fluids

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.

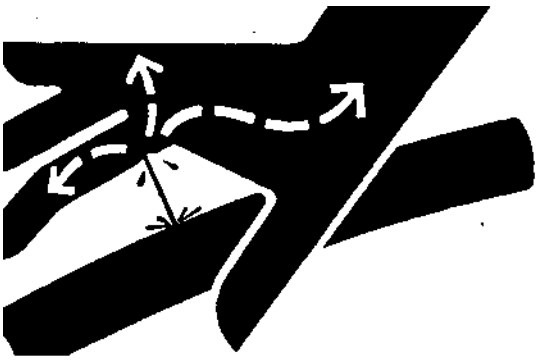
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

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.



X9811 —UN—23AUG88

DX,FLUID -19-12OCT11-1/1

Prevent Battery Explosions

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

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

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

TS204 —UN—15APR13

DX,SPARKS -19-03MAR93-1/1

Prevent Acid Burns

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

Avoid the hazard by:

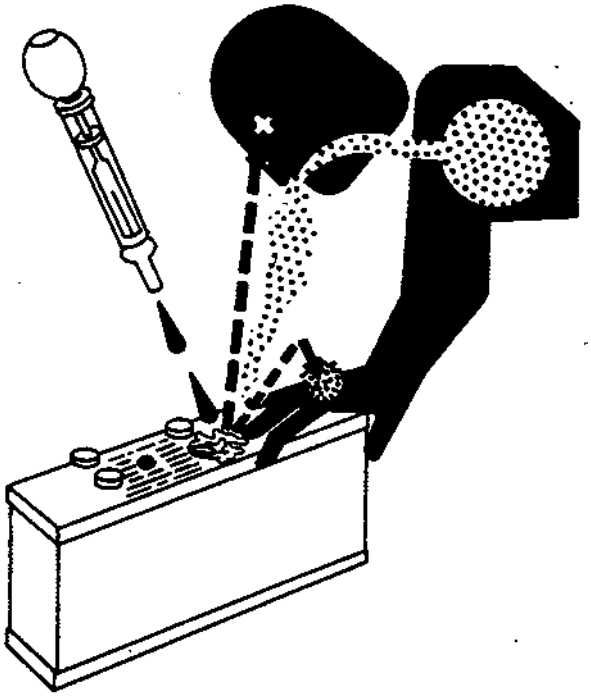
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your 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 quarts).
3. Get medical attention immediately.



TS203 —UN—23AUG88

DX,POISON -19-21APR93-1/1

Retorque Wheel Bolts and Nuts

Retorque wheel bolts and nuts as specified under **Wheel Bolts and Nuts** in Lubrication and Maintenance section. Failure to do this could result in a wheel falling off during operation, causing the machine to tip over with serious injury to the operator and extensive damage to the machine.

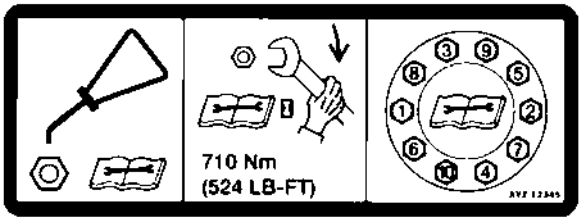
Front Axle Wheel Bolts (Lubricated):

- 710 N·m (524 lb-ft)

Rear Axle Wheel Nuts (Dry):

- 550 N·m (405 lb-ft)

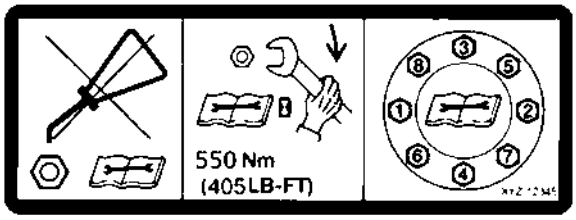
ZX201260 —UN—06OCT14



ZX224019

Front Wheel Bolts Torque

ZX224019 —UN—08NOV14



ZX224020

Rear Wheel Nuts Torque

ZX224020 —UN—08NOV14

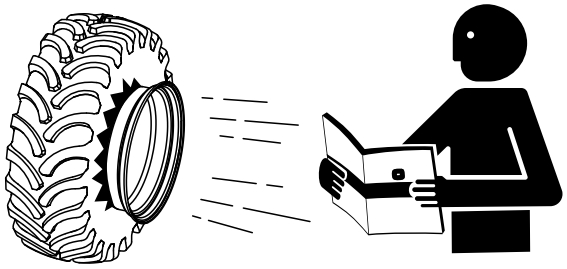
OUCC002,0004C41 -19-31MAY16-1/1

Follow Tire Recommendations

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.



H111235 —UN—13MAY14

DX,TIRE,INFO -19-19MAY14-1/1

Service Tires Safely

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.

RXA0103438 —UN—11JUN09

DX,WW,RIMS -19-19AUG09-1/1

Service Cooling System Safely

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

Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

TS281 —UN—15APR13

DX,RCAP -19-04JUN90-1/1

Speed Limit

In accordance with national speed regulations, the machine must have a plate showing its top speed limit.

NOTE: Depending on country the location and the amount of plate differ.

ZX220645 —UN—06OCT14

ZX220644 —UN—31OCT14

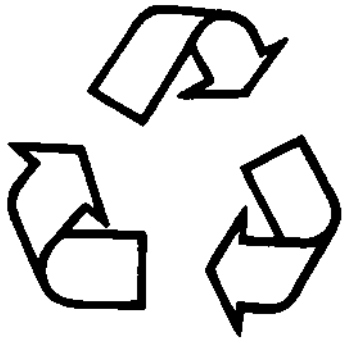
ZX223960 —UN—01NOV14

OUCC002,00041E9 -19-31OCT14-1/1

Decommissioning — Proper Recycling and Disposal of Fluids and Components

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);



TS1133 —UN—15APR13

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.

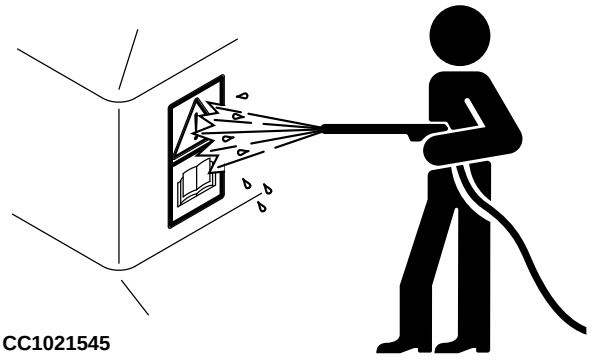
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, 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 -19-01JUN15-1/1

Avoid High-Pressure Jet on Safety Decals

Pressurized water can remove or damage safety decals. Do not direct high-pressure jet on safety decals.

Immediately replace missing or damaged safety decals. Replacement safety decals are available from your John Deere dealer.

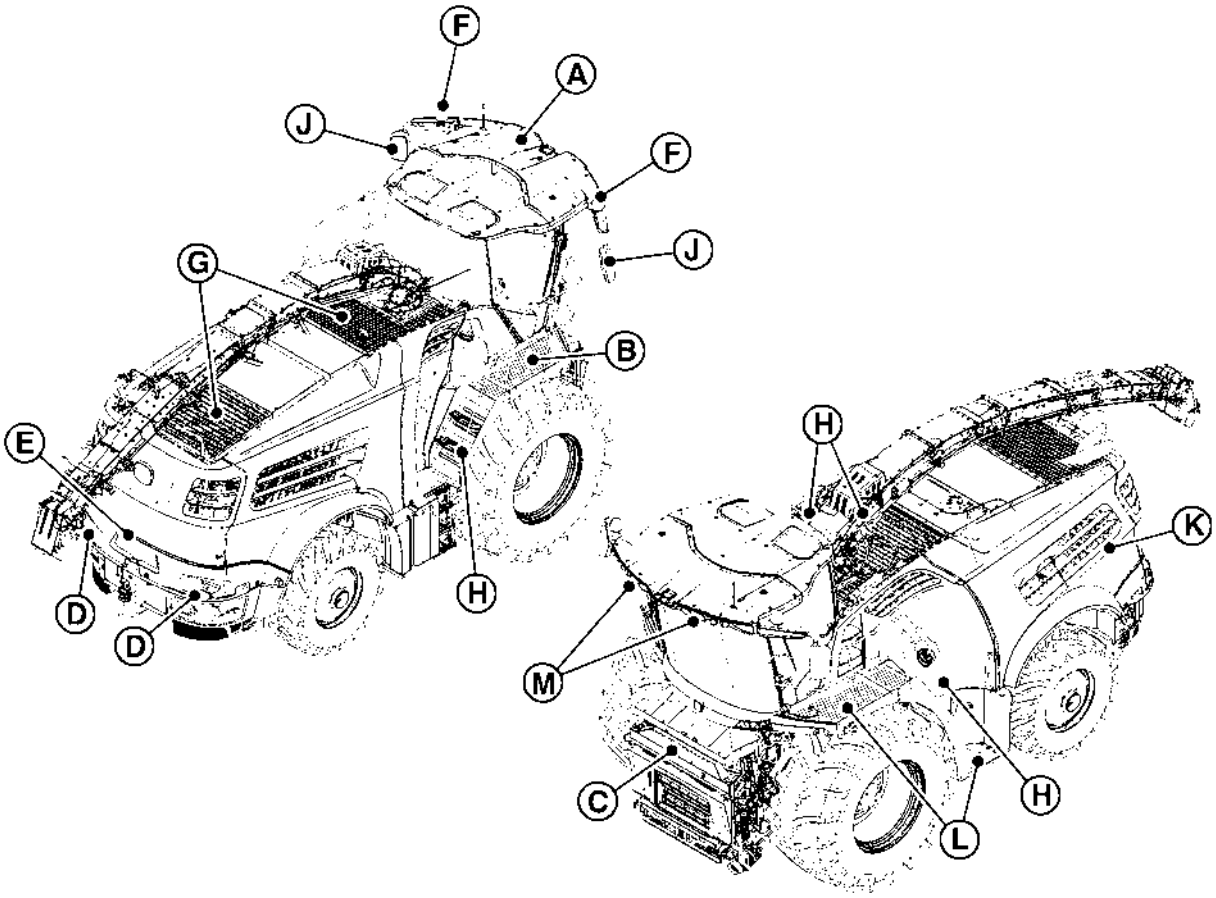


CC1021545

CC1021545 —UN—23APR02

OUCC002,0003AEA -19-10SEP12-1/1

Machine Safety Features



ZX1050671

ZX1050671—UN—31OCT14

A—Cab Safety Features[1]

B—Slip Resistant Service Platform with Handrails
C—Safety Decals
D—Tail and Hazard Warning Lights
E—Backup Alarm
F—Beacon Lights
G—Slip Resistant Skid Mats
H—Hand Hold Railing
J—Rear View Mirrors
K—Shields
L—Slip Resistant Steps, Service Platform with Handrails
M—Headlights

In addition to the safety features shown here, other components and systems, safety signs 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.

[1]*Including: Operator's Presence System, Electronic Engine Start Lockout, Seat Belts, Horn, Emergency Exit Window, Park Brake and Turn Signals.*

OUCC002,0003D1F -19-06DEC13-1/1

Safety Decals

Pictorial Safety Signs

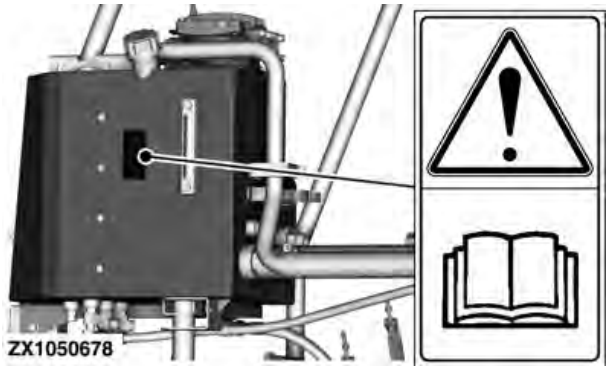
At several important places of this machine safety signs are affixed intended to signify potential danger. The hazard is identified by a pictorial in a warning triangle. An adjacent pictorial provides information how to avoid personal injury. These safety signs, their placement on the machine and a brief explanatory text are shown below.

TS231 —19—07OCT88

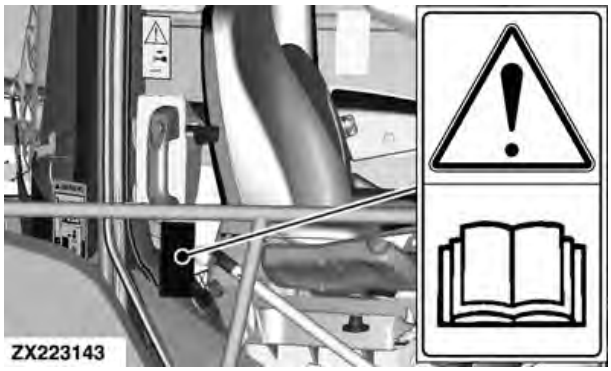
OUCC002,0004D1C -19-05JUL16-1/34

Operator's Manual

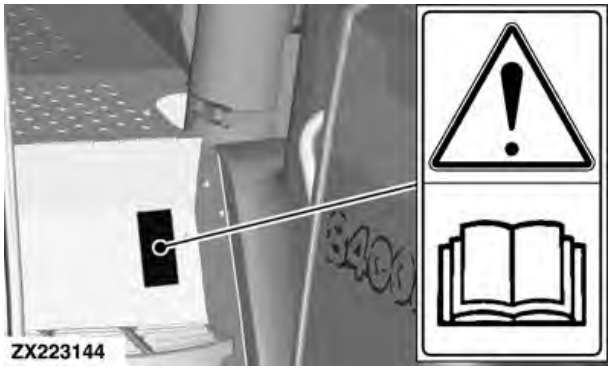
This Operator's Manual contains all important information necessary for safe machine operation. Carefully observe all safety rules to avoid accidents.



ZX1050678 —UN—08NOV14



ZX223143 —UN—08NOV14



ZX223144 —UN—08NOV14

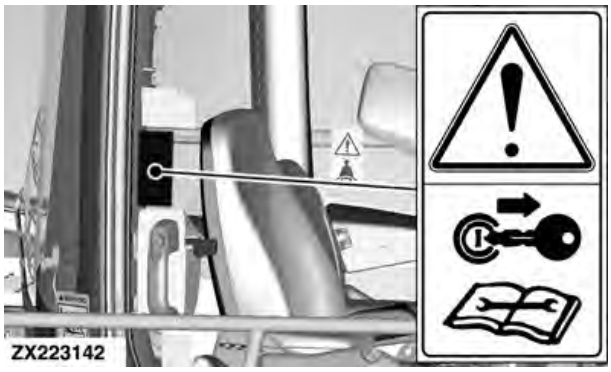
Continued on next page

OUCC002,0004D1C -19-05JUL16-2/34

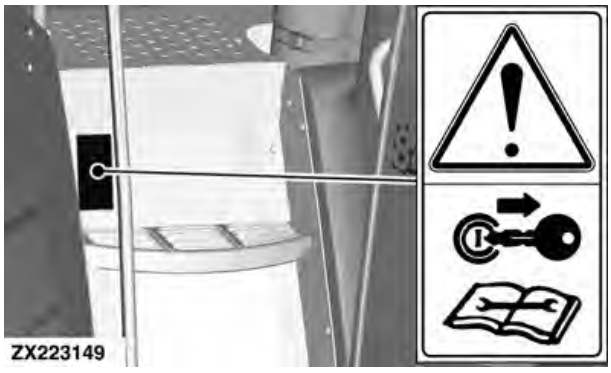
Repair and Maintenance

Before carrying out repair and maintenance work, shut off engine and remove key.

ZX1050679 —UN—16DEC14



ZX223142 —UN—08NOV14

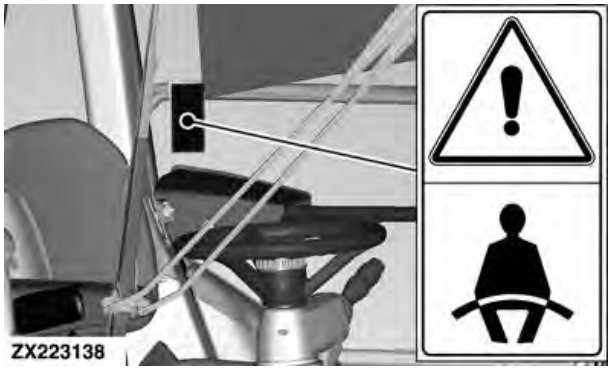


ZX223149 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-3/34

Seat Belt

Use the seat belt whenever operating the machine or riding as an observer.



ZX223138 —UN—08NOV14

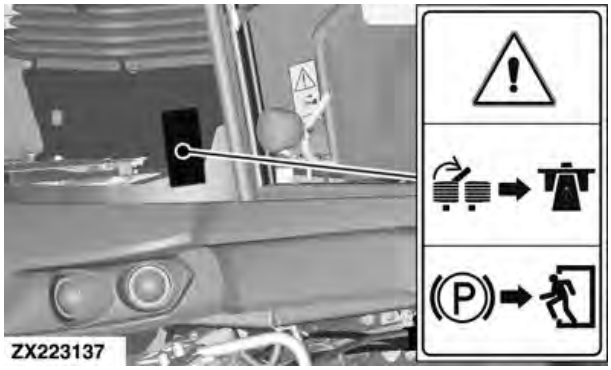
Continued on next page

OUCC002,0004D1C -19-05JUL16-4/34

Park Brake

Set park brake before leaving the machine.

Lock service brake pedals together before driving on roadway.



ZX223137 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-5/34

Emergency Exit

Seat belt may be cut with knife on handle to exit cab in an emergency.

ZX223153 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-6/34

Discharge Spout in Operating Position

When the discharge spout is in its operating position, check for overhead power lines (dependent on local conditions).

ZX1050681 —UN—21JAN14

Continued on next page

OUCC002,0004D1C -19-05JUL16-7/34

Access Ladder and Platform

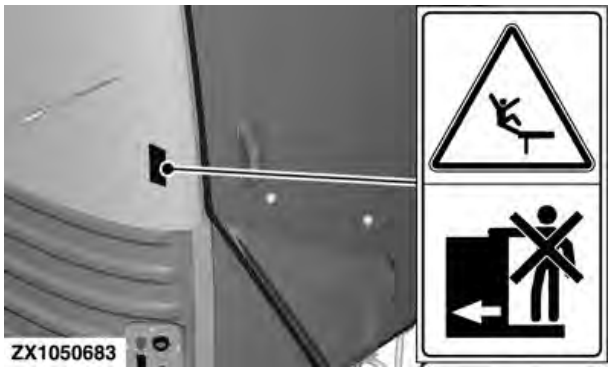
Do not allow riders on access ladder or platform.

ZX1050682 —UN—21JAN14

OUCC002,0004D1C -19-05JUL16-8/34

Platform, Right-Hand Side

Do not allow riders on service platform.

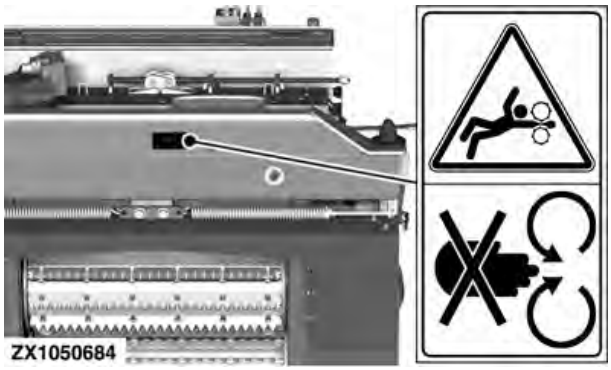


ZX1050683 —UN—21JAN14

OUCC002,0004D1C -19-05JUL16-9/34

Feed Rolls

Stay clear of rotating feed rolls to avoid personal injury.



ZX1050684 —UN—21JAN14

Continued on next page

OUCC002,0004D1C -19-05JUL16-10/34

Cutterhead Assembly and Drive

Do not touch any moving machine parts. Wait until all moving parts have stopped.

ZX1050685 —UN—03FEB14

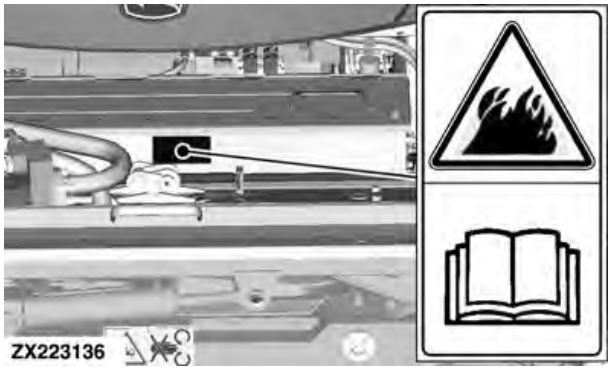
ZX1050686 —UN—21JAN14

OUCC002,0004D1C -19-05JUL16-11/34

Avoid Fires

Avoid equipment fires.

The build up of chaff and crop debris around the cutterhead is a fire hazard. Inspect and clean this area frequently and before initiating a sharpening stone process.



ZX223136 —UN—08NOV14

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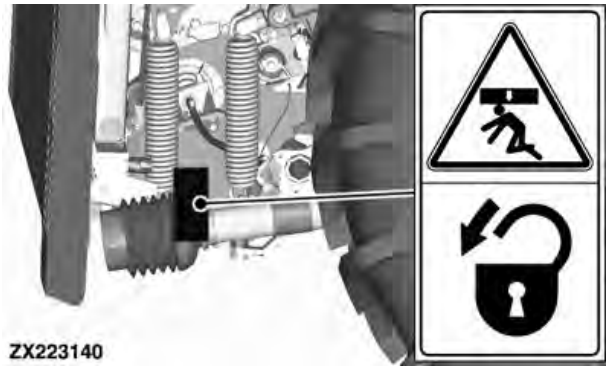
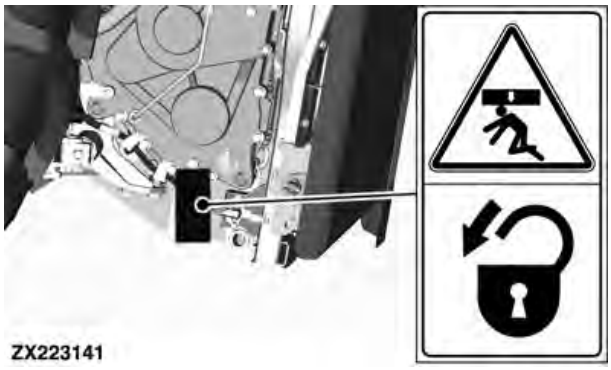
OUCC002,0004D1C -19-05JUL16-12/34

Below Cutterhead

Stay clear of this area unless safety lock is engaged.



ZX223140 —UN—08NOV14

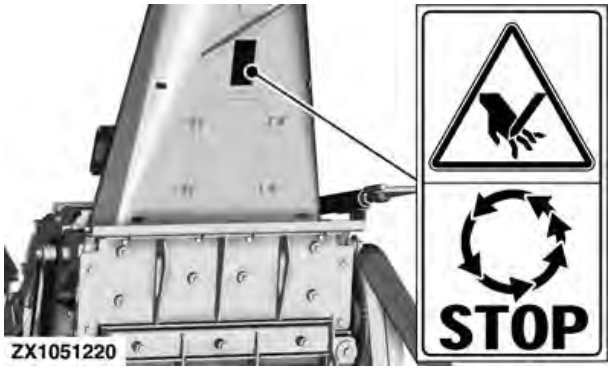


ZX223141 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-13/34

Spout Transition Channel

Do not touch any moving machine parts. Wait until all moving parts have stopped.



ZX1051220 —UN—21JAN14

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OUCC002,0004D1C -19-05JUL16-14/34

Cutterhead

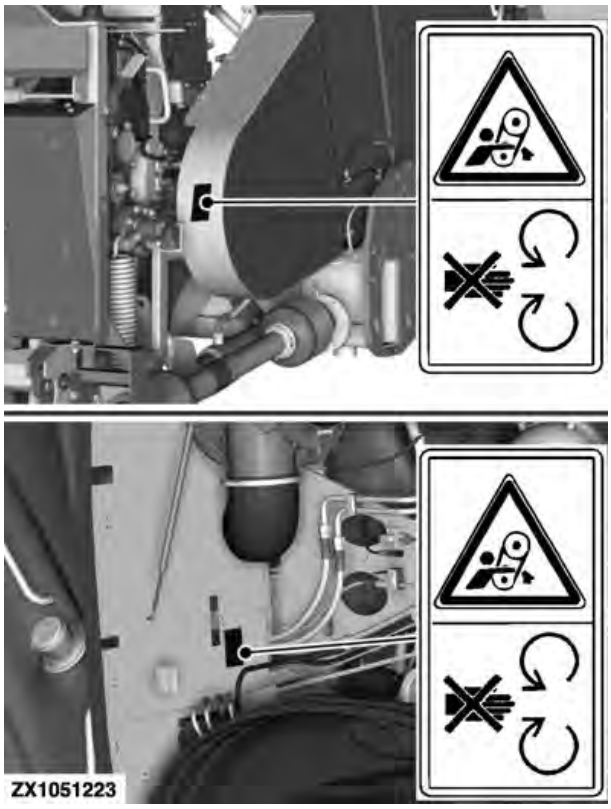
Do not touch any moving machine parts. Wait until all moving parts have stopped.

ZX223139 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-15/34

Main Drive (8100—8600)

Do not touch any moving machine parts. Wait until all moving parts have stopped.



ZX1051223 —UN—03FEB14

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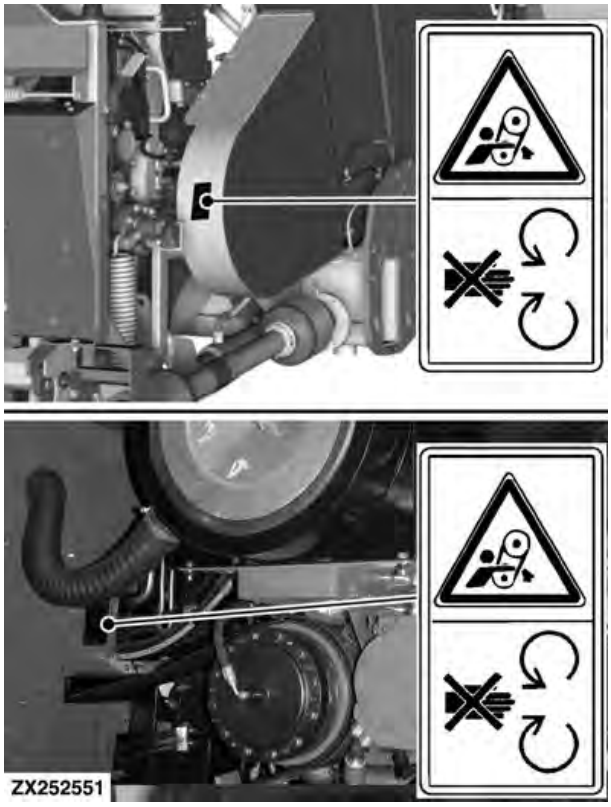
OUCC002,0004D1C -19-05JUL16-16/34

Main Drive (8700 and 8800)

Do not touch any moving machine parts. Wait until all moving parts have stopped.

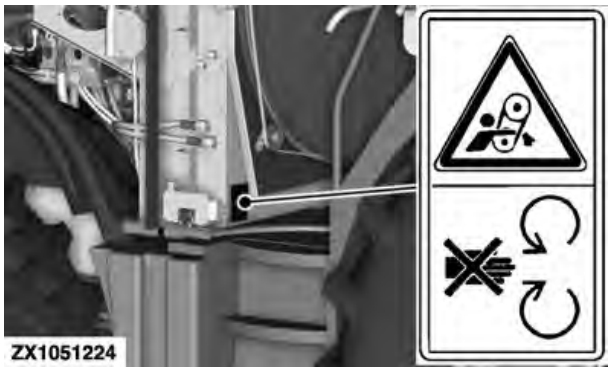


ZX252551 —UN—09SEP15

OUCC002,0004D1C -19-05JUL16-17/34

Rotary Suction Screen

Do not touch any moving machine parts. Wait until all moving parts have stopped.



ZX1051224 —UN—21JAN14

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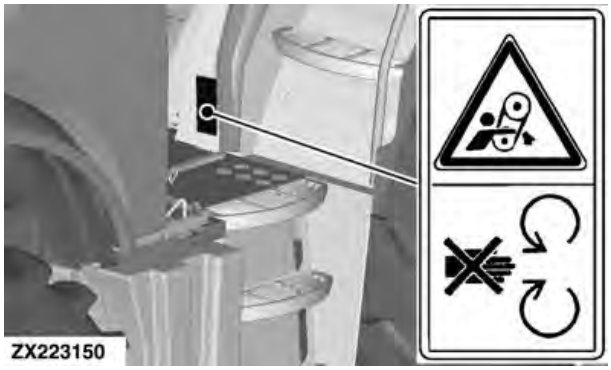
OUCC002,0004D1C -19-05JUL16-18/34

Kernel Processor Drive

Do not touch any moving machine parts. Wait until all moving parts have stopped.

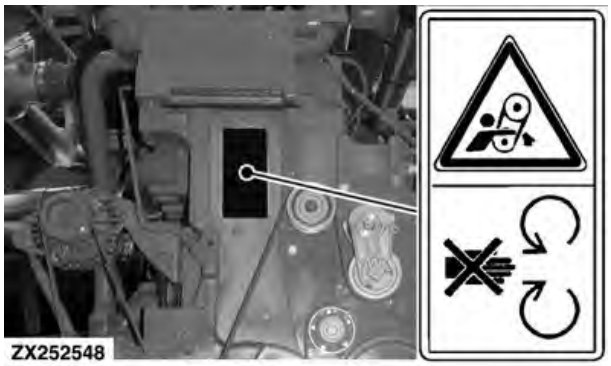


ZX223150 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-19/34

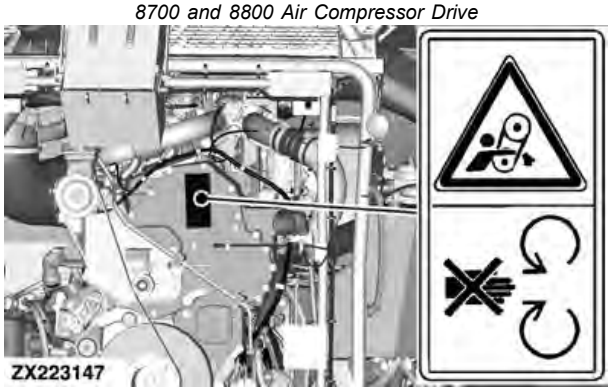
Air Compressor Motor Drive

Do not touch any moving machine parts. Wait until all moving parts have stopped.



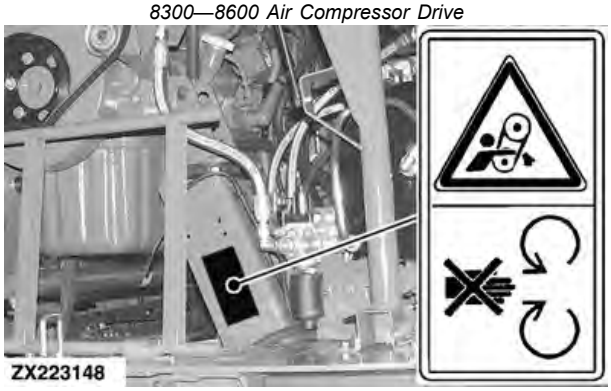
ZX252548 —UN—09SEP15

8700 and 8800 Air Compressor Drive



ZX223147 —UN—08NOV14

8300—8600 Air Compressor Drive



ZX223148 —UN—08NOV14

8100 and 8200 Air Compressor Drive

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OUCC002,0004D1C -19-05JUL16-20/34

Exhaust System

Stay clear of hot surfaces.

ZX1051225 —UN—21JAN14

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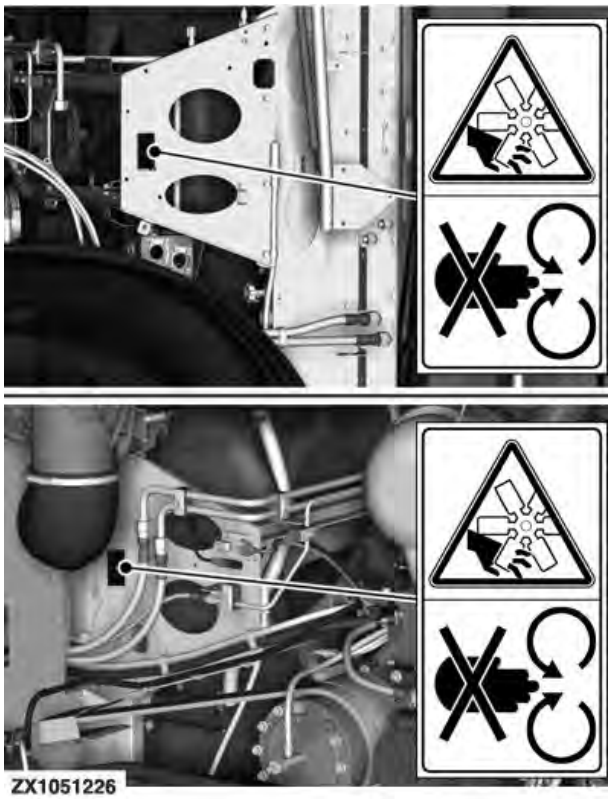
OUCC002,0004D1C -19-05JUL16-21/34

Fan (8100—8600)

Keep your hands away from fan and drive belt when the engine is running.



ZX1051226 —UN—21JAN14

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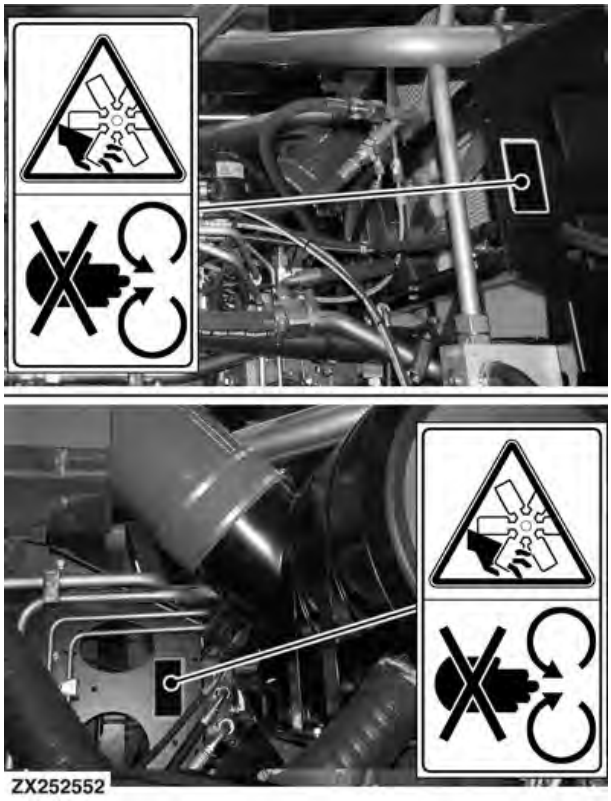
OUCC002,0004D1C -19-05JUL16-22/34

Fan (8700 and 8800)

Keep your hands away from fan and drive belt when the engine is running.

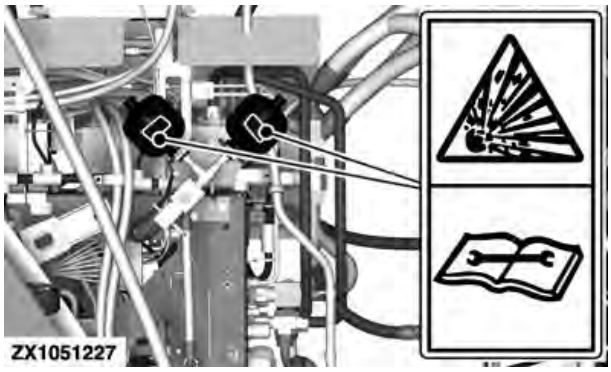


ZX252552 —UN—09SEP15

OUCC002,0004D1C -19-05JUL16-23/34

Accumulators - Harvesting Unit Float System

Avoid bodily injuries from hydraulic oil and gas under pressure.



ZX1051227 —UN—03FEB14

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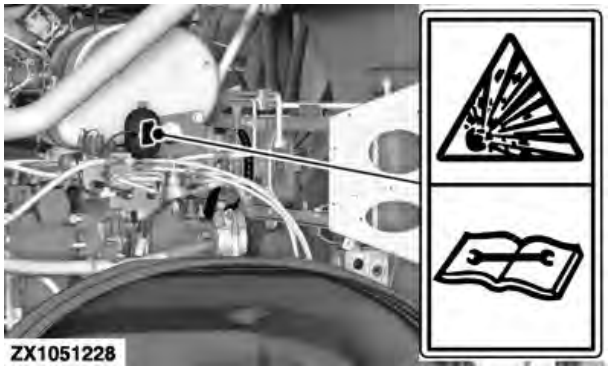
OUCC002,0004D1C -19-05JUL16-24/34

Accumulator - Main Clutch (8100—8600)

Avoid bodily injuries from hydraulic oil and gas under pressure.

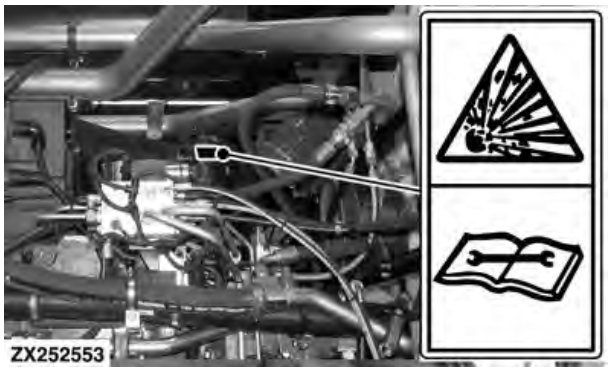


ZX1051228 —UN—03FEB14

OUCC002,0004D1C -19-05JUL16-25/34

Accumulator - Main Clutch (8700 and 8800)

Avoid bodily injuries from hydraulic oil and gas under pressure.



ZX252553 —UN—09SEP15

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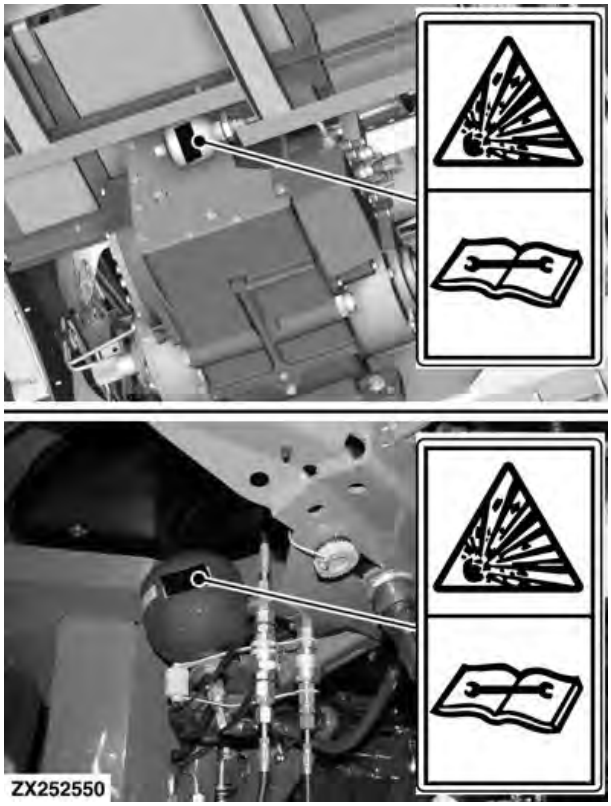
OUCC002,0004D1C -19-05JUL16-26/34

Accumulator - ProDrive™ Transmission

Avoid bodily injuries from hydraulic oil and gas under pressure.

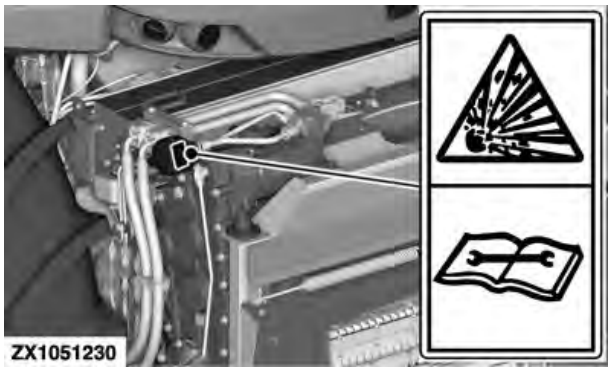


ZX252550 —UN—09SEP15

OUCC002,0004D1C -19-05JUL16-27/34

Accumulator - Length-of-Cut Transmission

Avoid bodily injuries from hydraulic oil and gas under pressure.



ZX1051230 —UN—03FEB14

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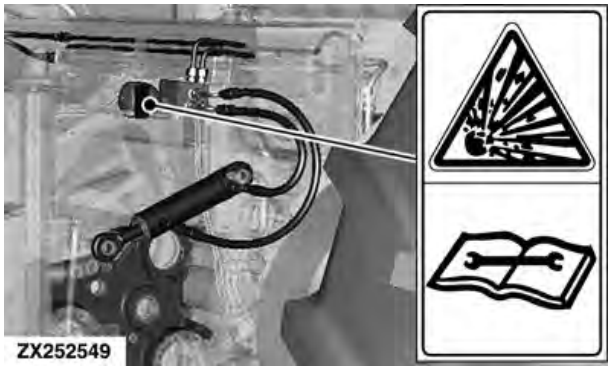
OUCC002,0004D1C -19-05JUL16-28/34

Accumulator - Feed Roll Dampening

Avoid bodily injuries from hydraulic oil and gas under pressure.

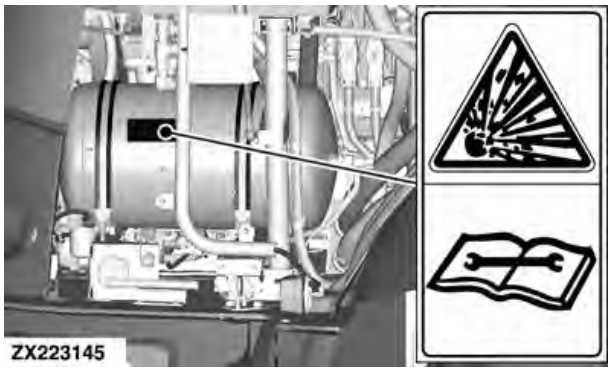


ZX252549 —UN—09SEP15

OUCC002,0004D1C -19-05JUL16-29/34

Accumulator - Air Compressor

Avoid bodily injuries from air under pressure.

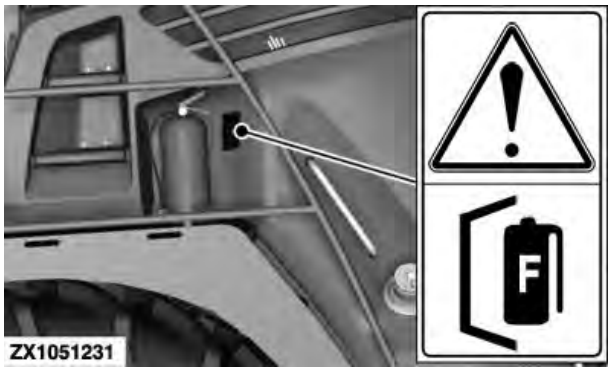


ZX223145 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-30/34

Fire Extinguisher

Do not operate the machine unless a fire extinguisher ready for operation is installed at this location.



ZX1051231 —UN—03FEB14

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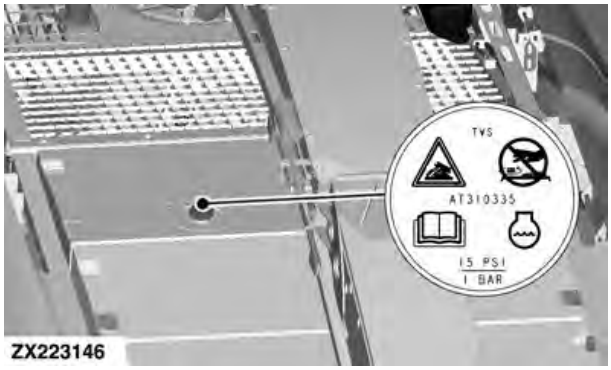
OUCC002,0004D1C -19-05JUL16-31/34

Cooling System

Avoid being scalded when opening expansion tank cap. Open cap 1,5 turns to relieve pressure. Never open when engine is hot.

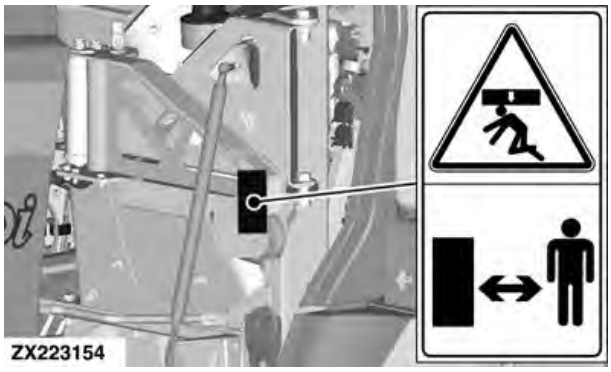


ZX223146 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-32/34

Kernel Processor Winch

Stay clear of load carried by winch.

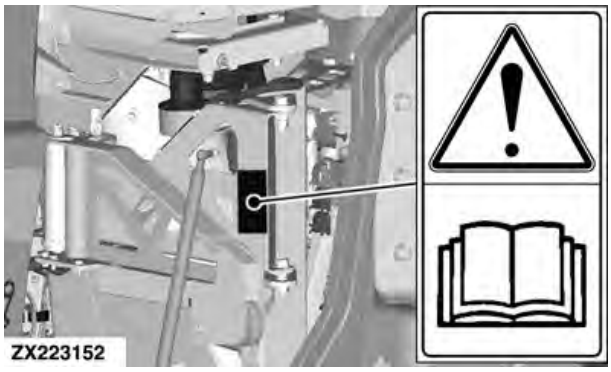


ZX223154 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-33/34

Kernel Processor Winch

This Operator's Manual contains all important information necessary for safe kernel processor winch operation. Carefully observe all safety rules to avoid accidents.



ZX223152 —UN—08NOV14

OUCC002,0004D1C -19-05JUL16-34/34

Remove Accumulated Crop Debris

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 as necessary. Before performing any inspection or service, shut off the engine, set the park brake and remove the key.

The areas that have to be cleaned before initiating the knife sharpening process are the feed roll area, the knife sharpening device area, and the chute area.

TS227 —UN—15APR13

OUCC002,00042F1 -19-31JAN15-1/1

Cleaning and Inspection - Instructions

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.

This section shows areas of the machine that require periodic cleaning, inspection, and adjustment.

Frequency of inspection varies depending on a number of factors including operating conditions, weather, crop conditions, machine settings, and operating speeds.

Clean the machine of accumulated crop debris, excess grease, and leaking or spilled hydraulic fluid and diesel fuel.

The parts of the machine that are most affected by buildup of crop debris are:

- The feeding system.
- The cutterhead assembly.
- The transition chute area.
- The engine compartment.
- The air filters.
- The radiator.

Using compressed air can make the job of keeping these areas clean much easier.

Fire prevention, regular and thorough cleaning of the machine combined with the other routine maintenance procedures listed in the Operator's Manual greatly reduces the chance of downtime and improves machine performance. Always follow all safety procedures posted on the machine and in the Operator's Manual.

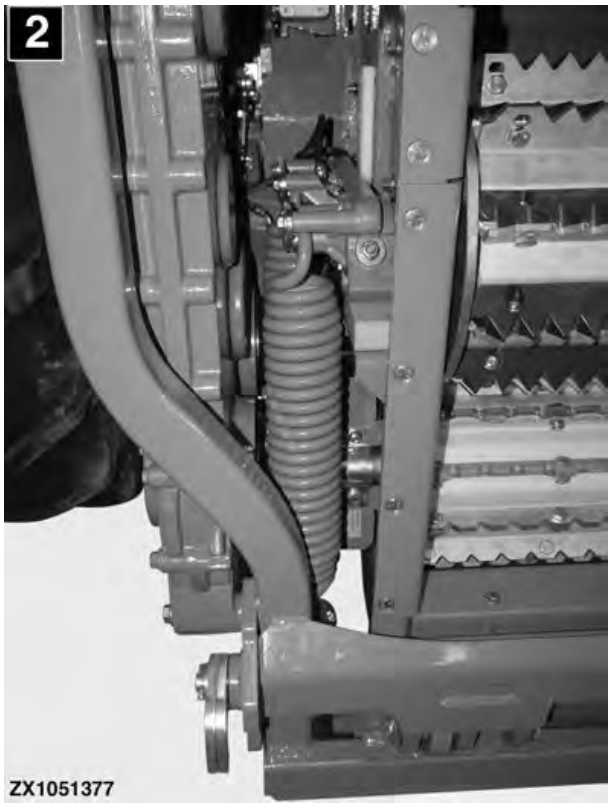
Feeding System:

The entire area at the front of the machine including the feeding system must be cleaned periodically.

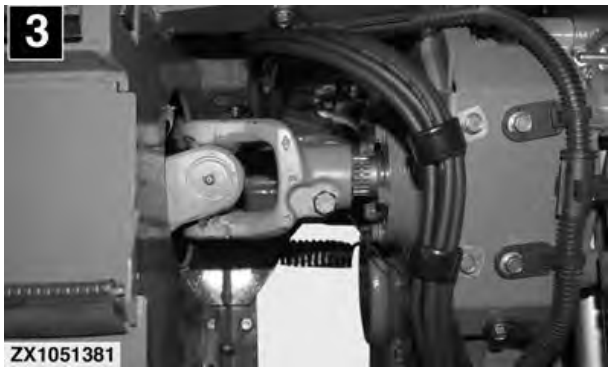
In particular, the areas shown must be kept clean:

1. Around the feed roll tensioning springs and header driveline on the left-hand side.
2. Around the feed roll tensioning springs on the right-hand side.
3. Around the upper feed roll drive shaft on the right-hand side.

ZX1051234 —UN—20JUN13



ZX1051377 —UN—20JUN13



ZX1051381 —UN—20JUN13

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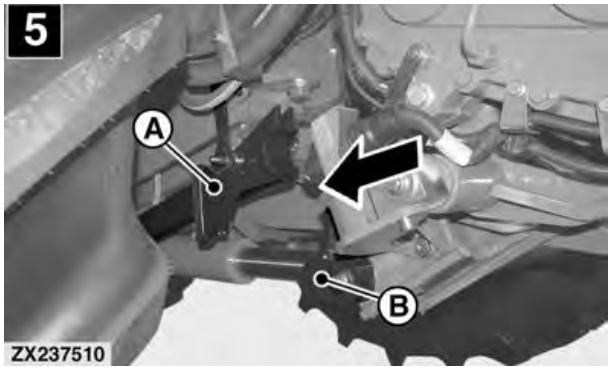
OUCC002,00046B1 -19-08SEP15-1/15

4. Around the lower feed roll drive hub on the right-hand side.
5. Around the cutterhead lift lock on the right-hand side

⚠ CAUTION: To ensure that cutterhead lift lock can be securely engaged, always keep area around the locking beam (A) and stop block (B) clear of debris.

A—Locking Beam **B—Stop Block**

ZX1051382 —UN—20JUN13



ZX237510 —UN—23MAR15

OUCC002,00046B1 -19-08SEP15-2/15

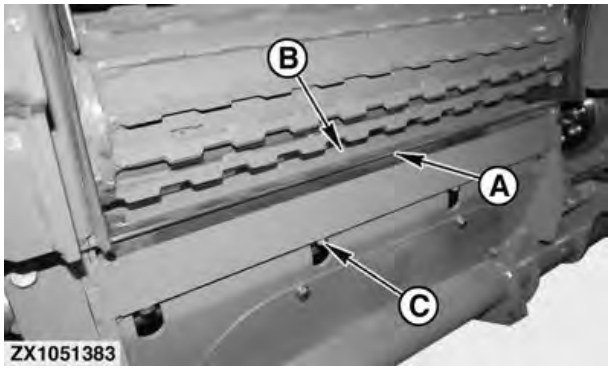
Smooth Roll and Stripper:

In order to prevent material from wrapping around the smooth roll the stripper must be adjusted accurately. The gap between the stripper and the smooth roll must be checked periodically and the entire area must be kept clean.

If material buildup or wrapping is detected in this area, stripper clearance must be readjusted as follows.

Stripper (A) is correctly adjusted when the minimum gap between smooth roll (B) and the stripper is 0.2 mm (0.008 in.) and the smooth roll still turns freely. To adjust the stripper, loosen four screws (C) and adjust the stripper evenly.

NOTE: To ensure a more even flow of material, the smooth roll, stripper and the area around the stationary knife must be cleaned. Replace the stripper whenever it becomes excessively worn.



ZX1051383 —UN—20JUN13

A—Stripper **C—Screws (4 Used)**
B—Smooth Roll

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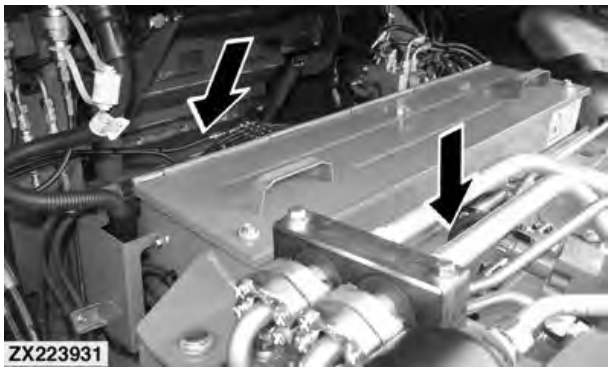
OUCC002,00046B1 -19-08SEP15-3/15

ZX1051384 —UN—20JUN13



ZX223931 —UN—29OCT14

Area around the Knife Sharpening Device:

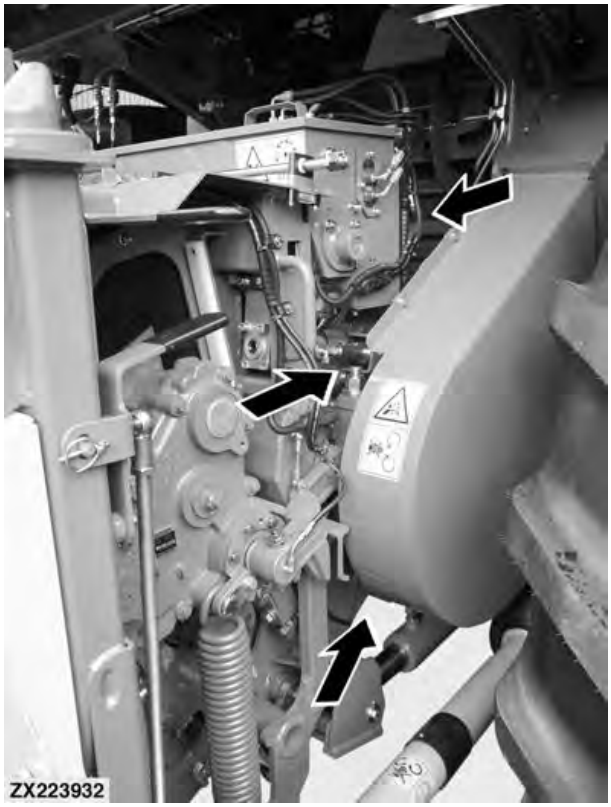
Crop debris can build up in the area around the knife sharpening device, on cutterhead assembly. These crop debris may be ignited by sparks caused during knife sharpening. This area must be kept clean especially before every knife sharpening procedure. In particular, the following areas:

- Behind the cutterhead.
- On both sides, under the stationary knife adjusting arm assembly and stationary knife retainer.
- Hydraulic hoses, lubrication lines, and wiring harnesses.
- Above and under the transition chute assembly.
- Around the spiral floor.

IMPORTANT: Clean the area around the knife sharpening device REGULARLY and BEFORE every knife sharpening procedure.

Never initiate a sharpening procedure in an area with flammable particles or while driving the machine.

The pull-out curtain reduces the buildup of crop debris around the cutterhead.



ZX223932 —UN—29OCT14

ZX237511 —UN—23MAR15

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OUCC002,00046B1 -19-08SEP15-4/15

Sheaves:

The surfaces of the sheaves and the grooves in the sheaves must be cleared of foreign bodies every day. Foreign bodies on the sheaves may cause vibration, which in turn may cause premature wear at the bearings.

ZX1051386 —UN—20JUN13

Continued on next page

OUCC002,00046B1 -19-08SEP15-5/15

Engine Compartment (8100—8600):

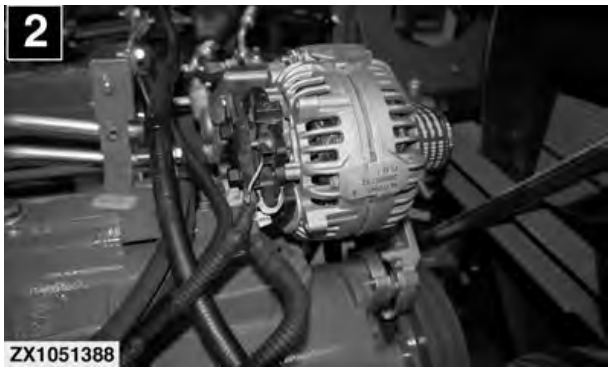
Clear crop debris periodically from both sides of the engine compartment, and inspect the wiring harnesses and hydraulic hoses for damage.

In particular, the areas shown must be kept clean:

1. This illustration shows the left-hand side of the engine compartment. Crop debris can penetrate the engine compartment cover screen and build up on the hot surfaces in the engine compartment.
2. Around the alternator, tensioner rolls and sheaves. Clear this area periodically of dust, paying particular attention to the fan and to the sheave of the alternator. Clean the tensioner and deflector rolls both inside and out.
3. Around the turbochargers which must be cleaned periodically to prevent crop debris from building up on them and possibly igniting.
4. Around the diesel particulate filter (Final Tier 4/Stage IV engine only). Clear this area periodically of dust, paying particular attention to the top of the diesel particulate filter.

IMPORTANT: Check other areas for cleanliness too. Areas above hot surfaces must be kept clean to prevent debris from falling down and onto these surfaces.

ZX1051387 —UN—20JUN13



ZX1051388 —UN—20JUN13

ZX203179 —UN—20JUN13

ZX203180 —UN—20JUN13

Final Tier 4/Stage IV Engine Only

Continued on next page

OUCC002,00046B1 -19-08SEP15-6/15

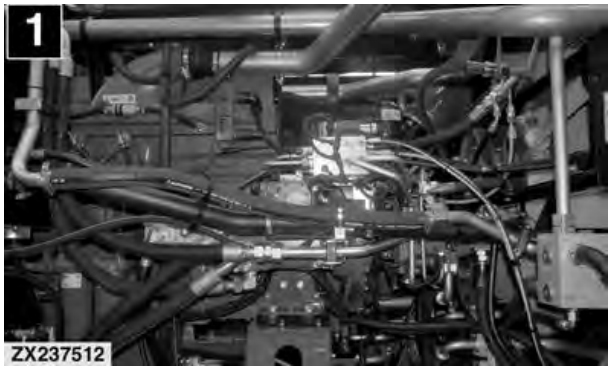
Engine Compartment (8700 and 8800):

Clear crop debris periodically from both sides of the engine compartment, and inspect the wiring harnesses and hydraulic hoses for damage.

In particular, the areas shown must be kept clean:

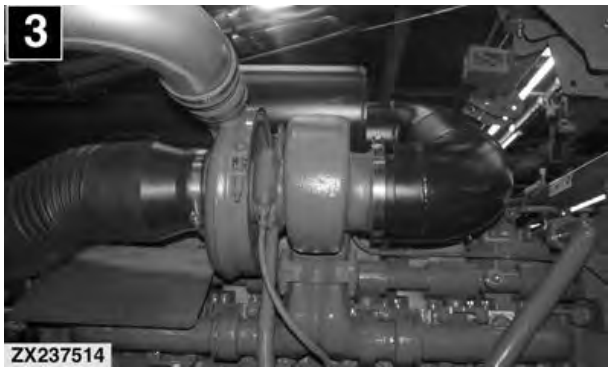
1. This illustration shows the left-hand side of the engine compartment. Crop debris can penetrate the engine compartment cover screen and build up on the hot surfaces in the engine compartment.
2. Around the alternators, tensioner rolls and sheaves. Clear this area periodically of dust, paying particular attention to the fan and to the sheave of the alternator. Clean the tensioner and deflector rolls both inside and out.
3. Around the turbocharger which must be cleaned periodically to prevent crop debris from building up on it and possibly igniting.

IMPORTANT: Check other areas for cleanliness too. Areas above hot surfaces must be kept clean to prevent debris from falling down and onto these surfaces.



ZX237512 —UN—23MAR15

ZX237513 —UN—23MAR15



ZX237514 —UN—23MAR15

OUCC002,00046B1 -19-08SEP15-7/15

Cooling Elements:

Clean the cooling elements periodically with compressed air. Starting at the cooling fan side (i.e. against the normal flow of cooling air), blow compressed air through the cooling elements. Then repeat this procedure from the opposite side.

IMPORTANT: Depending on the crop harvested, the tube (see arrow) to the suction fan may be clogged with residue. In this case, the tube must be scraped out and washed regularly.

ZX252554 —UN—09SEP15

Continued on next page

OUCC002,00046B1 -19-08SEP15-8/15

Fresh Air Filter:

Clean the fresh air filter periodically. A clean fresh air filter is necessary to keep the cab and the air inside it clean, and to maintain the efficiency of the air-conditioning system.

ZX203182 —UN—20JUN13

Continued on next page

OUCC002,00046B1 -19-08SEP15-9/15

Engine Air Cleaner:

To ensure the efficiency of the engine, clean the engine air cleaner periodically with compressed air. Clean as follows:

1. Use compressed air to clean the engine air cleaner from the inside out, until as much dust as possible has been blown out.
2. Clean the engine air cleaner with compressed air from the outside until no more dust can be removed.
3. Repeat steps 1 and 2 until it is no longer possible to see dust being blown out.

ZX203183 —UN—20JUN13

Engine Air Cleaner - 8100—8600

ZX237515 —UN—23MAR15

Engine Air Cleaner - 8700, 8800

ZX1041801 —UN—20JUN08

ZX1041802 —UN—20JUN08

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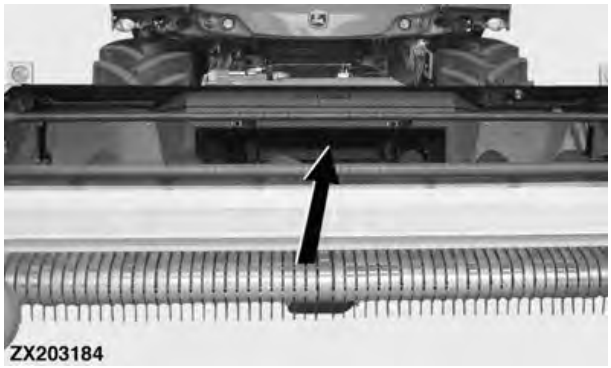
OUCC002,00046B1 -19-08SEP15-10/15

Net on Pickup:

Pickups should be equipped with a net. This net helps to prevent crop debris from building up at the front of the machine and around the knife sharpening device. The net covers the auger and is secured to the compressor sheet. Ask your John Deere dealer for more information on available bundles.



ZX203184 —UN—20JUN13

OUCC002,00046B1 -19-08SEP15-11/15

Cab Windows:

IMPORTANT: Do not manually move the wiper arm, this could cause damage to the wiper mechanism.

Use the relevant access ladder to access and clean left and right glasses of cab. Do not go over the spout to reach other side of the cab. Step down and use the relevant access ladder.

Use appropriate cleaning tools to reach glasses from left and right landings.

ZX224010 —UN—05NOV14

Cab Window—Side Glass

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OUCC002,00046B1 -19-08SEP15-12/15

Use the relevant access ladder and steps provided in the styling panel on the left-hand side to access and clean the rear glass of cab. Do not go over the spout to reach other side of the cab. Step down and use the relevant access ladder.

Use appropriate cleaning tools and rear cab handrail (see arrow) to reach the rear glass from left and right landings.

ZX224008 —UN—05NOV14

Cab Window—Rear Glass

Continued on next page

OUCC002,00046B1 -19-08SEP15-13/15

Stand on the ground to clean front cab window. Use a suitable tool with extension.

ZX224009 —UN—05NOV14

Cab Window—Front Windshield

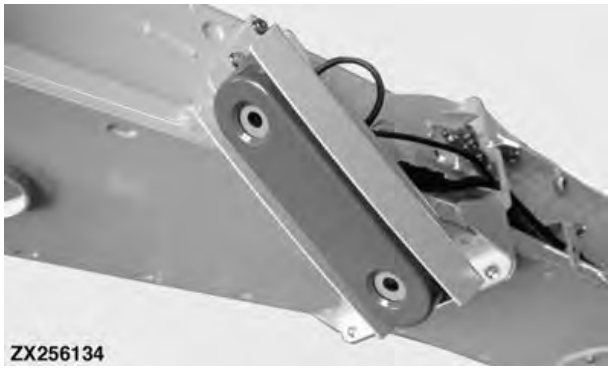
OUCC002,00046B1 -19-08SEP15-14/15

Active Fill Control (Option) and Video Camera:

Frequency of cleaning varies depending on a number of factors including operating conditions, weather, and crop conditions.

Clean camera window using a soft, moistened cloth.

- **Machine With 8-Row Discharge Spout:**
  a. Tilt spout up from rest position to access camera.
  b. Turn engine off.
  c. Access engine hood by using step and hand hold on left side of machine.
  d. Stand on center of engine hood to clean camera. For stability, hold on to working light grid.
- **Machine With 10 or 12-Row Discharge Spout:**
  a. Position discharge spout on right side of machine and lower to lowest position to clean camera.
  b. Turn engine off.



ZX256134 —UN—09SEP15

c. Use a raised platform as needed to access camera. For stability, hold on to working light grid.

OUCC002,00046B1 -19-08SEP15-15/15

Fire Extinguisher Recommendations

A 6 kg (13 lb) general purpose fire extinguisher complying with legal regulations must be installed on the left-hand side of the operator's platform.

Make sure that the fire extinguisher is always ready for operation. Read the manual provided with the extinguisher for operating instructions. Once the extinguisher is discharged, no matter for how long, it must be recharged.

Keep the whole machine clean and free of dust, chaff and straw to prevent the possibility of a fire.

ZX1050672 —UN—16DEC14

OUCC002,0004226 -19-15DEC14-1/1

Fire Prevention - Instructions

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 the machine combined with the other routine maintenance procedures listed in the Operator's Manual greatly reduces the chance of downtime and improves machine performance. Always follow all safety procedures posted on the machine and in the Operator's Manual.

IMPORTANT: For more information on regular cleaning, see Cleaning and Inspection - Instructions.

Fire Extinguisher:

John Deere recommends a 6 kg general-purpose fire extinguisher (“ABC”) mounted next to the cab door. Check every day that the fire extinguisher is in position.

Remove Accumulated Crop Debris - Keep Machine Clean:

The buildup of crop debris, dirt and grease in the engine compartment, at the kernel processor, sharpening device, cutterhead, feed rolls and header, as well as at moving parts in general, represents a fire hazard that could lead to machine fire. Clean these areas of the machine regularly. Before carrying out any inspection on the machine, always shut off the engine, prevent the machine from rolling away and remove the ignition key.

ZX1050672 —UN—16DEC14

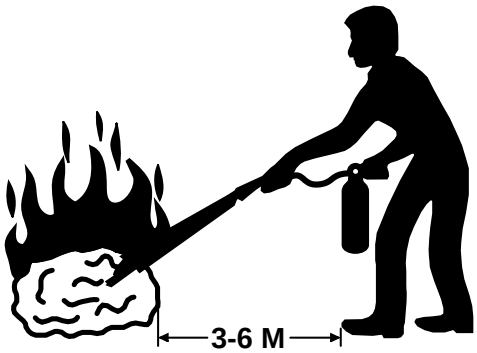
TS227 —UN—15APR13

OUCC002,0003D23 -19-26JUL13-1/1

Operate a Fire Extinguisher

John Deere recommends a 6 kg general-purpose fire extinguisher mounted next to the cab door. Check every day that the fire extinguisher is in position.

Every time fire extinguishers are used - even if only briefly - they must replaced or serviced by authorized service personnel.



H90363 —UN—05DEC07

Use of a Fire Extinguisher: The illustration shows the recommended method of extinguishing a fire. Always aim towards base of fire.

The following are basic steps for the use of a fire extinguisher:

1. Remove fire extinguisher from bracket and carry to area of fire.
2. Approach area of fire with wind to your back.
3. Pull the safety pin out of the actuating lever.
4. Hold extinguisher upright and aim hose at base of flames.
5. Squeeze lever to discharge fire extinguisher.
6. Move hose to cover the source of the fire evenly with extinguishing agent.

Inspection of Fire Extinguisher: At least once a month, ensure the following:

1. Is the fire extinguisher positioned at the designated location next to the cab door?
2. Is the fire extinguisher clearly visible, with no obstructions to proper access?
3. Are operating instructions on fire extinguisher legible and facing outward?
4. Are the safety seals broken or missing?
5. Is extinguisher full? Determine by "hefting" the extinguisher.
6. The fire extinguisher must not exhibit any physical damage, corrosion or leakage, and the nozzle must not be clogged.

When inspection of the fire extinguisher reveals a deficiency, extinguisher must be serviced by authorized service personnel or be replaced.

OUCC002,0003D22 -19-26JUL13-1/1

In Case of Fire

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:

TS227 —UN—15APR13

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 -19-22AUG13-1/1

Images Collected From Camera Devices

To enhance operation and functionality some systems can be installed on the machine that use images from camera devices.

The images from the camera device are directed at the field, crop, machine, and ancillary machines during the system's use.

These camera devices can also capture images of the operator or bystanders during system operation.

Be aware that images captured by these cameras can be:

- Shown to the operator in the cab.
- Recorded within the system for troubleshooting.
- Recorded within the system for improving system performance.

To prevent images from being captured by cameras used in these systems, refer to the operator manual for instruction on how to turn off the system.

ZX256135 —UN—09SEP15

OUCC002,0004701 -19-08SEP15-1/1

Cab

CAUTION: Do not ride or attempt to climb access area while forage harvester is moving.

Do not go over the spout to reach other side of the cab. Step down from the machine and use the relevant access ladder.

Cab Access

Always use handrails and handholds (see arrows) to access cab from left or right-hand side.

ZX207932 —UN—06OCT14

ZX207933 —UN—06OCT14

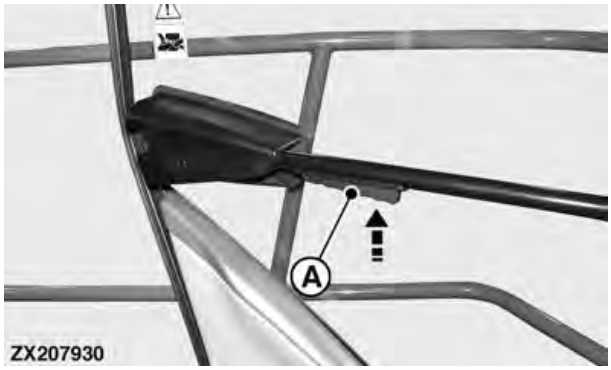
Continued on next page

OUCC002,0004C54 -19-05JUL16-1/27

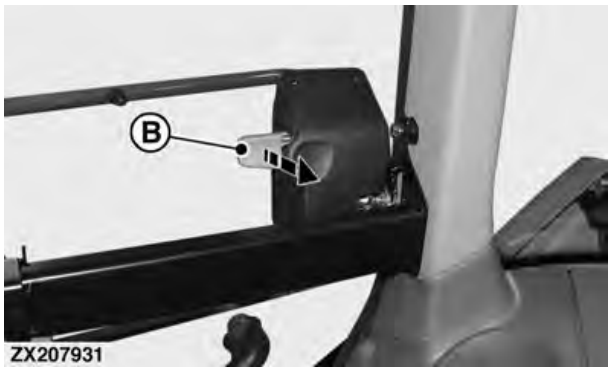
Cab Doors

- **From outside:** Unlock door by means of ignition key. Press button and open door.
- **From inside—Left-hand Side:** Pull up door opening lever (A) then push the door open.
- **From inside—Right-hand Side:** Pull door opening lever (B) then push the door open.

A—Lever **B—Lever**



ZX207930 —UN—27NOV13



ZX207931 —UN—27NOV13

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OUCC002,0004C54 -19-05JUL16-2/27

Steering Column

⚠ CAUTION: For safety reasons, sound horn before starting the engine or operating the machine.

Horn (A) allows operator to warn bystanders to stay clear.

Turn Signal Switch (B) allows operator to indicate left or right-hand turns.

⚠ CAUTION: Adjust steering wheel only when machine is stopped.

Steering Column Vertical Adjustment (C) allows operator to adjust steering column up or down.

Loosen hub and push or pull wheel to position. Slightly tighten hub to hold steering wheel in position.

Key Switch (D) has the following switch positions:

First Position	Accessories
Second Position	OFF
Third Position	Run
Fourth Position	Start

⚠ CAUTION: Adjust column only when machine is stopped. Do not step on pedal without holding steering wheel.

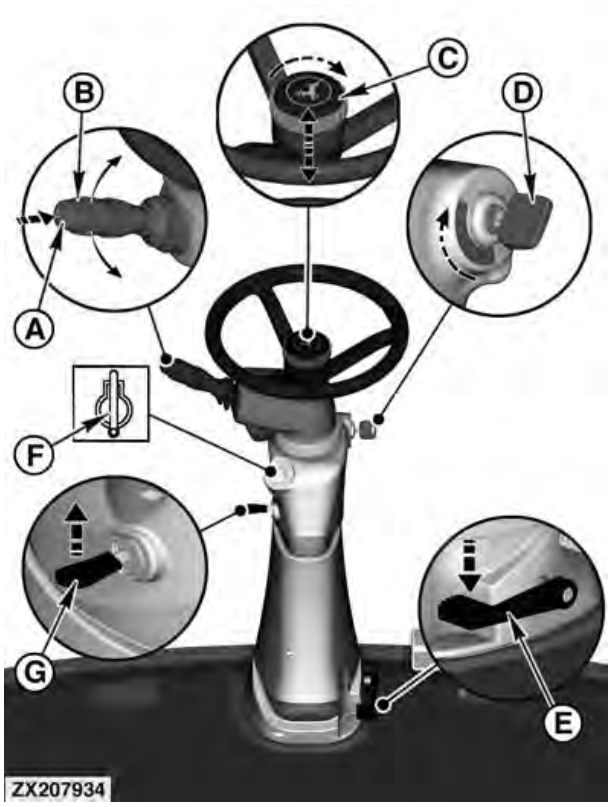
Steering Column Horizontal Adjustment (E) allows operator to move steering column with pedal to desired position.

Press pedal to release lock on steering column and move column to desired position. Column locks when pedal is released.

NOTE: Starting aid only works in "Run" or "Start" positions.

Cold Start Aid Push Button (F) (If Equipped) allows the operator to start engine in cold conditions. Push to start in cold conditions.

⚠ CAUTION: Adjust steering wheel only when machine is stopped.



ZX207934 —UN—27NOV13

A—Horn
B—Turn Signal Switch
C—Steering Column Vertical Adjustment
D—Key Switch
E—Steering Column Horizontal Adjustment
F—Starting Aid Push Button
G—Steering Wheel Tilt Adjustment

Steering Wheel Tilt Adjustment (G) allows operator to move steering column with handle to desired position.

Pull up on handle to release lock and move steering wheel to desired position. Release handle to lock into desired position.

Continued on next page

OUCC002,0004C54 -19-05JUL16-3/27

Windshield Wiper/Washer Selector Switch

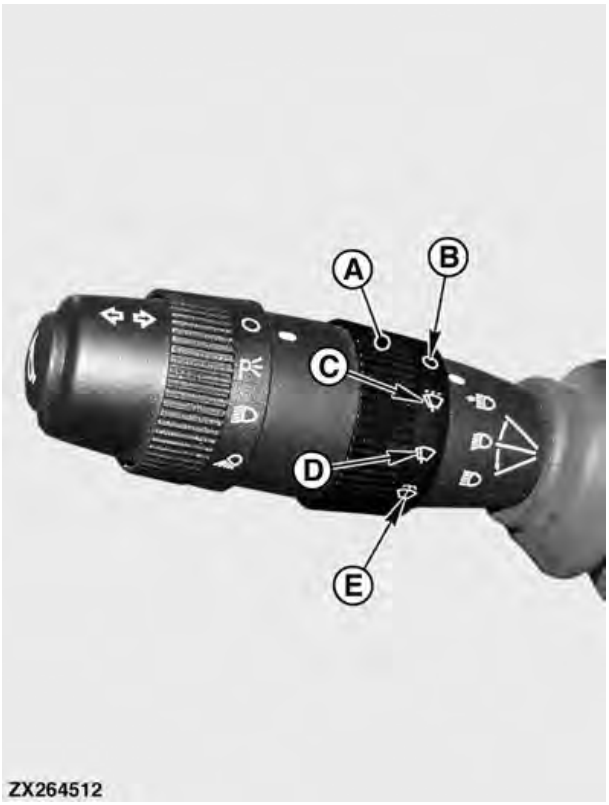
NOTE: Key switch must be ON or machine running for windshield wiper and windshield washer to operate.

Windshield wiper/washer selector switch (A) on steering column is used to control the following:

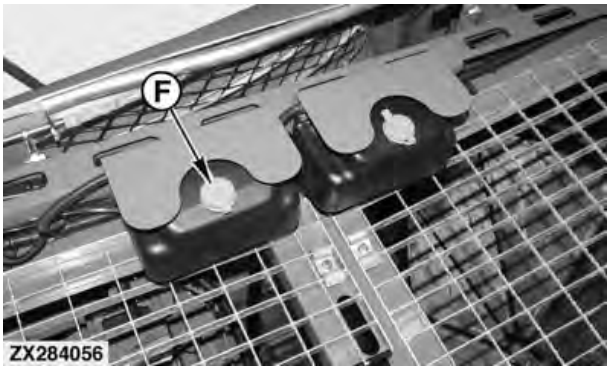
- OFF Position (B).
- Wiper Intermittent Operation (C).
- Wiper ON Position (D).
- Windshield Washer (E).

To access the windshield washer reservoir (F), step on right-hand side of cab platform.

A—Windshield Wiper/Washer Selector Switch
B—OFF Position
C—Wiper Intermittent Position
D—Wiper ON Position
E—Windshield Washer
F—Windshield Washer Reservoir



ZX264512 —UN—27NOV15



ZX284056 —UN—18JUN16

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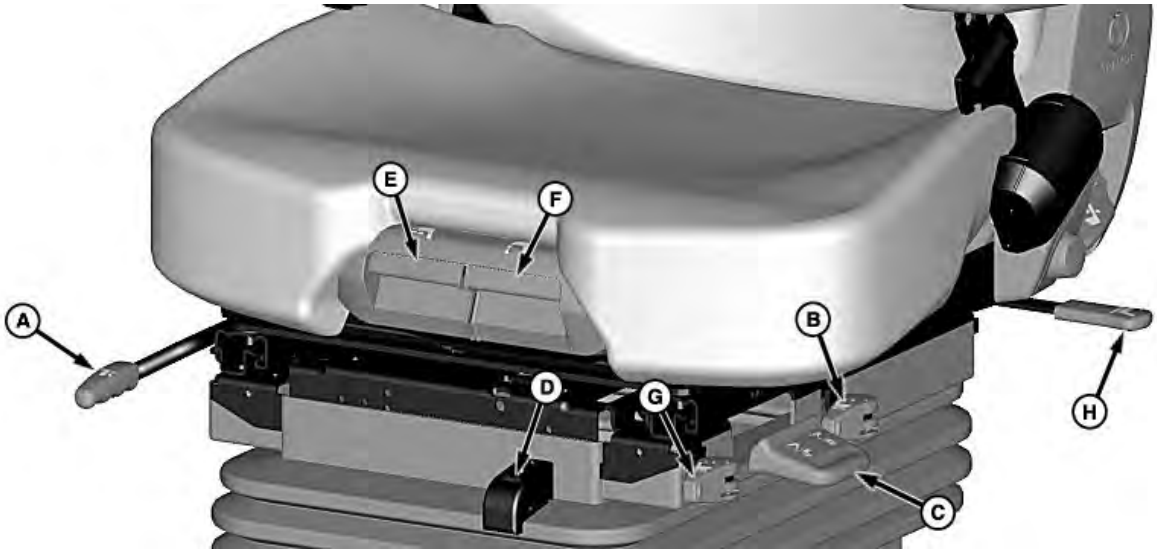
OUCC002,0004C54 -19-05JUL16-4/27



H96739 —UN—02JUN11

A—Fore-Aft Adjustment Handle
B—Vertical Shock Dampener Control
C—Weight/Height Adjustment Handle
D—Weight/Height Indicator
E—Seat Bottom Depth Adjustment Handle
F—Seat Bottom Angle Adjustment Handle
G—Fore-Aft Isolation Adjustment Handle
H—Side Isolation Adjustment Handle

ComfortCommand™ Operator's Seat (Premium Cloth Seat)

NOTE: Seat is equipped with an operator's presence system. If header and cutterhead assembly are engaged and the operator leaves the seat, the header and cutterhead drive systems disengage.

- **Fore-Aft Adjustment Handle (A)** slides seat forward or rearward for the best working position.
- **Vertical Shock Dampener Control (B)** limits amount of "upward motion" the seat suspension provides.

  NOTE: Push control forward for soft ride or move handle back for firm ride. Between these two positions is medium firmness.
- **Weight/Height Adjustment Handle (C)** raises or lowers the seat. Pull up on handle to raise seat or push down on handle to lower seat. Adjust seat until green marking is visible in weight/height indicator.

  NOTE: Suspension can be adjusted to reach limits in minimum and maximum heights, which in effect locks out the suspension system making it rigid. Suspension height control will also hit limits if adjusted too close to the extremes.

  Do not operate compressor for more than one minute when adjusting seat.

  If seat does not float or "pump" up, see your John Deere dealer.
- **Weight/Height Indicator (D)** provides a visual indicator to operator on current weight and height. Use weight/height adjustment handle to adjust seat until green marking is visible in indicator.

  NOTE: Adjust seat to operator weight and height. This allows the operator to get the most ride zone protection. Seat has a built-in buffer at the high and low end of vertical seat travel, resulting in a much smoother ride.
- **Seat Bottom Depth Adjustment Handle (E)** moves seat bottom forward or rearward for the best working position.
- **Seat Bottom Angle Adjustment Handle (F)** tilts seat cushion for the best working position.
- **Fore-Aft Isolation Adjustment Handle (G)** locks out or releases forward or rearward movements. Pull up on handle to lock or push down on handle to release.

  NOTE: Fore-Aft isolator allows shock impacts to be absorbed.
- **Side Isolation Adjustment Handle (H)** locks out or releases side-to-side movements. Push handle forward to release and pull handle rearward to lock.

  NOTE: Side isolation allows shock impacts to be absorbed.

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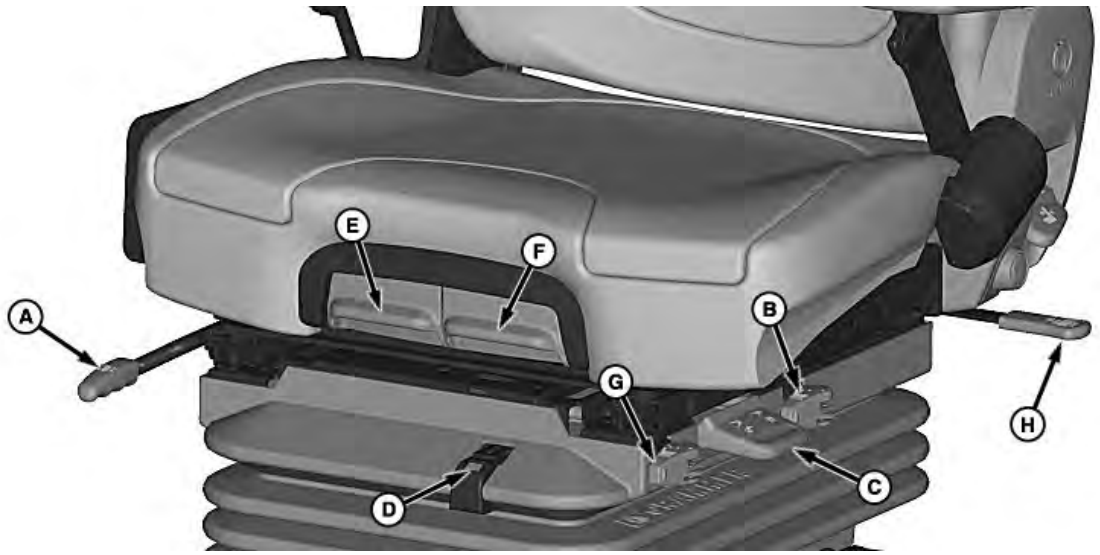
OUCC002,0004C54 -19-05JUL16-5/27



H106058 —UN—31OCT12

A—Fore-Aft Adjustment Handle
B—Vertical Shock Dampener Control
C—Weight/Height Adjustment Handle
D—Weight/Height Indicator
E—Seat Bottom Depth Adjustment Handle
F—Seat Bottom Angle Adjustment Handle
G—Fore-Aft Isolation Adjustment Handle
H—Side Isolation Adjustment Handle

ComfortCommand™ Operator's Seat (Premium Leather Seat)

NOTE: Seat is equipped with an operator's presence system. If header and cutterhead assembly are engaged and the operator leaves the seat, the header and cutterhead drive systems disengage.

- **Fore-Aft Adjustment Handle (A)** slides seat forward or rearward for the best working position.
- **Vertical Shock Dampener Control (B)** limits amount of "upward motion" the seat suspension provides.

  NOTE: Push control forward for soft ride or move handle back for firm ride. Between these two positions is medium firmness.
- **Weight/Height Adjustment Handle (C)** raises or lowers the seat. Pull up on handle to raise seat or push down on handle to lower seat. Adjust seat until green marking is visible in weight/height indicator.

  NOTE: Suspension can be adjusted to reach limits in minimum and maximum heights, which in effect locks out the suspension system making it rigid. Suspension height control will also hit limits if adjusted too close to the extremes.

  Do not operate compressor for more than one minute when adjusting seat.

  If seat does not float or "pump" up, see your John Deere dealer.
- **Weight/Height Indicator (D)** provides a visual indicator to operator on current weight and height. Use weight/height adjustment handle to adjust seat until green marking is visible in indicator.

  NOTE: Adjust seat to operator weight and height. This allows the operator to get the most ride zone protection. Seat has a built-in buffer at the high and low end of vertical seat travel, resulting in a much smoother ride.
- **Seat Bottom Depth Adjustment Handle (E)** moves seat bottom forward or rearward for the best working position.
- **Seat Bottom Angle Adjustment Handle (F)** tilts seat cushion for the best working position.
- **Fore-Aft Isolation Adjustment Handle (G)** locks out or releases forward or rearward movements. Pull up on handle to lock or push down on handle to release.

  NOTE: Fore-Aft isolator allows shock impacts to be absorbed.
- **Side Isolation Adjustment Handle (H)** locks out or releases side-to-side movements. Push handle forward to release and pull handle rearward to lock.

  NOTE: Side isolation allows shock impacts to be absorbed.

Continued on next page

OUCC002,0004C54 -19-05JUL16-6/27

Left-Hand Armrest and Seat Back (Premium Cloth/Leather Seat)

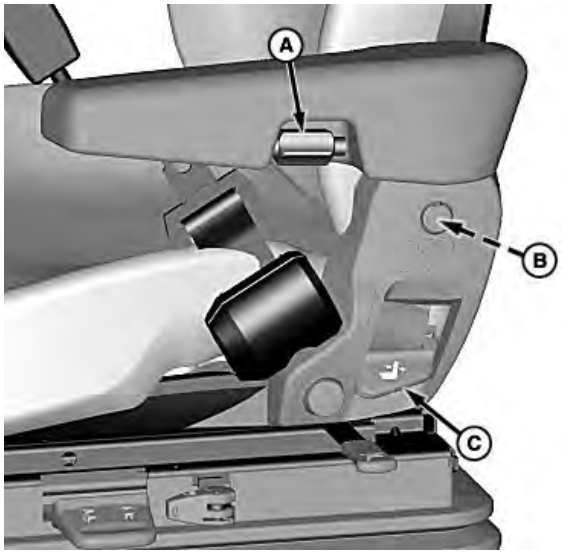
- **Armrest Angle Adjustment Knob (A)** tilts armrest up or down. Rotate knob clockwise to tilt down and counterclockwise to tilt up.
- **Armrest Height Adjustment (B)**. Remove cap from cover and loosen nut. Adjust armrest to desired position, then tighten nut to specification and reinstall cap.

Specification

Nut—Torque..... 25 N·m (221 lb.-in.)

- **Backrest Angle Adjustment Handle (C)** adjusts seat back angle. Pull up on handle and adjust backrest to desired position and release handle.

A—Armrest Angle Adjustment Knob
B—Armrest Height Adjustment
C—Backrest Angle Adjustment Handle



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OUCC002,0004C54 -19-05JUL16-7/27

Heated/Ventilated Seat Switch (Premium Cloth/Leather Seat)

NOTE: Key switch must be ON or machine must be running for heated/ventilated seat to operate.

Heated/ventilated seat switch (A) located on left-hand side of backrest turns seat heater or seat ventilation ON/OFF.

- Switch in top position turns seat heater ON (seat ventilation OFF).
- Switch in middle position turns seat heater and seat ventilation OFF.
- Switch in bottom position turns seat ventilation ON (seat heater OFF).

A—Heated/Ventilated Seat Switch

H106063 —UN—31OCT12

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OUCC002,0004C54 -19-05JUL16-8/27

Lumbar Support Switch (Premium Leather Seat)

NOTE: Key switch must be ON or machine must be running for lumbar support to operate.

Lumbar support provides operator with added comfort to the upper and lower backrest areas. Lumbar support switches (A and B) located on left-hand side of backrest increase or decrease lumbar support curvature.

- Top Lumbar Support Switch - press plus (+) or minus (-) symbol to adjust upper lumbar support curvature.
- Bottom Lumbar Support Switch - press plus (+) or minus (-) symbol to adjust lower lumbar support curvature.

A—Lumbar Support Switch **B—Lumbar Support Switch**

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OUCC002,0004C54 -19-05JUL16-9/27

Instructional Seat

Seat back (A) and seat bottom (B) can be raised or lowered to desired operating position.

A—Seat Back **B—Seat Bottom**

H96631 —UN—26MAY10

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OUCC002,0004C54 -19-05JUL16-10/27

Seat Belts

CAUTION: Inspect seat belts and mounting hardware on your machine at least once a year. If 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 must be replaced immediately. For your safety, replace the belt system only with replacement parts approved for your machine, see your John Deere dealer.

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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.

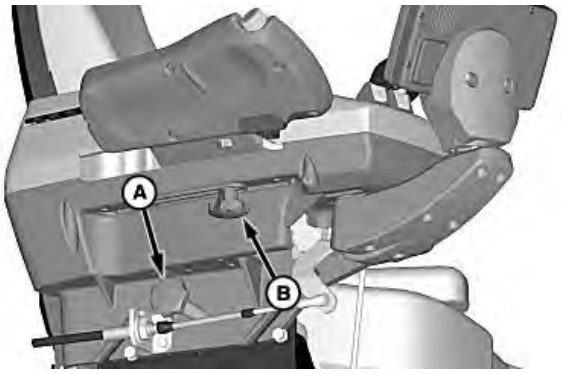
OUCC002,0004C54 -19-05JUL16-11/27

CommandTouch™ Armrest and CommandARM™ Control Consoles

Loosen knob (A) and slide CommandTouch™ armrest console up/forward or down/back in slots on outer plate. Tighten knob to lock armrest into position.

Loosen knob (B) and slide CommandARM™ control console forward-rearward. Tighten knob to lock control console into place.

A—Knob **B—Knob**



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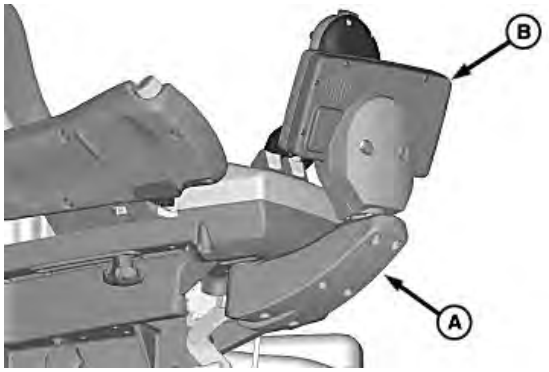
CommandCenter™ Display

Rotate arm (A) left/right to desired operating position.

Rotate display (B) left/right or forward/rearward to desired operating position.

A—Arm **B—Display**



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Overhead Control Panel

- **Microphone (Optional):**
  Use the microphone (A) to communicate hands-free using a Bluetooth® cell phone (Bluetooth® must be enabled). See **Phone Interface (Option)** in this section to set up Bluetooth® cell phone.

  NOTE: Key switch must be ON or machine must be running for microphone to work.

- **Mirror Heater Switch (Optional):**
  - Press bottom part of switch (B) to turn mirror heater off.
  - Press top part of switch (B) to turn mirror heater on.

  NOTE: Key switch must be ON or machine must be running to heat mirrors.

- **Mirror Control Switch (Optional):**
  - Mirror control switch (C) selects the left-hand or right-hand mirror for further adjustment.
  - Mirror adjust switch (D) moves selected mirror up or down and left or right.

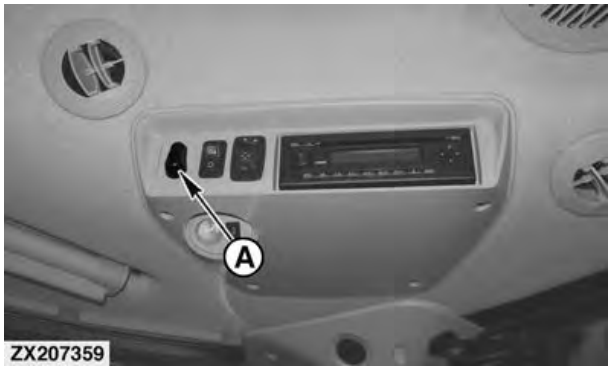
  NOTE: Key switch must be ON or machine must be running to adjust mirrors.

- **Radio Types (Optional):**
  Different radios (E) are available from your John Deere dealer. See **Audio Interface (Option)** in this section to operate radio.

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

Main Features	Radio	Connection of external devices	CD	CD, MP3/ WMA	USB	Bluetooth®
Deluxe Radio System with CD	X	X	X	X		
Premium Radio System	X	X	X	X	X	X

A—Microphone
B—Mirror Heater Switch
C—Mirror Control Switch
D—Mirror Adjust Switch
E—Radio Types



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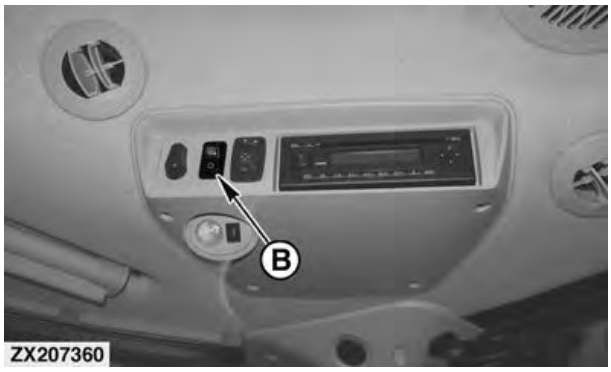

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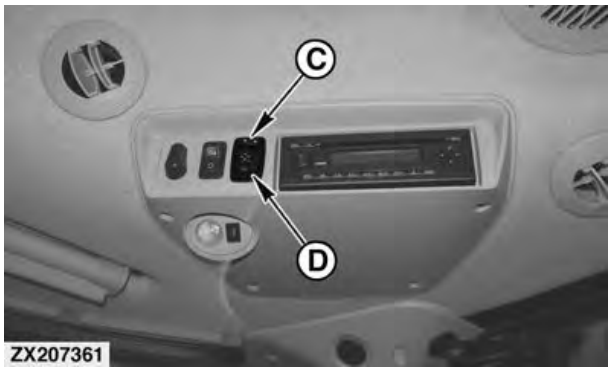

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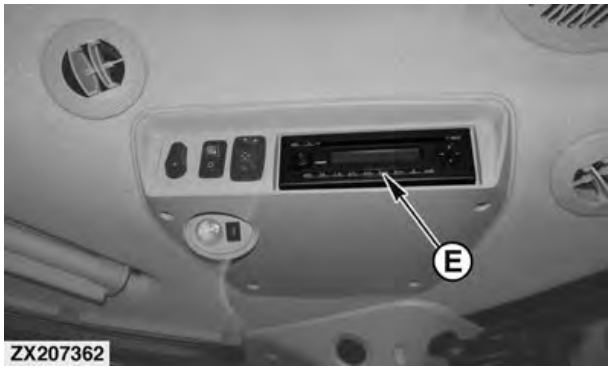

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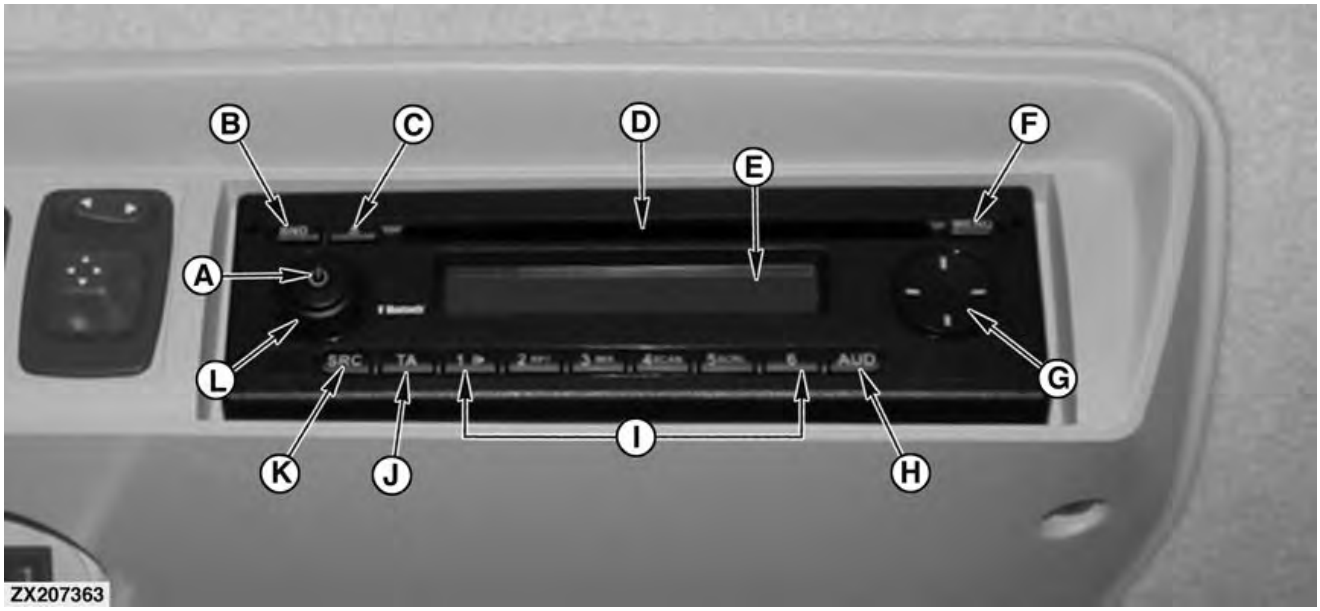

ZX207363 —UN—22NOV13

A—Power/Mute Key
B—Band (BND) Key
C—CD Eject Key
D—CD Slot
E—Radio Display
F—Menu Key
G—Multi-Function Rocker Switch
H—Audio (AUD) Key
I— Key Block (1—6)
J— Traffic Announcements (TA) Key
K—SRC Key
L—Volume Control

Radio Controls:

CAUTION: Road safety has top priority. Operate the radio system only if traffic condition and driving situation allow you to do so. Familiarize yourself with the radio before driving the vehicle. Select an appropriate volume when driving.

CAUTION: Do not become distracted by the radio when working. Turn the radio off when procedures require full attention.

CAUTION: Adjust the volume of the radio correctly to be able to hear acoustic warning signals of police, fire department and ambulance on time.

CAUTION: It may result in hearing damage if the radio volume is set too loud.

Item	Designation	Function
A	Power/mute key	Press briefly to turn the radio on. Press briefly during operation to mute the radio. Press and hold to turn the radio off.
B	BND	Press briefly to select memory level or wave band. Press and hold to start the Travelstore function.
C	CD eject key	
D	CD slot	
E	Display	Change the display.
F	Menu key	Access the menus for the basic settings.
G	Multi-function rocker switch	Navigate within the display and switch functions.
H	AUD key	Press briefly to access the audio menu for adjustment of bass, middle, treble, balance and loudness. Press and hold to restore factory sound settings (treble and bass for the currently used audio source only).
I	1 - 6 key block	Station keys
J	TA key	Switch back from user and audio menus to current source. Exit the radio scan functions. Turn the priority for traffic announcements on/off. Cancel a traffic announcement while in process (Europe only).

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OUCC002,0004C54 -19-05JUL16-15/27

Item	Designation	Function
K	SRC key	Source selection between radio and AUX (depending on model also CD, USB and XM) provided that a medium is inserted or connected and turned on.
L	Volume control	

OUCC002,0004C54 -19-05JUL16-16/27

Rear-View Mirror and Outside Mirrors

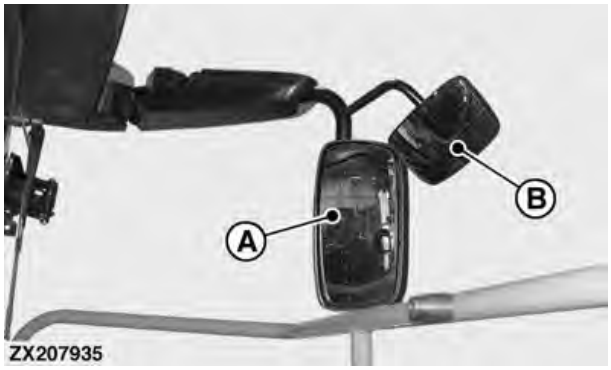
Machine is equipped with:

- Two outside mirrors (A) that can be either electrically or manually controlled (see **Overhead Control Panel** in this section).

  NOTE: In certain countries, an additional outside mirror (B) is required on the right-hand side of the machine.

- One rear view mirror (C) in cab.

A—Outside Mirror
B—Additional Outside Mirror
C—Rear-View Mirror



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ZX207936 —UN—27NOV13

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OUCC002,0004C54 -19-05JUL16-17/27

Cab Roof

Side louvers (A) can be oriented to direct air flow as desired.

Louvers (B) direct air flow only onto the windshield to accelerate defogging.

The machine can be equipped with front (C) and rear (D) pull-down sunshades.

A—Side Louver
B—Windshield Louver
C—Front Pull-Down Sunshade
D—Rear Pull-Down Sunshade

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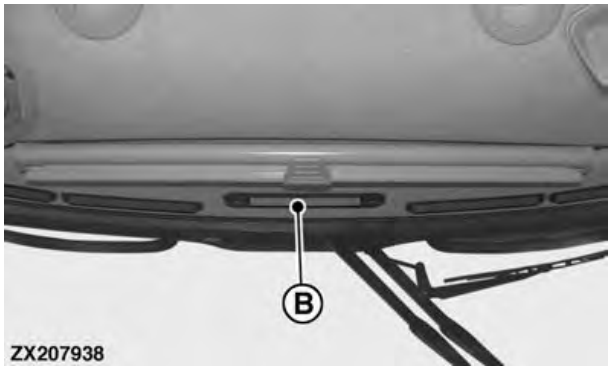

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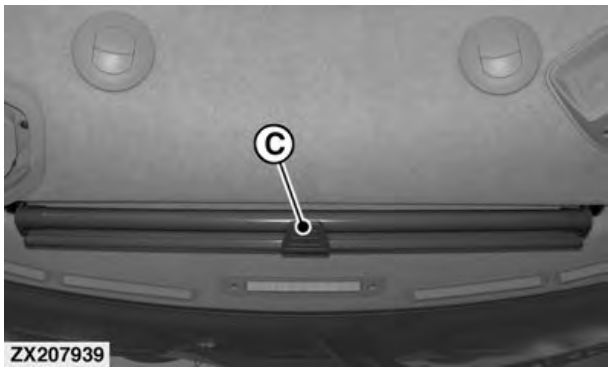

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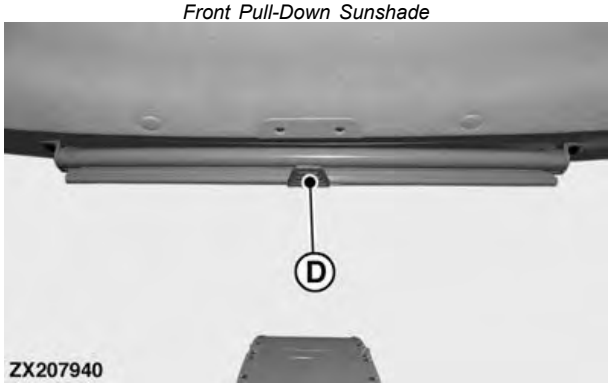
Front Pull-Down Sunshade



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Rear Pull-Down Sunshade

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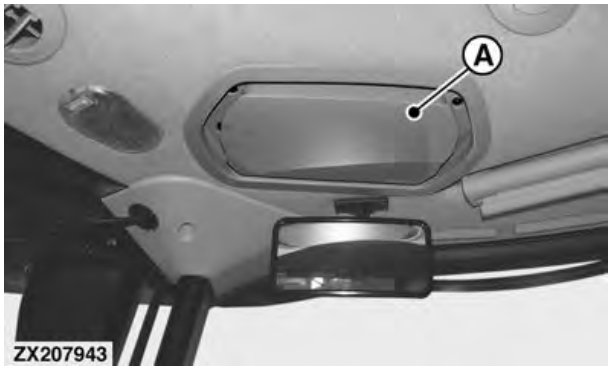
Cab Roof—Continued

Recirculation air filter (A) can be replaced as required (see **Replace Recirculation Air Filter** in Lubrication and Maintenance section).

Cab is prepared for two loudspeakers (B).

Use hook (C) to store personal wears.

A—Recirculation Air Filter
B—Loudspeaker
C—Hook



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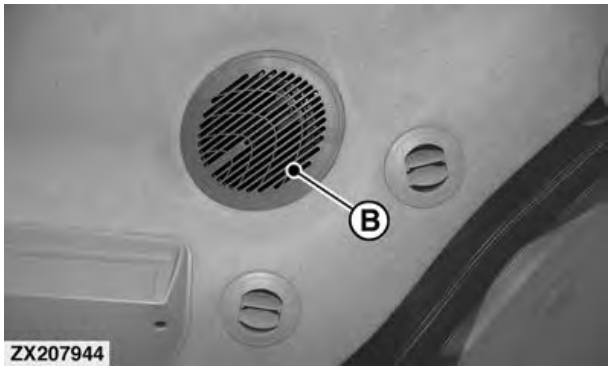

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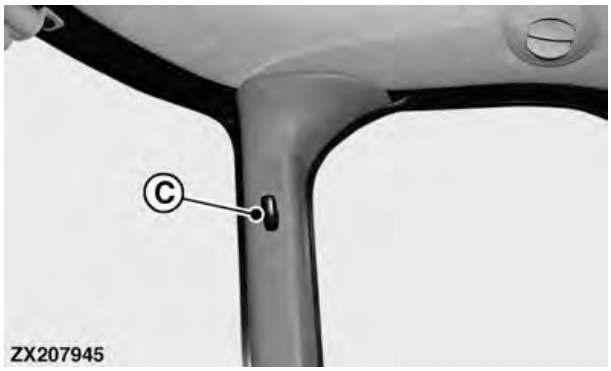

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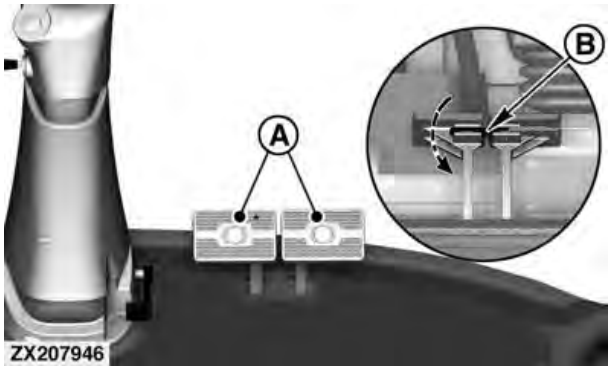
Brake Pedals

Leave brake pedals (A) unlocked for field use and lock (B) brake pedals together when transporting.

A—Brake Pedals
B—Lock (Transport)



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Cab Interior Lights

Dome light (A) provides overhead lighting for use at night or in low light conditions.

Dome light switch (B) is a three position switch:

- ON (left)
- OFF (center)
- Automatic (right) (open cab door)

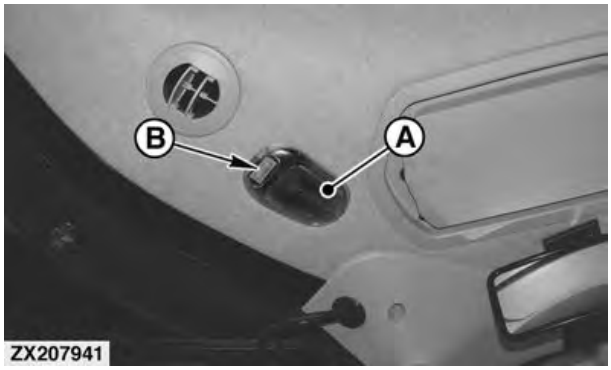
Map light (C) provides overhead lighting for use at night or in low light conditions.

NOTE: Adjust map light (C) as needed.

Map light switch (D) is a two-position switch:

- ON
- OFF

A—Dome Light
B—Light Switch
C—Map Light
D—Light Switch



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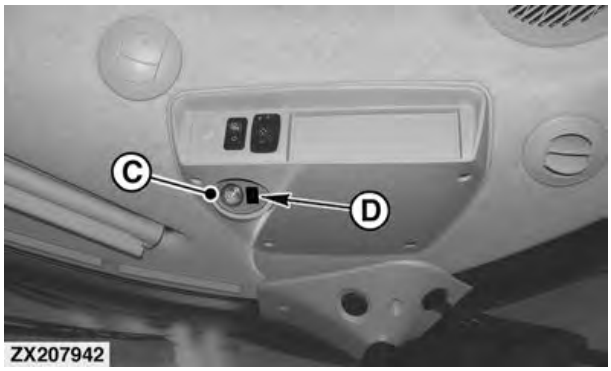

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Power Outlet Sockets

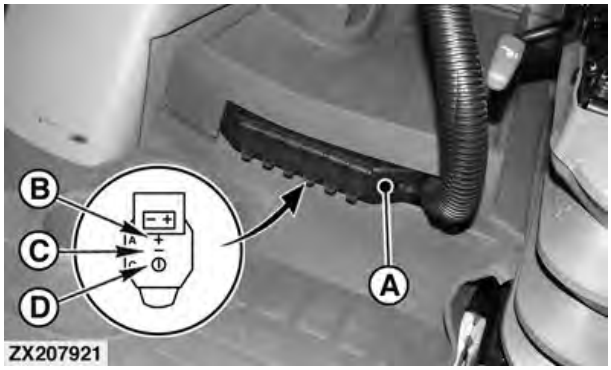
- **Power Outlet Socket Strip:**

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

  Power outlet socket strip (A) with six electrical outlets is located on the floor on the right-hand side of the operator's seat. These outlets provide switched or unswitched power.
  - Spade terminal (B) is unswitched positive power.
  - Spade terminal (C) is ground.
  - Spade terminal (D) is switched positive power (key switch ON).

- **12 V Sockets:** An electrical consumer with a requirement for MAX 120 W can be connected to the 12 V socket (E).

A—Power Outlet Socket Strip
B—Spade Terminal (Unswitched Positive Power)
C—Spade Terminal (Ground)
D—Spade Terminal (Switched Positive Power)
E—12 V Power Outlet



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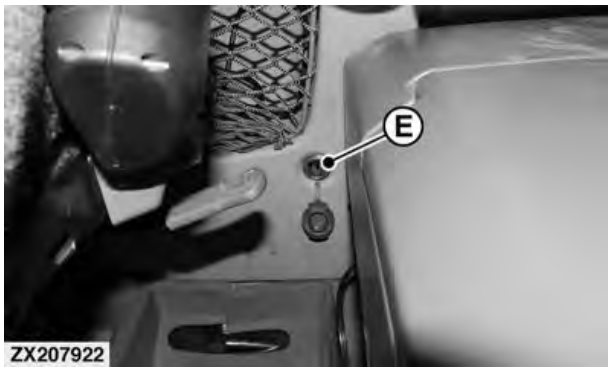

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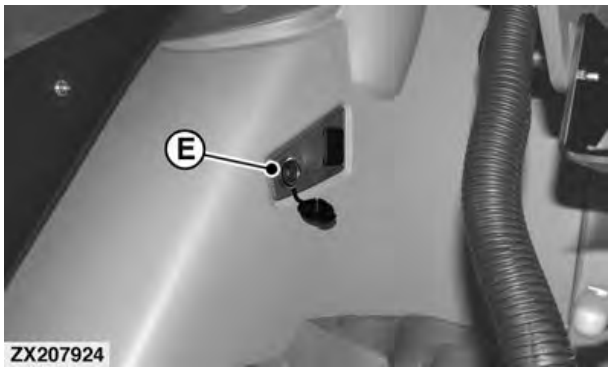

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OUCC002,0004C54 -19-05JUL16-22/27

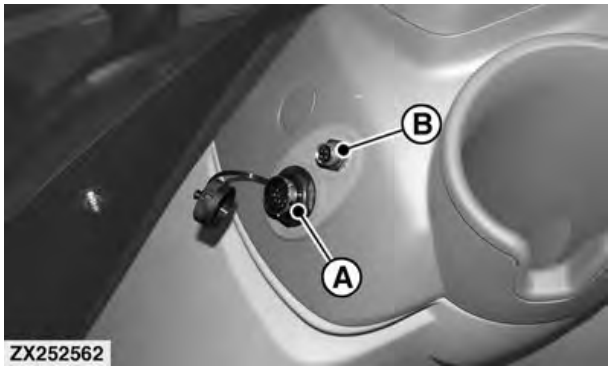
- **GreenStar™ 3 2630 Display and Video Signal Sockets:** For connection of display or video, refer to **GreenStar™ 3 2630 Display** in this section.
- **Service ADVISOR™ Diagnostic Socket:** This socket (C) is suitable only for service and diagnostic purposes. Do not connect any other equipment.

  NOTE: Remove bottle holder to access socket (C).

  For more information, contact your John Deere dealer.
- **USB Port:** USB port (D) can be used for data transfer.

  IMPORTANT: The USB port (E) is suitable only for service and diagnostic. Do not connect any other equipment.

A—GreenStar™ 3 2630 Display Socket
B—Video Signal Socket
C—Service ADVISOR™ Diagnostic Socket
D—USB Port
E—USB Port



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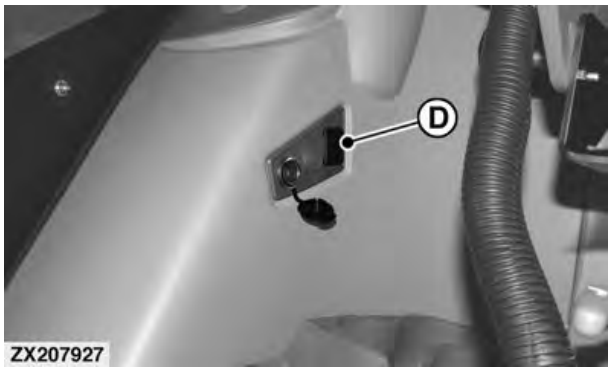

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Refrigerator (If Equipped)

NOTE: Refrigerator operates only when key switch is ON and MUST remain plugged into the 12-volt socket (E) to keep food or beverages cold.

Raise seat bottom (A) to open refrigerator top cover (B).

Refrigerator front cover (C) can also be opened without raising seat bottom.

Turn temperature control dial (D) clockwise to decrease temperature or counterclockwise to increase temperature.

A—Seat Bottom
B—Top Cover
C—Front Cover
D—Temperature Control Dial
E—12 V Power Outlet

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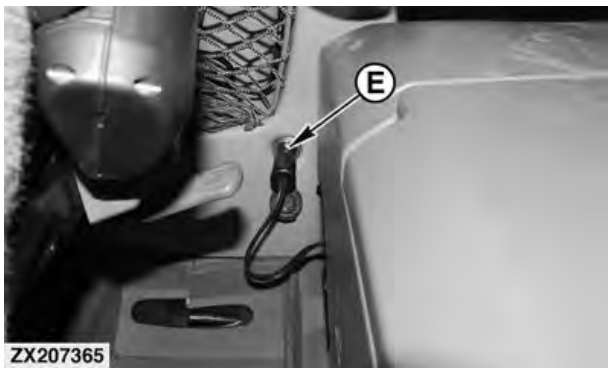

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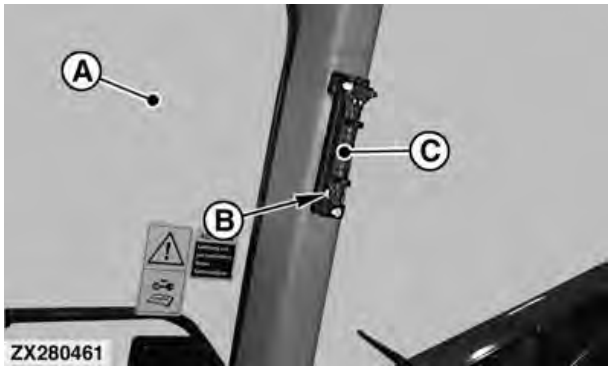
OUCC002,0004C54 -19-05JUL16-24/27

The right-hand cab window (A) may be opened and used as an emergency exit. Seat belt may be cut with knife (B) of hammer (C) to exit cab in an emergency.

A—Window
B—Knife
C—Hammer



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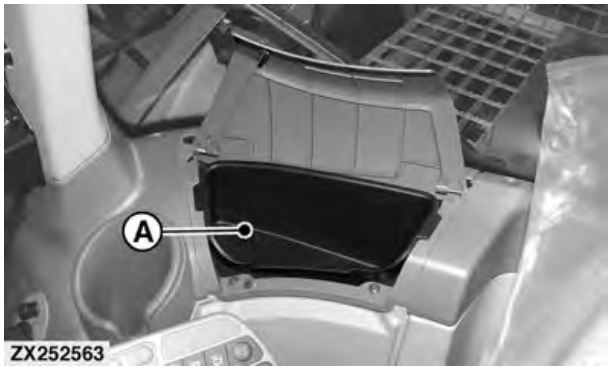
Storage Locations

NOTE: The tray in storage location (A) and (C) is removable and washable. Storage location (C) can be used for Ag Management Solutions (AMS) printer kit installation. Contact your John Deere dealer.

A—Storage Location—Right-hand Rear Side
B—Storage Location—Behind Operator Seat
C—Storage Location—Behind Instructional Seat



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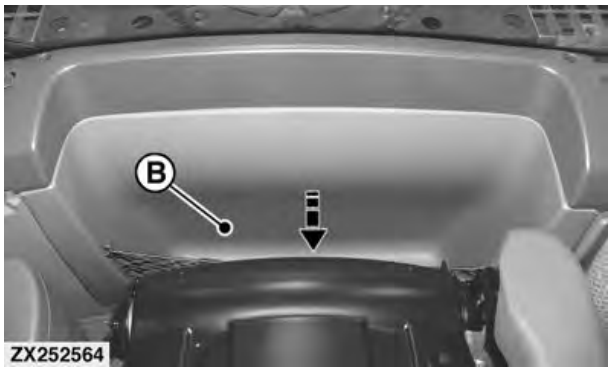

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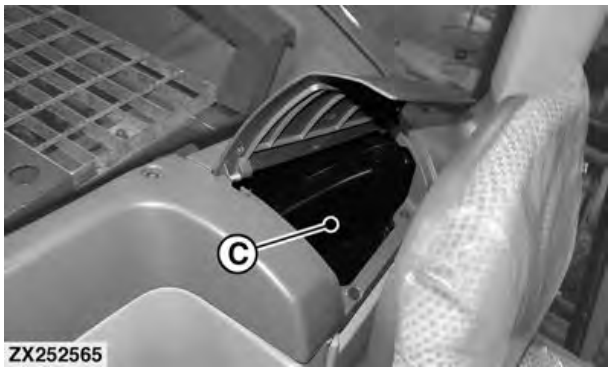

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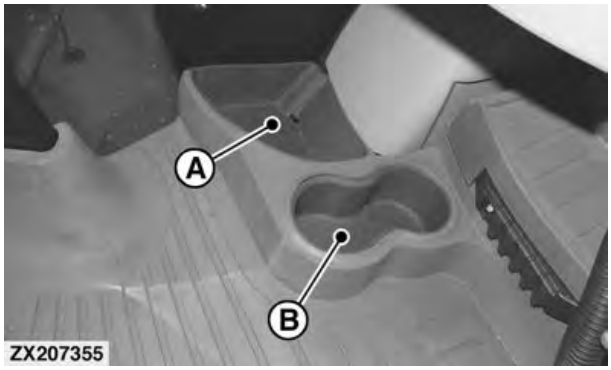
OUCC002,0004C54 -19-05JUL16-26/27

Storage Locations—Continued

A—Storage Location—Right-hand Side
B—Storage Location—Bottle Holders
C—Storage Location—Beneath Armrest Lid



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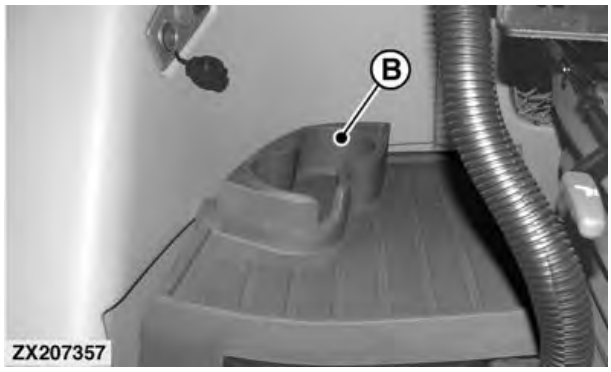

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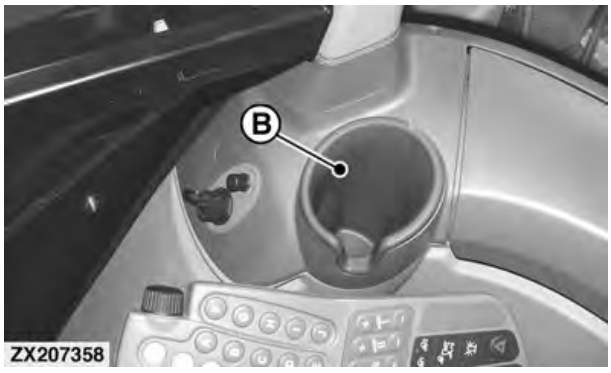

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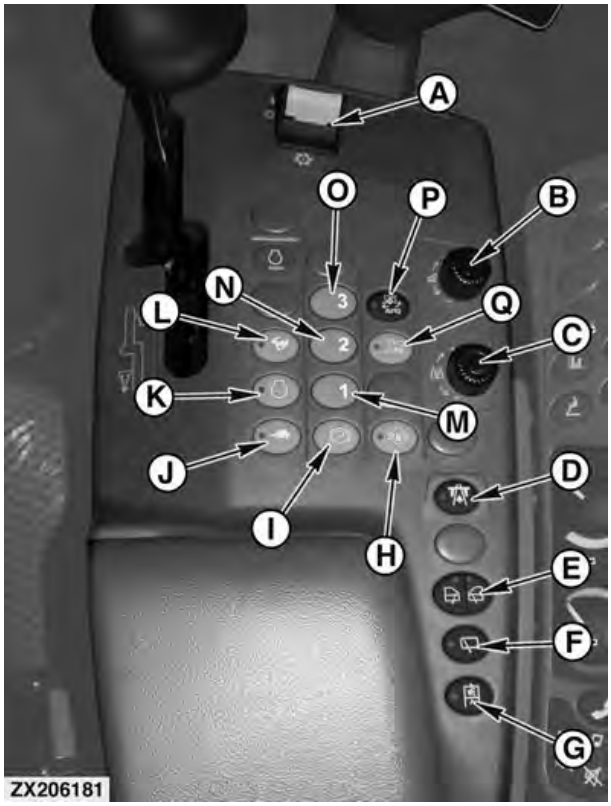
OUCC002,0004C54 -19-05JUL16-27/27

CommandTouch™ Armrest Console

NOTE: Not every switch or button is available for every machine model.

Before operating machine, become familiar with switches, buttons and controls.

A—Main Clutch Switch
B—Header Height Control Dial
C—Row Guidance Offset Control Dial
D—Road Safety Mode Button
E—Left and Right Wiper Button
F—Rear Wiper Button
G—Air Compressor Button
H—Differential Lock Button[1]
I— Park Brake Button
J— Low Idle Button
K—Engine Speed Set Button
L— Engine Speed Button (High)
M—Gear 1 Button[2]
N—Gear 2 Button[2]
O—Gear 3 Button[2]
P—Traction Control Button
Q—Four-Wheel Drive Button



ZX206181 —UN—16OCT13

[1]*ProDrive™ Transmission Only*
[2]*PBST Transmission Only*

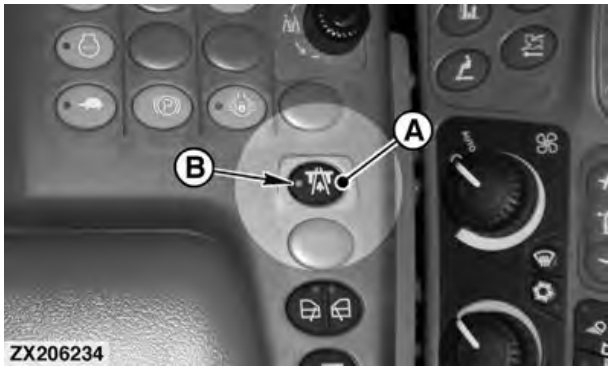
OUCC002,0004C96 -19-16JUN16-1/13

Road Safety Mode Button:

IMPORTANT: For road travel, road safety mode button must be in road mode position. Before driving on public roads, also move header and spout to transport position.

When road safety mode button (A) is pressed, indicator light (B) turns ON indicating button is in road mode. Pressing the button disengages all the hydraulic functions with the exception of the steering.

To re-engage the hydraulic functions for field operation, press road safety mode button (A) for **2 seconds**; indicator light (B) turns OFF, indicating the button is in the field mode.



ZX206234 —UN—22NOV13

A—Road Safety Mode Button **B—Indicator Light**

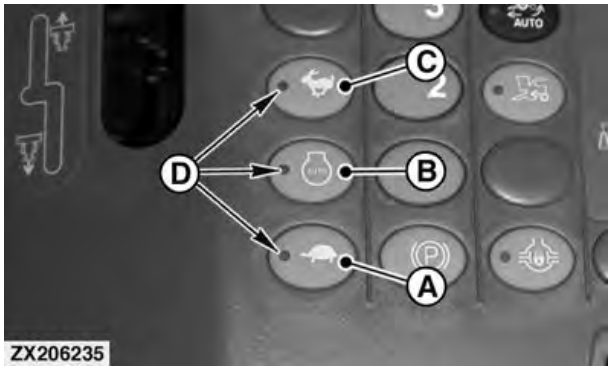
Continued on next page

OUCC002,0004C96 -19-16JUN16-2/13

Engine Speed Buttons:

Engine speed buttons are used to manage the engine speed during field operation, road travel, or to activate/deactivate the engine speed management—field mode (see **Engine And Aftertreatment Page** in this section).

- Low idle button (A) is for low speed.
  - With MANUAL field mode selected: Press and hold low idle button (A) for two seconds to set the engine to the lowest idle speed (900 rpm).
  - With MANUAL field mode selected: Press low idle button (A) successively to decrease the engine speed in steps of 50 rpm.
  - With HEADLAND or ECONOMY field mode selected: Press low idle button (A) once to deactivate the selected field mode and enter the MANUAL mode instead.
- On machines with ProDrive™ transmission, the engine speed set button (B) activates or deactivates the engine speed management—field mode (see **Engine and Aftertreatment Page** in this section).
- Button (C) is for high idle speed.
  - With MANUAL field mode selected: Press and hold engine speed button (C) for two seconds to set the engine to the highest idle speed (2200 rpm).
  - With MANUAL field mode selected: Press engine speed button (C) successively to increase the engine speed in steps of 50 rpm.



ZX206235 —UN—22NOV13

A—Low Idle Button **C—Engine Speed Button (High)**
B—Engine Speed Set Button **D—Indicator Lights**

  - With HEADLAND or ECONOMY field mode selected: Press engine speed button (C) once to deactivate the selected field mode and enter the MANUAL mode instead.

Indicator lights (D) indicate which button is currently selected.

OUCC002,0004C96 -19-16JUN16-3/13

Main Clutch Switch:

Main clutch switch (A) allows cutterhead assembly to be turned ON or OFF. Push down and forward to lock switch in ON position or pull back on switch to turn OFF.

System Requirements:
- Road safety mode button in field mode.
- Feed roll housing closed.
- Operator is on the seat.
- Engine running at a speed below 1700 rpm.
- Sharpening stone in home position.

IMPORTANT: If operator leaves seat after engagement, cutterhead assembly is disengaged and stops rotating. To re-engage, sit squarely on operator seat and turn main clutch switch OFF and back ON.

Cutterhead assembly can be shut OFF with quick stop button (B). See **Multi-Function Lever** in this section.

A—Main Clutch Switch **B—Quick Stop Button**

ZX206232 —UN—22NOV13

ZX206233 —UN—22NOV13

Continued on next page

OUCC002,0004C96 -19-16JUN16-4/13

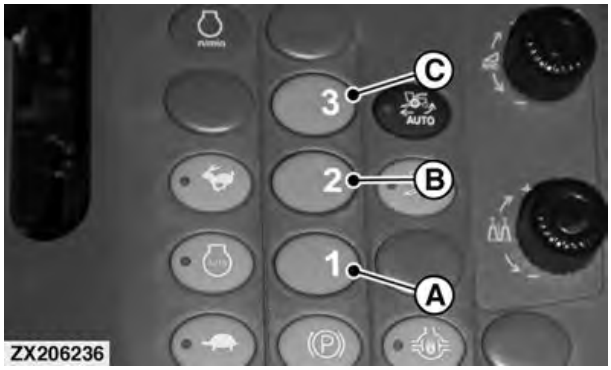
Gear Buttons (PBST Only):

IMPORTANT: Machine must be stopped and multi-function lever moved to neutral position before selecting desired gear.

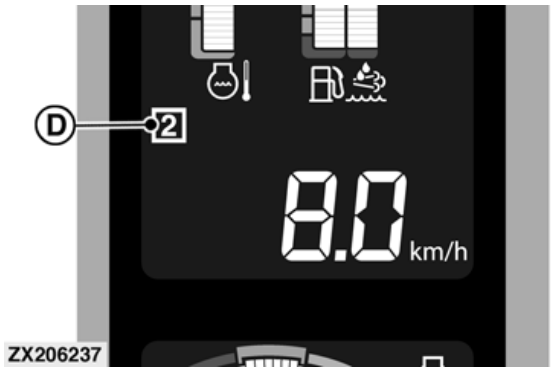
NOTE: Tire sizes and country code regulations limit maximum ground speed.

Gear buttons (A, B, or C) are used to control transmission ground speed electronically. Press desired button to increase or decrease machine ground speed. Transmission gear indicator (D) shows which button is pressed and flashes until transmission electronically shifts (see **Primary Display Unit (PDU)** in this section).

A—First Gear Button
B—Second Gear Button
C—Third Gear Button
D—Gear Indicator



ZX206236 —UN—22NOV13



ZX206237 —UN—22NOV13

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OUCC002,0004C96 -19-16JUN16-5/13

Park Brake Button:

IMPORTANT: System is in manual mode every time the engine is started. Park brake indicator (B) illuminates indicating park brake is engaged. Press park brake button (A) once to enter automatic mode (see Primary Display Unit (PDU) in this section).

The park brake prevents machine movement. Use park brake button (A) to change between manual and automatic modes and to engage/disengage park brake in manual mode.

Automatic Mode:

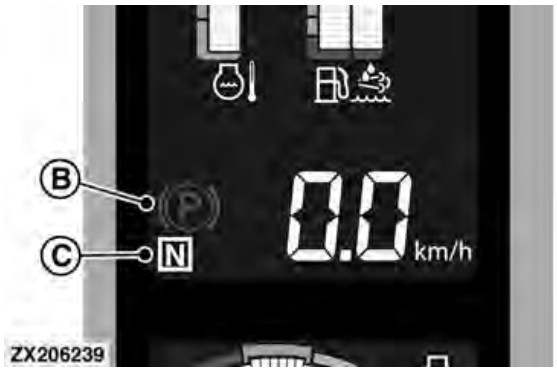
- Press park brake button (A) **once** to set park brake to automatic mode.
  - If multi-function lever is in neutral position (C) and speed is less than 1.5 km/h (1 mph), park brake is applied. If multi-function lever is moved out of neutral position, park brake is released.

NOTE: Park brake engages each time multi-function lever is set to neutral position or if engine is shut OFF.

Manual Engagement (Default Mode):

- Press park brake button (A) **twice** to set park brake to manual mode.
  - If multi-function lever is in neutral position (C) and speed is less than 1.5 km/h (1 mph), park brake is applied. If multi-function lever is moved out of neutral position or speed is greater than 1.5 km/h (1 mph) an alarm sounds.

ZX206238 —UN—22NOV13



ZX206239 —UN—22NOV13

A—Park Brake Button
B—Park Brake Indicator
C—Neutral Indicator

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OUCC002,0004C96 -19-16JUN16-6/13

Differential Lock Button (ProDrive™ Machines Only):

NOTE: Differential disengages when brake pedals are pressed.

Differential lock button (A) engages/disengages the differential lock to resolve traction problems in the field. Indicator light (B) and differential lock icon (C) turn ON when system is active.

The differential lock can be engaged/disengaged manually or set to automatic mode (default mode).

NOTE: Automatic mode cannot be selected when the road safety mode button is in road mode.

NOTE: The differential lock can be manually engaged or disengaged when the road safety mode button is in road or field mode.

Automatic mode:

While in this mode, the system engages the differential lock if the speed difference between right and left front wheel is above 10% and at least 3 km/h (1.9 mph).

If differential lock is activated in automatic mode the outer ring symbol (D) lights up and differential lock symbol (E) flashes.

NOTE: The system disengages the differential lock if the ground speed is above 10 km/h (6.2 mph) or if the steering angle of rear wheels is above 10°. The differential lock is automatically re-engaged when engagement conditions are met again.

Manual engagement/disengagement:

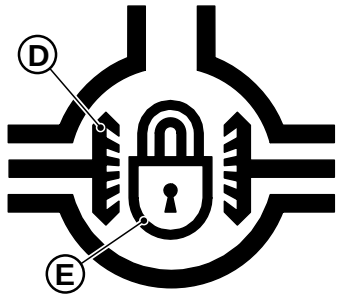
The differential lock can be manually engaged only if the ground speed is below 10 km/h (6.2 mph).

Outer ring symbol (D) and lock symbol (E) light up as soon as differential lock is engaged manually.

NOTE: If ground speed raises above 10 km/h (6.2 mph) or if the steering angle of rear wheels is above 10°, the differential is automatically unlocked. To re-engage the differential lock, press button (A) twice again.

ZX206240 —UN—18DEC13

ZX206241 —UN—22NOV13



ZX206242

ZX206242 —UN—22NOV13

A—Differential Lock Button
B—Indicator Light
C—Differential Lock Icon
D—Outer Ring Symbol
E—Lock Symbol

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OUCC002,0004C96 -19-16JUN16-7/13

Four-Wheel Drive Button:

IMPORTANT: With four-wheel drive switched ON, the travel speed decreases.

On PBST Machines: Do not switch four-wheel drive ON or OFF while driving the machine in third gear at maximum travel speed.

Move multi-function lever slightly out of neutral position before switching four-wheel drive ON or OFF.

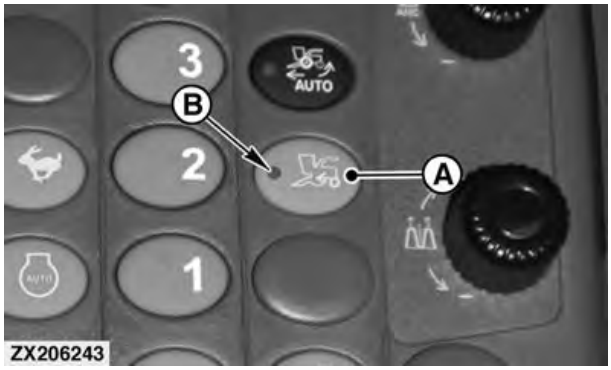
On PBST Machines: In conditions that cause high pressure in hydrostatic system and machine slows or stops, move multi-function lever to neutral and shift transmission to a lower gear.

The four-wheel drive system is designed for use in poor traction conditions or to improve steering control. It is not necessary to engage four-wheel drive for driving machine, except in soft or muddy conditions.

NOTE: The four-wheel drive can also be engaged using a configurable switch on the back of multi-function lever (see Multi-Function Lever and Operator Settings Page in this section).

Press four-wheel drive button (A) once to activate the four-wheel drive system. Indicator light (B) and four-wheel drive indicator (C) turn ON when system is active.

- **PBST Machines:** In extremely muddy conditions, it can be necessary to apply both brakes momentarily to increase hydrostatic pressure and oil flow to rear wheels.
- **ProDrive™ Machines:** If four-wheel drive is engaged, the traction control function (anti-slippage regulation, ASR) is automatically engaged (see **Traction Control Button (ProDrive™ Transmission Only)** in this section and **Drive The Machine** in Field Operation section).



ZX206243 —UN—22NOV13

ZX206244 —UN—22NOV13

A—Four-Wheel Drive Button
B—Indicator Light
C—Four-Wheel Drive Indicator

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OUCC002,0004C96 -19-16JUN16-8/13

Traction Control Button (ProDrive™ Machines Only):

The traction control system (anti-slippage regulation) is designed for use in poor traction conditions.

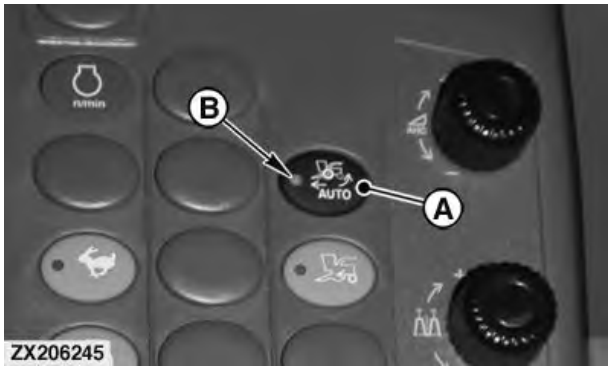
System Requirements:

Engaging traction control is only possible with:
- Engine running
- Road safety mode button in field mode
- Four-wheel drive engaged

Press traction control button (A) once to activate the anti-slippage regulation. Indicator light (B) and traction control indicator (C) turn ON when system is active.

NOTE: Disengaging the traction control system deactivates the four-wheel drive if it has been previously engaged.

A—Traction Control Button
B—Indicator Light
C—Traction Control Indicator



ZX206245 —UN—18DEC13

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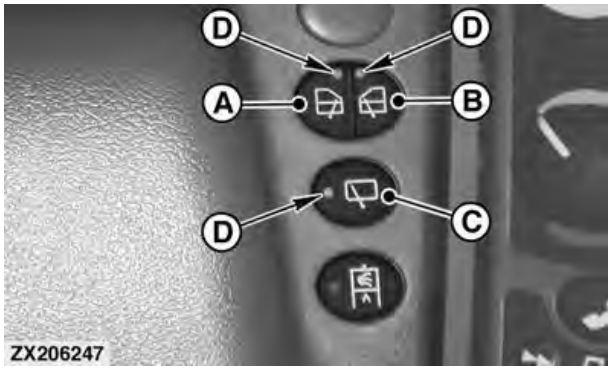
OUCC002,0004C96 -19-16JUN16-9/13

Left, Right, and Rear Wiper Buttons (if equipped):

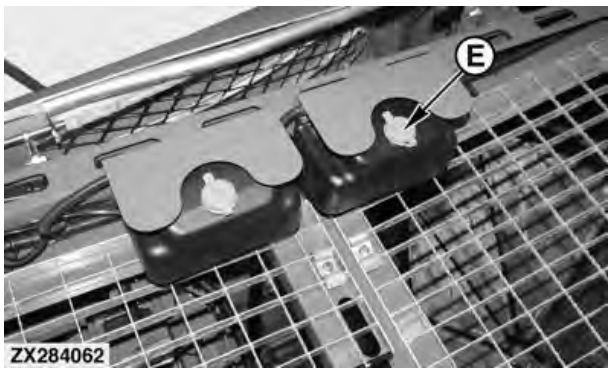
- Press the wiper button (A, B, or C) once to activate the relevant wiper. Indicator light (D) turns ON when wiper is active.
  The wiper interval is adjustable. To setup the wiper interval see **Wiper Interval Page** in this section.
- Press and hold the wiper button (A, B, or C) to activate the relevant wiper washer.

To access the left, right, and rear window washer reservoir (E), step on right-hand side of cab platform.

A—Left Wiper Button
B—Right Wiper Button
C—Rear Wiper Button
D—Indicator Light
E—Window Washer Reservoir



ZX206247 —UN—22NOV13



ZX284062 —UN—18JUN16

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OUCC002,0004C96 -19-16JUN16-10/13

Air Compressor Button (if equipped):

System Requirements:

Activating air compressor control valve is only possible if the following conditions are met:

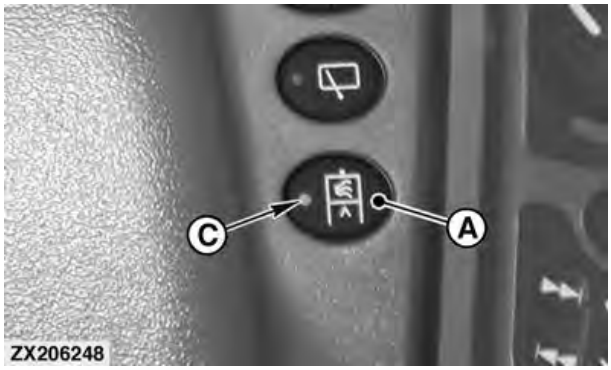
- Engine running at low idle
- Road safety mode button in road mode
- Park brake engaged
- Multi-function lever in neutral position

Press the air compressor button (A) once to activate the air compressor control valve (B). Indicator light (C) turns ON when air compressor is ready to use (see **Air Compressor (Option)** in Field Operation section).

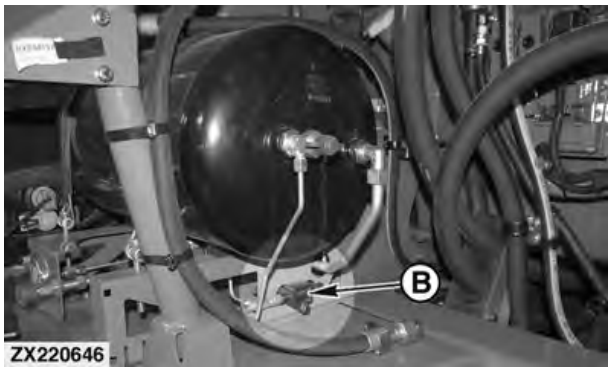
Once air compressor control valve is activated, the following machine functions are unavailable:

- All spout functions
- Active Fill Control function (if equipped)
- Feed roll drive
- SCV 1 and 2 functions
- Header tilt and height controls
- Wagon dump function (if equipped)

A—Air Compressor Button
B—Control Valve
C—Indicator Light



ZX206248 —UN—22NOV13



ZX220646 —UN—06OCT14

OUCC002,0004C96 -19-16JUN16-11/13

Row Guidance Offset Control Dial (if equipped):

Use control dial (A) to bring the machine back on track if it deviates (track adjustment). See **AutoTrac™ RowSense™ Guidance (Option)** in this section.

Control dial (A) allows the row guidance system to move the machine to either side within the same crop row. This offset adjustment allows intermediate rows to be cropped and compensates for sideslip if the machine is operated on a slope. Turn control dial (A) to the left or right.

A—Row Guidance Offset Control Dial

ZX206250 —UN—18DEC13

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OUCC002,0004C96 -19-16JUN16-12/13

Header Height/Ground Pressure Control Dial:

Depending on the activated header height control mode (B, C, or D), use control dial (A) to adjust the desired header height/ground pressure set point (E).

NOTE: Current header height or header ground pressure (G) and activation button (H) on multi-function lever are also displayed.

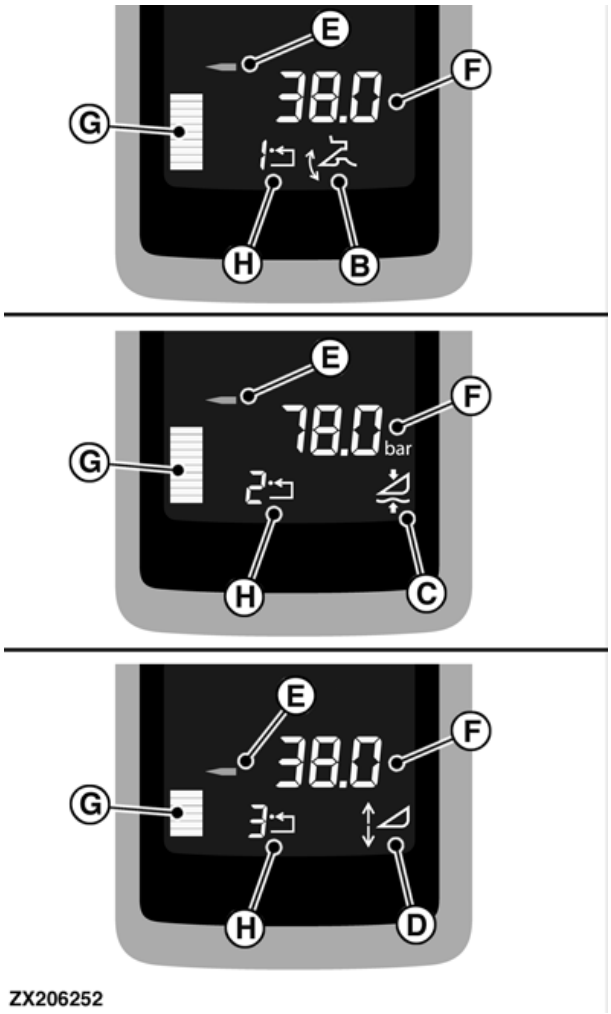
The stored header height/ground pressure (F) is displayed while adjusting value and for 3 seconds after header height control mode activation.

Refer to:

- **Multi-Function Lever** and **Header Setup Page** in this section to activate the desired control mode.
- **Automatic Header Control** in this section to learn about the header height control system.

A—Header Height/Ground Pressure Control Dial
B—Return-to-Position Icon
C—Return-to-Pressure Icon
D—Header Height Sensing Icon
E—Header Height Set Point
F—Header Height/Ground Pressure Display
G—Current Header Height/Ground Pressure Display
H—Activation Button Display

ZX206251 —UN—18DEC13



ZX206252 —UN—20DEC13

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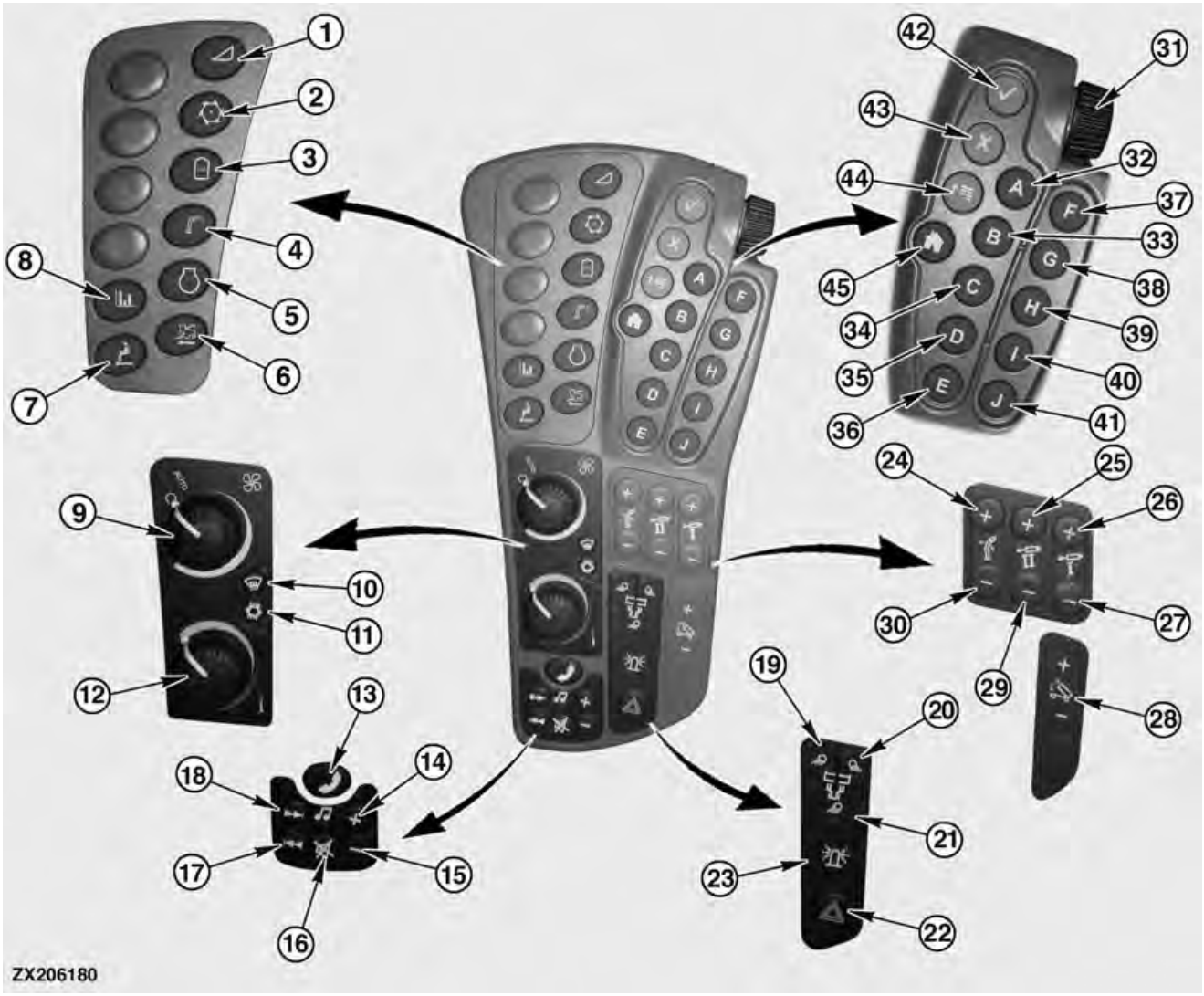
CommandARM™ Controls



1— Header Settings Button
2— Cutterhead Assembly Settings Button
3— Additive Dosing System Settings Button (If Equipped)
4— Spout Settings Button
5— Engine Settings Button
6— Vehicle Settings Button
7— Operator Settings Button
8— Statistics Button
9— Fan Speed Control
10— Defog Button
11— Air-Conditioning Button
12— Temperature Control
13— Push-To-Talk Button (If Equipped)
14— Volume Increase Button (If Equipped)
15— Volume Decrease Button (If Equipped)
16— Mute Button (If Equipped)
17— Seek Reverse Button (If Equipped)
18— Seek Forward Button (If Equipped)
19— Left Work Light Button
20— Right Work Light Button
21— Rear Work Light Button
22— Hazard Warning Lights Button
23— Beacon Lights Button
24— Spout Raise Switch
25— SCV 2 Switch (Extend)
26— SCV 1 Switch (Extend)
27— SCV 1 Switch (Retract)
28— Wagon Dump Switch (If Equipped)
29— SCV 2 Switch (Retract)
30— Spout Lower Switch
31— Selection Dial
32 - 41—A—J Shortcut Buttons
42— Confirm Button
43— Cancel Button
44— Menu Button
45— Home Button

NOTE: Not every switch or button is available for every machine model.

The CommandARM™ control console is divided in five main areas:

1. **Items 1 to 8**—CommandCenter™ display operator interface buttons. These buttons allow direct access to the relevant pages on display to setup machine functions or equipment (see **CommandCenter™ Display** in this section).
2. **Items 9 to 18**—Cab climate control and audio functions buttons. These buttons are used to operate ClimaTrak™ automatic temperature control and radio function (see **ClimaTrak™ Automatic Temperature Control** and **Radio Functions Controls (If Equipped)** in this section).
3. **Items 19 to 23**—Machine lights buttons (see **Machine Lights** in this section).

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OUCC002,0004C86 -19-10JUN16-1/20

4. **Items 24 to 30**—Machine hydraulic functions switches (see **Machine Hydraulic Functions** in this section).
5. **Items 31 to 42**—CommandCenter™ display operator interface controls (see **CommandCenter™ Display** in this section).

Before operating machine, become familiar with switches, buttons and controls.

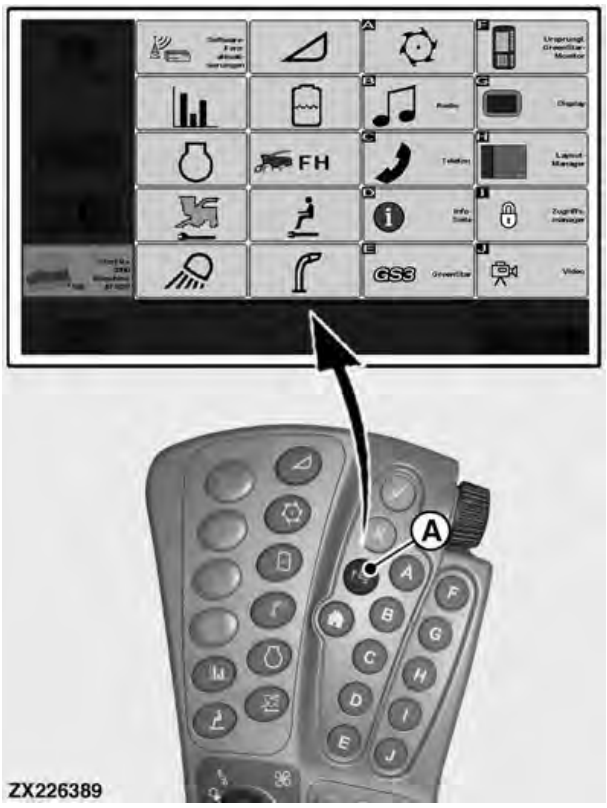
OUCC002,0004C86 -19-10JUN16-2/20

Menu Button

Press button (A) to directly access the Menu Page on the CommandCenter™ display (see **CommandCenter™ Display** in this section).

From this page the operator can setup, activate or select the desired machine functionality.

A—Menu Button



ZX226389 —UN—18JUN16

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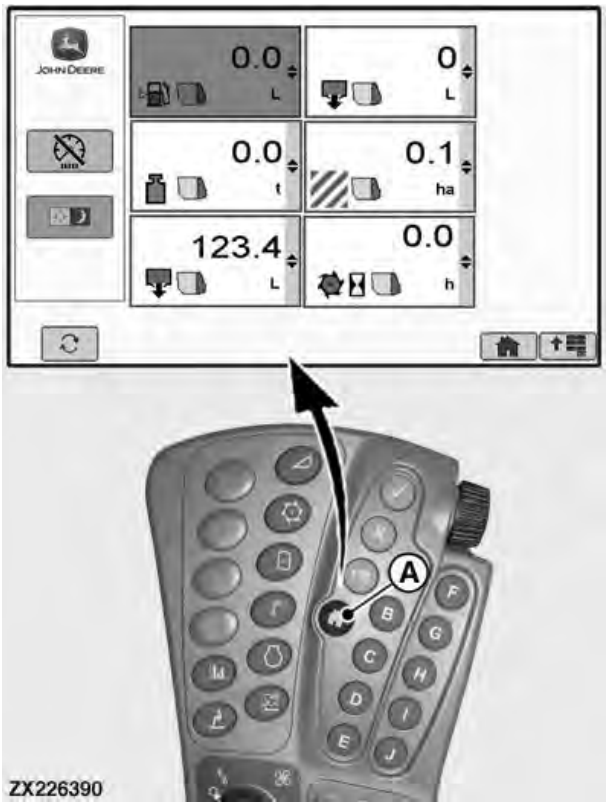
OUCC002,0004C86 -19-10JUN16-3/20

Home Button

Press button (A) to directly access the Home Page on the CommandCenter™ display (see **Home Page** and **Layout Manager Page** in this section).

From this page the operator can select the desired page that is loaded at CommandCenter™ Display startup.

A—Home Button



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OUCC002,0004C86 -19-10JUN16-4/20

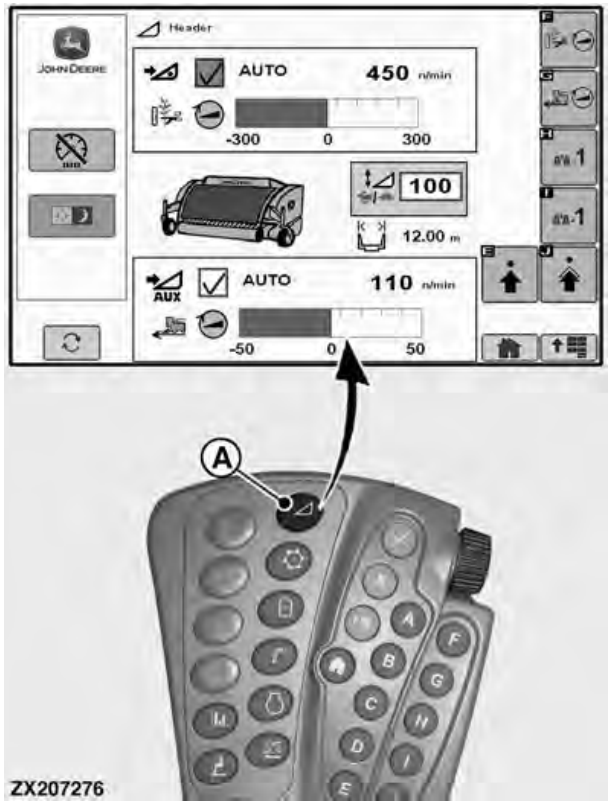
Header Settings Button

Press button (A) to directly access the Header Page on the CommandCenter™ display (see **Header Page** in this section).

From this page the operator can:

- Setup the header attached to the machine.
- Adjust header raise speed.
- Adjust header drive speed.
- Setup the header height control modes.

A—Header Settings Button



ZX207276 —UN—08NOV14

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OUCC002,0004C86 -19-10JUN16-5/20

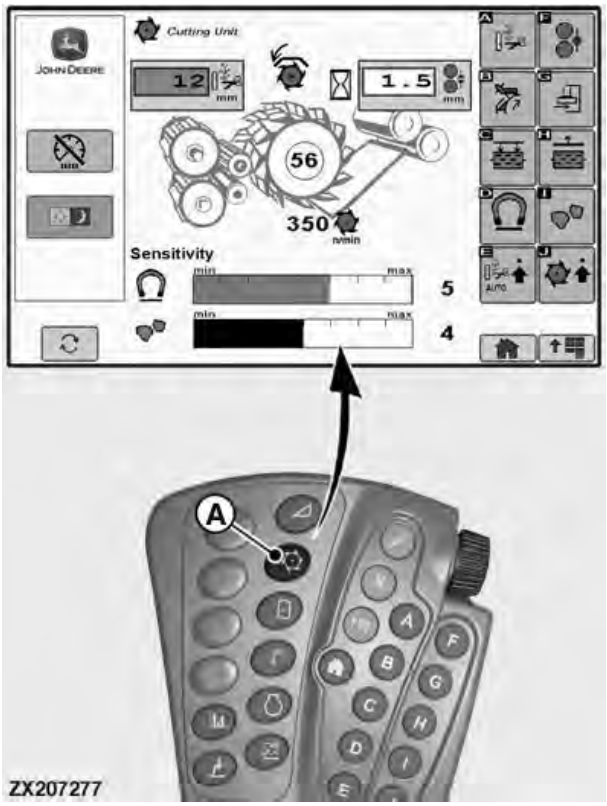
Cutterhead Assembly Settings Button

Press button (A) to directly access the Cutterhead Assembly Setup Page on the CommandCenter™ display (see **Cutterhead Assembly Setup Page** in this section).

From this page the operator can:

- Setup cutterhead knives.
- Adjust required length of cut.
- Activate AutoLoc™ function.
- Adjust kernel processor gap (if equipped).
- Setup metal detector.
- Setup stone detector (if equipped).
- Initiate knife sharpening process.
- Adjust stationary knife.

A—Cutterhead Assembly Settings Button



ZX207277 —UN—13NOV14

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OUCC002,0004C86 -19-10JUN16-6/20

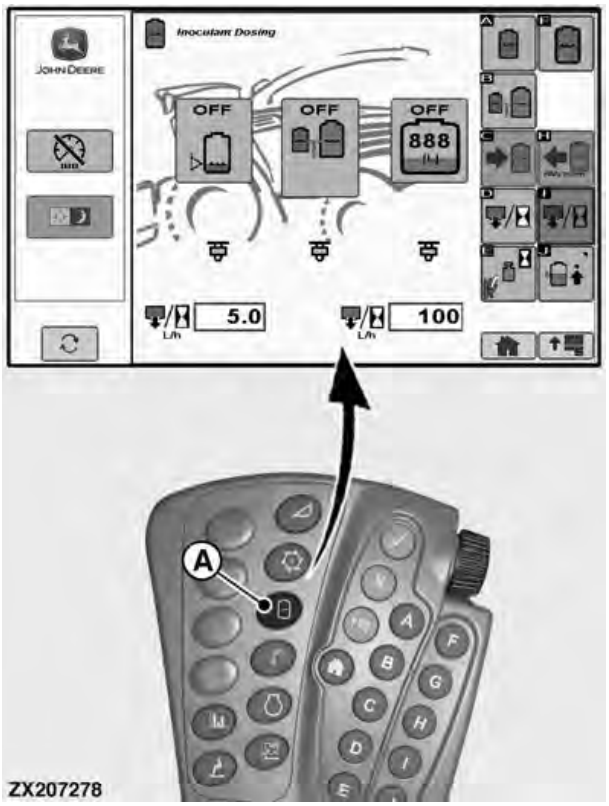
Additive Dosing System Settings Button (If Equipped)

Press button (A) to directly access the Additive Dosing System Page on the CommandCenter™ display (see **Additive Dosing System Page (Option)** in this section).

From this page the operator can:

- Setup nozzle size.
- Setup high volume dosing device flow rate.
- Setup low volume dosing device flow rate.
- Setup TL (Twin Line) mixing ratio.
- Initiate circuit cleaning and return concentrate to tank process.

A—Additive Dosing System Settings Button



ZX207278 —UN—08NOV14

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OUCC002,0004C86 -19-10JUN16-7/20

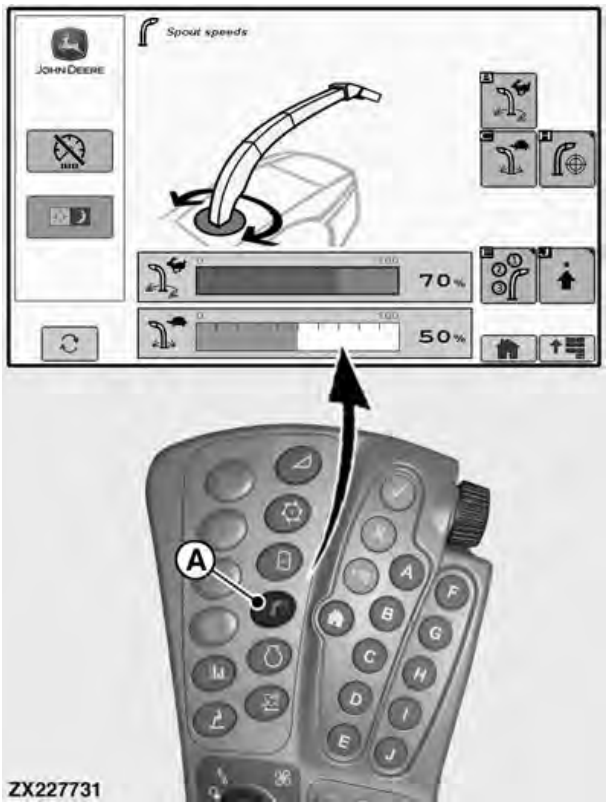
Spout Settings Button

Press button (A) to directly access the Spout Speeds Page on the CommandCenter™ display (see **Spout Speeds Page** in this section).

From this page the operator can:

- Adjust spout slow and fast rotation speeds.
- Setup Automatic Spout Control function (if equipped).
- Setup Active Fill Control function (if equipped).

A—Spout Settings Button



ZX227731 —UN—11JAN15

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OUCC002,0004C86 -19-10JUN16-8/20

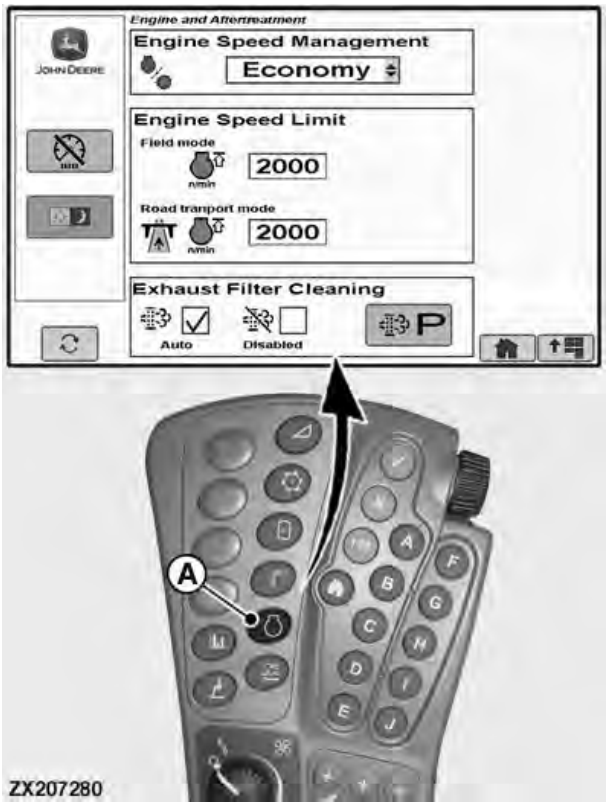
Engine Settings Button

Press button (A) to directly access the Engine Settings Page on the CommandCenter™ display (see **Engine And Aftertreatment Page** in this section).

From this page the operator can:

- Select the desired engine speed management for field operations.
- Adjust field and road mode engine speed limits.
- Initiate exhaust filter cleaning process.

A—Engine Settings Button



ZX207280 —UN—21NOV14

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OUCC002,0004C86 -19-10JUN16-9/20

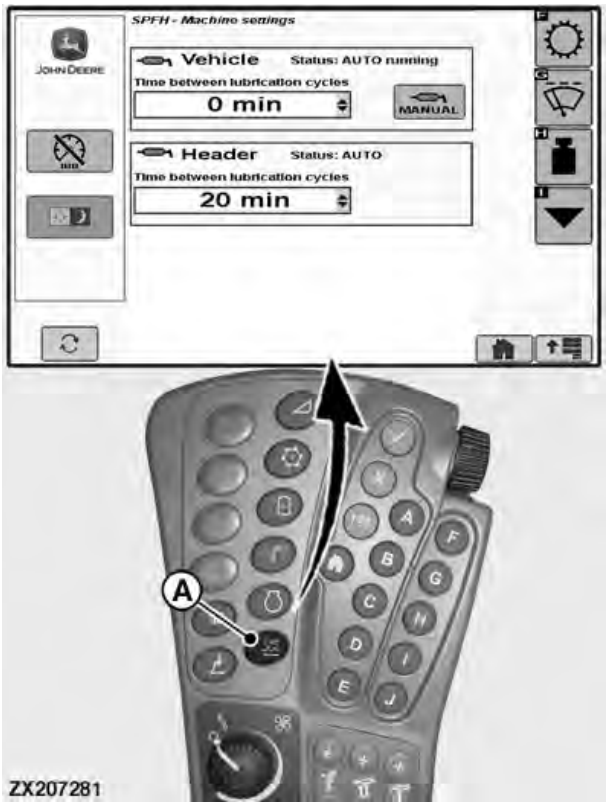
Vehicle Settings Button

Press button (A) to directly access the Vehicle Settings Page on the CommandCenter™ display (see **Vehicle Settings Page** in this section).

From this page the operator can:

- Setup the machine and header automatic lubrication system (if equipped).
- Calibrate the machine mass flow sensor and monitor machine throughput (if equipped).
- Activate the tow mode if necessary.
- Adjust wiper intervals.
- Select and carry out machine component calibration procedures.

A—Vehicle Settings Button



ZX207281 —UN—18NOV14

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OUCC002,0004C86 -19-10JUN16-10/20

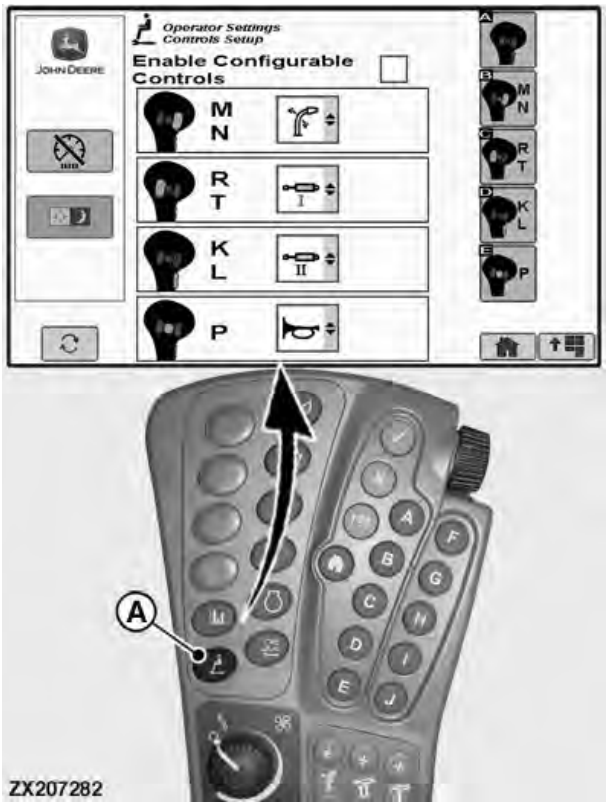
Operator Settings Button

Press button (A) to directly access the Operator Settings Page on the CommandCenter™ display (see **Operator Settings Page** in this section).

From this page the operator can:

- Assign a specific function to each multi-function lever configurable switch (see **Multi-Function Lever** in this section).

A—Operator Settings Button



ZX207282 —UN—18NOV14

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OUCC002,0004C86 -19-10JUN16-11/20

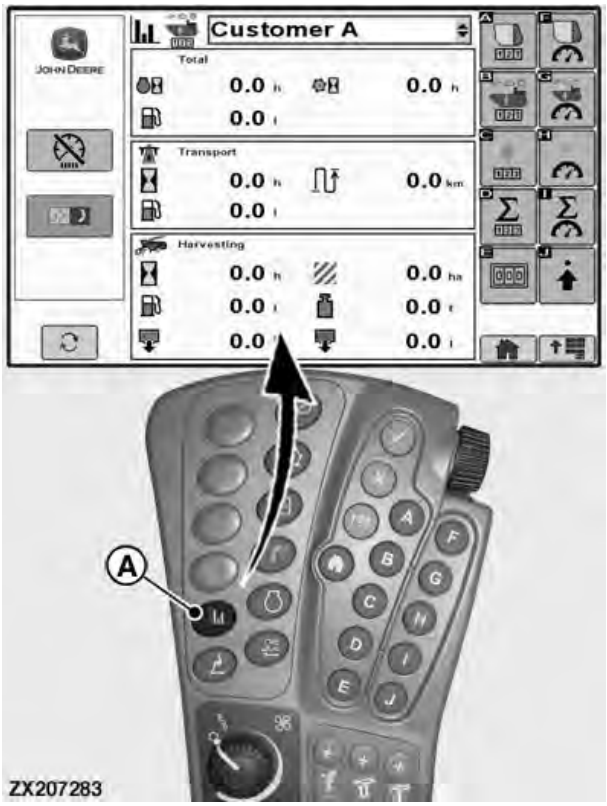
Statistics Button

Press button (A) to directly access the Statistics Page on the CommandCenter™ display (see **Harvest Statistics Page** in this section).

From this page the operator can monitor statistics per field, day, customer, totals, and machine performance for:

- Engine hours
- Cutterhead hours
- Fuel consumption
- Travel distance
- Harvesting hours
- Harvesting area
- Additive dosing system (if equipped)

A—Statistics Button



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OUCC002,0004C86 -19-10JUN16-12/20

ClimaTrak™ Automatic Temperature Control

NOTE: When operating in cold environments it is best to point air vents towards cab floor and turn fan speed to automatic position. This helps circulate air flow throughout the cab.

Operate ClimaTrak™ automatic temperature control as follows:

- **Fan Speed Control (A)** adjusts fan speed and amount of air coming out of louvers.
  - Off Position - all power to system is OFF.
  - Automatic Position - fan speed is determined by difference between selected temperature and actual cab temperature.

  NOTE: As temperature approaches setpoint, fan speed decreases.

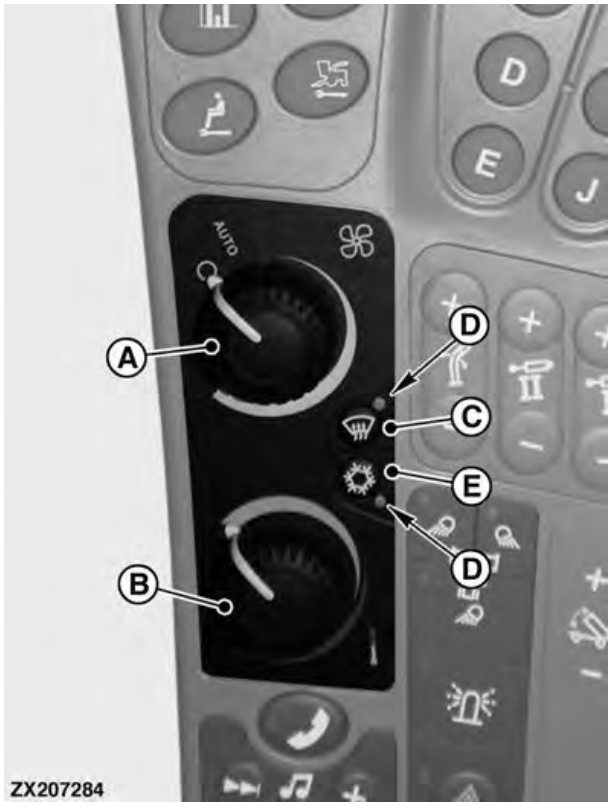
- **Temperature Control (B)** adjusts temperature inside cab. Turn dial to red zone to increase temperature and blue zone to decrease temperature.
- **Defog Button (C)** opens defrost vents. Defog helps remove moisture from air even in heat mode.

  NOTE: Air-conditioning system turns ON when defog button (C) is first pressed. This allows moisture to be removed from the air and allows dry air to be blown on the windows. Press air-conditioning button (E) to turn OFF.

  Indicator light (D) illuminates when defog is ON.

- **Air-Conditioning Button (E)** activates air-conditioning system to cool cab.

  NOTE: Indicator light (D) illuminates when air-conditioning system is ON.



ZX207284 —UN—22NOV13

A—Fan Speed Control
B—Temperature Control
C—Defog Button
D—Indicator Light
E—Air-Conditioning Button

Continued on next page

OUCC002,0004C86 -19-10JUN16-13/20

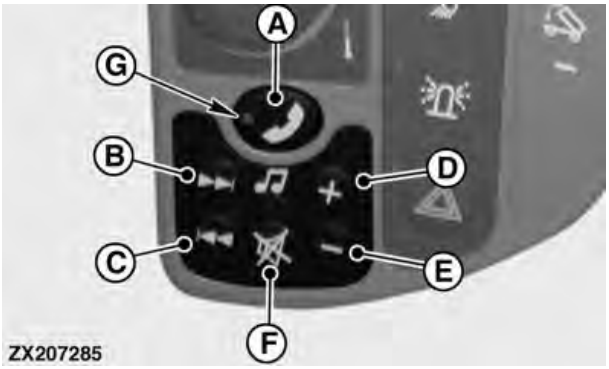
Radio Controls (If Equipped)

Operate radio (if equipped) as follows:

- **Push-To-Talk Button (A):** Press button to answer incoming phone calls or end calls already in process.

  NOTE: Indicator light (G) illuminates when button is pressed (function activated).

- **Seek Forward Button (B) and Seek Reverse Button (C):** Press button to change to next or previous preset radio station or to seek through all radio stations.
  - AM/FM/WX/MW/LW: Press button (**short press**) to change to next preset radio station.
  - AM/FM/WX/MW/LW: Press button (**long press**) to seek through all radio stations.
  - XM®: Press button to change to next station.
  - CD/MP3: Press button to advance to next available track.
- **Volume Increase Button (D):** Press button to increase audio volume.
- **Volume Decrease Button (E):** Press button to decrease audio volume.
- **Mute Button (F):** Press button to mute audio and press again to un-mute audio.



ZX207285 —UN—22NOV13

A—Push-To-Talk Button
B—Seek Forward Button
C—Seek Reverse Button
D—Volume Increase Button
E—Volume Decrease Button
F—Mute Button
G—Indicator Light

NOTE: Press button to mute microphone during a phone call.

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OUCC002,0004C86 -19-10JUN16-14/20

Machine Lights (Depending on Machine Equipment)

Depending on the lights package installed, the machine lights are activated as follows:

- Use left front, right front, or rear worklights button (A, B, C) to turn on-off the relevant worklight.
- Use beacon light button (D) to turn beacon light on-off.

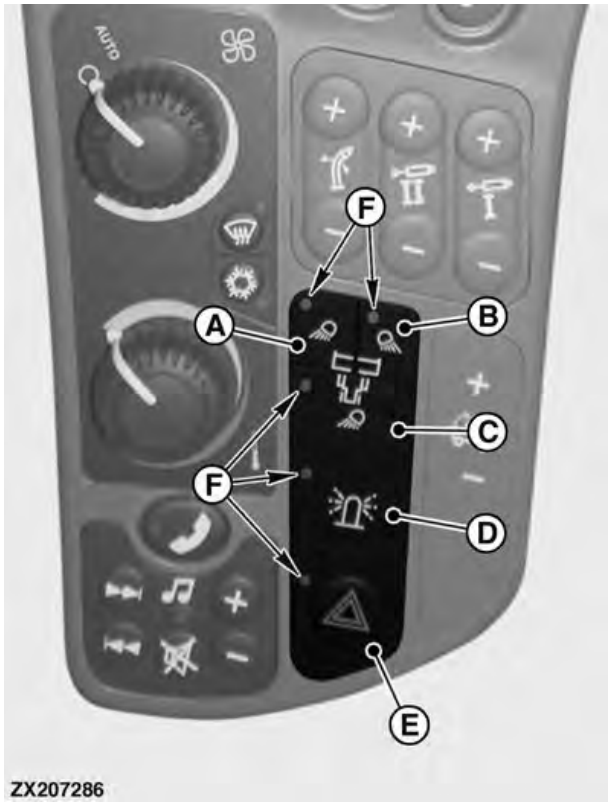
NOTE: Beacon light can also be turned on-off using one of the configurable switches on back of multi-function lever (see Multi-Function Lever in this section).

- Use hazard warning light button (E) to turn hazard warning lights on-off.
- Use light selector switch (G) on steering column to turn road or field lights on-off (see **Machine Lighting** in this Section).
- Access lights setup (H) to activate the desired lights (see **CommandCenter™ Display** and **Lighting Setup Page** in this section).

NOTE: If road lights are ON, stubble lights, fascia lights and rear discharge lights will not be able to be turned ON.

Indicator light (F) illuminates when button is pressed (function activated).

A—Left Front Worklight Button (Option)
B—Right Front Worklight Button (Option)
C—Rear Worklights Button
D—Beacon Light Button
E—Hazard Warning Lights Button
F—Indicator Light
G—Light Selector Switch
H—Lights Setup



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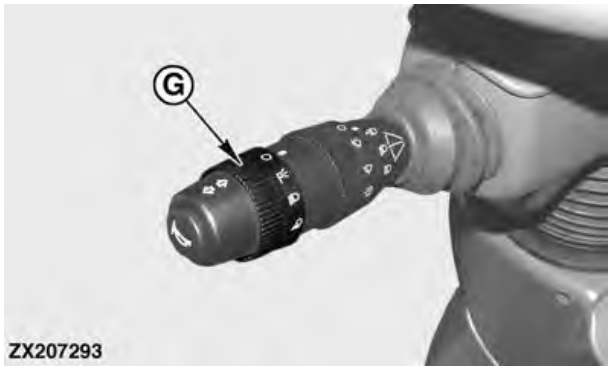

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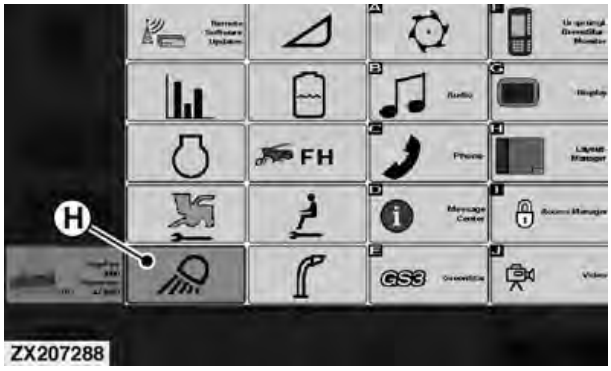

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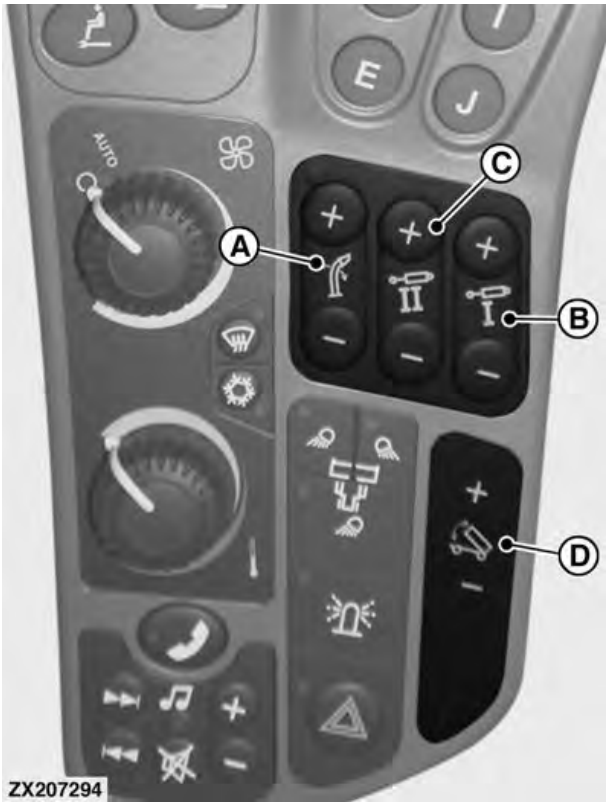
Machine Hydraulic Functions

The following hydraulic functions can be operated from the CommandARM™ control console:

- Spout raise/lower using switch (A).
- Single-acting SCV using switch (B) - pressure oil is provided to corresponding hydraulic connection of multicoupler (E).
- Double-acting SCV using switch (C) - pressure oil is provided to corresponding hydraulic connection of multicoupler (E).
- Wagon dump function using switch (D) - pressure oil is provided to corresponding hydraulic rear couplers (F).

Operate machine hydraulic functions as follows:

A—Spout Raise/Lower Switch
B—SCV I Switch
C—SCV II Switch
D—Wagon Dump Switch
E—Multicoupler
F—Rear Coupler



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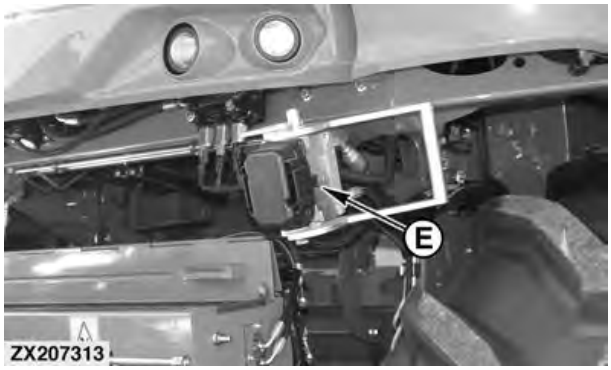

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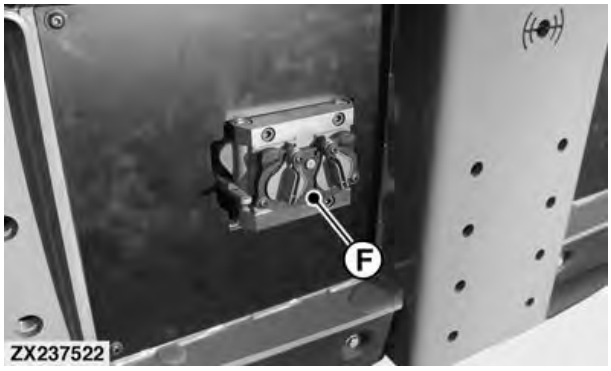

ZX237522 —UN—09SEP15

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OUCC002,0004C86 -19-10JUN16-16/20

Spout Raise/Lower Switch: Press and hold plus (+) symbol of switch (A) to raise the spout or minus (-) symbol to lower.

System Requirements:
- Engine is running.
- Road safety mode button is in field mode.
- Quick stop button is not actuated.
- The operator is sitting on the seat.

A—Spout Raise/Lower Switch

ZX207315 —UN—22NOV13

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SCV I Switch: Depending on which header is installed, switch (A) function varies:

- Corn header (Foldable) — Deck plate spacing increase/decrease
- Cutting platform — Reel raise/lower
- Pick-up — Deflector shield or crop deflector raise/lower

The selective control valve I controls any other optional hydraulic function that requires a single-acting hydraulic cylinder.

The selective control valve I can be activated in two different ways:

1 - Press and hold plus (+) symbol of switch (A) to extend hydraulic cylinder connected to connection (B) of multicoupler or minus (-) symbol to retract.

2 - SCV I (+) output is automatically activated after metal or stone detector trip occurs; SCV I (-) output is automatically activated if feed rolls are re-engaged after metal or stone is detected.

System Requirements:
- Properly equipped header is connected.

IMPORTANT: If the header attached to the machine is not correctly recognized, the SCV I auto activation is not implemented. Therefore, it is required to setup each new type of header after attaching process. The SCV I auto activation can also be deactivated. Refer to Attach and Detach Header in Field Operation section and to Header Advanced Settings Page in this section.

- Engine is running.
- Road safety mode button is in field mode.

A—SCV I Switch **B—SCV I Connection**

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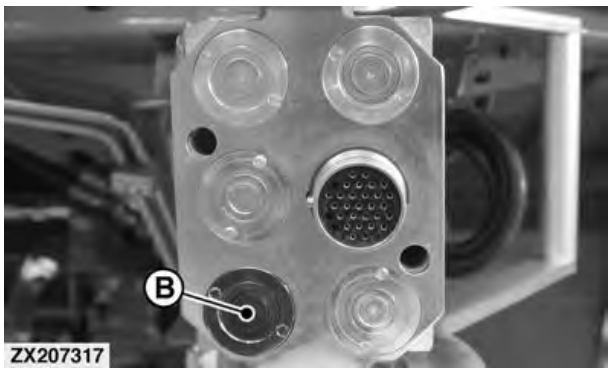

ZX207317 —UN—17JUN16

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SCV II Switch: Depending on which header is installed, switch (A) function varies:

- Corn header (Foldable) — Fold/unfold
- Corn header (Non-Foldable) — Deck plate spacing increase/decrease
- Cutting platform — Reel fore/aft
- Rotary harvesting unit — Fold/unfold
- Pickup — Gauge wheels in/out

The selective control valve II controls any other optional hydraulic function that requires a double-acting hydraulic cylinder.

The selective control valve II can be activated in two different ways:

1 - Press and hold plus (+) symbol of switch (A) to extend hydraulic cylinder connected to outlets (B) of multicoupler or minus (-) symbol to retract.

2 - Double press (+) symbol of switch (A) to activate the hydraulic cylinder extension time control or (-) symbol to activate the hydraulic cylinder retraction time control.

SCV II time control default values are:

- 4 seconds on pick-up.
- 20 seconds on cutting platform.
- 40 seconds on rotary harvesting unit.

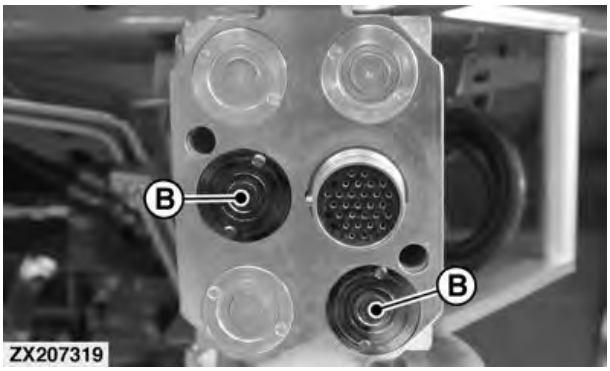
System Requirements:

- Properly equipped header is connected.
- Engine is running.
- Road safety mode button is in field mode.

A—SCV II Switch **B—SCV II Connections**

ZX207318 —UN—22NOV13

ZX208928 —UN—06OCT14



ZX207319 —UN—17JUN16

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OUCC002,0004C86 -19-10JUN16-19/20

Wagon Dump Switch (If Equipped): Operates the wagon dump valve (low or optionally high flow rate).

- The wagon dump valve can be activated in two different ways:
  1 - Press and hold plus (+) symbol of switch (A) to extend wagon dump hydraulic cylinder or minus (-) symbol to retract.
  2 - Double press (+) symbol of switch (A) to activate the hydraulic cylinder extension time control or (-) symbol to activate the hydraulic cylinder retraction time control.

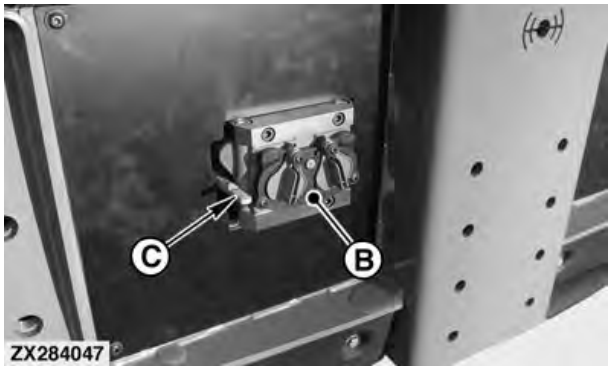
System Requirements:
- Engine is running.
- Road safety mode button is in field mode.

NOTE: SCV handle (C) is only pushed down when couplers are disconnected.

To collect oil while disconnecting wagon quick couplers, a reservoir (D) is located underneath the couplers (B). If necessary, drain oil from reservoir (D) into suitable receptacle.

A—Wagon Dump Switch
B—Wagon Dump Couplers
C—SCV Handle
D—Reservoir

ZX207320 —UN—22NOV13



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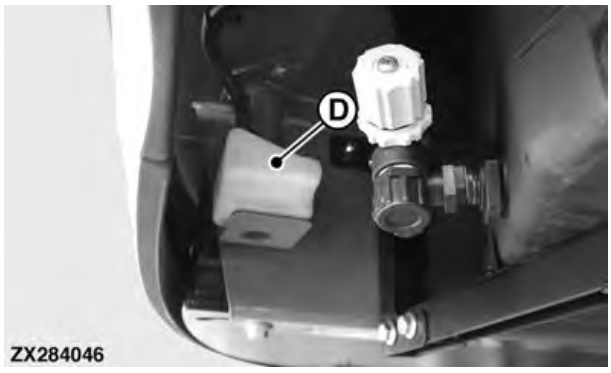

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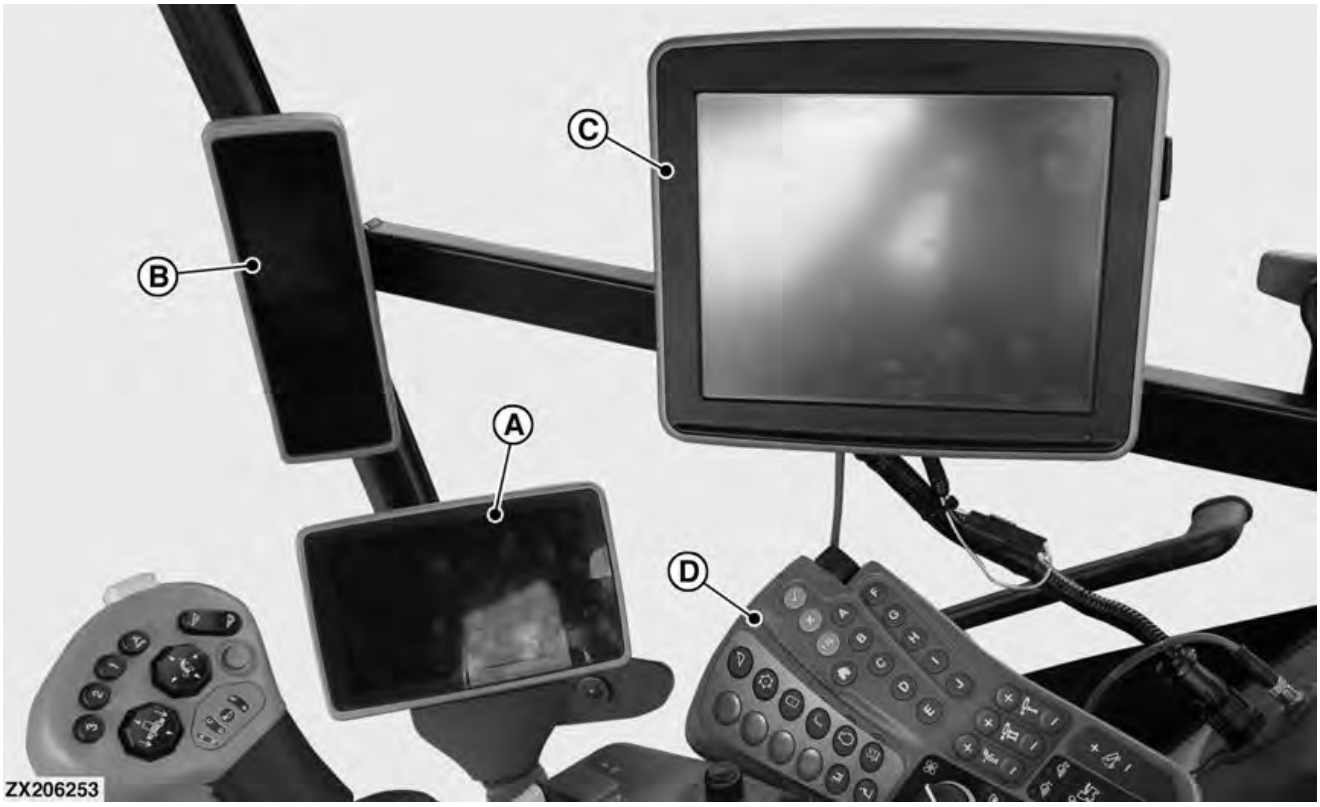
CommandCenter™ Display



A—CommandCenter™ Display
B—Primary Display Unit (PDU)
C—GreenStar™ 3 2630 Display
D—CommandARM™ Controls

As base equipment, the cab is equipped with:

- One CommandCenter™ display (A). This display is used to monitor the machine during field or road operation and setup machine functions or equipment.
- One Primary display unit (PDU) (B). This display provides information mainly on engine controls, header controls, and machine drive components/functions. For a complete description of this display, see **Primary Display Unit (PDU)** in this section.

Optionally, a GreenStar™ 3 2630 Display (C) can be installed when using specific Ag Management Solutions. See **GreenStar™ 3 2630 Display** in this section.

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To navigate through the icons and reach the relevant function page on CommandCenter™ display screen , use one of the following methods (also refer to **CommandARM™ Controls** in this section):

There are four methods of navigating around display screens:

1. ***Selection Dial and Confirm Button Method:***
   Use selection dial (A) to highlight desired icons A—J (B).
   Once desired icon is highlighted, use the following dial and switches:
   - **Selection Dial (A):** Rotate dial to scroll through available items on selected page or increase/decrease values in a selected item.
   - **Confirm Button (C):** Once available item is selected, use selection dial and press button to select item, toggle between available selections within item or enter/save values.
   - **Cancel Button (D):** Press button to cancel current selection.

2. ***Shortcut Buttons Method:***
   Shortcut buttons A—J (E) allow a one-touch selection of desired input field or corresponding item on display.
   - **Shortcut Buttons A—J (E):** Press to select corresponding icon on CommandCenter™ display or GreenStar™3 2630 Display (if equipped).

3. ***Touchscreen Method:***

   IMPORTANT: Under no circumstance should touchscreen be contacted with an object harder or sharper than a fingertip (pen, pencil point, or any metal objects). Heavy pressure damages underlying components and voids warranty. Light amounts of pressure, if exerted continuously, can degrade touchscreen reliability.

   - Select and touch desired icon A—J (B) on CommandCenter™ display screen.

ZX206254 —UN—08FEB16

A—Selection Dial
B—Icons A—J
C—Confirm Button
D—Cancel Button
E—Shortcut Buttons A—J
F—Menu Button
G—Home Button

4. ***Navigational Buttons:***
   - **Menu Button (F):** Press button to change active function that display is running.
   - **Home Button (G):** Displays user-defined home page. If multiple pages are defined, pressing home button multiple times toggles through each defined home page (see **Home Page** in this section).

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CAUTION: The warning message "Improper operation can cause unintended movement of hydraulic functions" (A) appears on screen at each start of the CommandCenter™ display and before the Home Page (B) is loaded on screen. Switches on back of multi-function lever are configurable. Reconfigurated switches can lead the operator who is not aware of the latest switch configuration to put the machine and/or bystander at risk. Press the relevant button (C, D, E) in regard to the situation:

- If the latest multi-function lever switch configuration is known, press Accept button (C) to continue Home Page (B) loading process and enable Configurable Controls (see Operator Settings Page in this section). Latest multi-function lever configuration is then applied to switches.

- If multi-function lever switch configuration must be modified, press Operator Settings Page Access button (D) to reach Operator Settings Page and configure switches (see Operator Settings Page in this section).

- If multi-function lever switch configuration must not be enabled or modified, press Dismiss button (E) to continue Home Page (B) loading process.

ZX226388

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ZX226386

ZX226386 —UN—21NOV14

ZX226387

ZX226387 —UN—21NOV14

A—Warning Message
B—Home Page
C—Accept
D—Operator Settings Page Access Button
E—Dismiss Button

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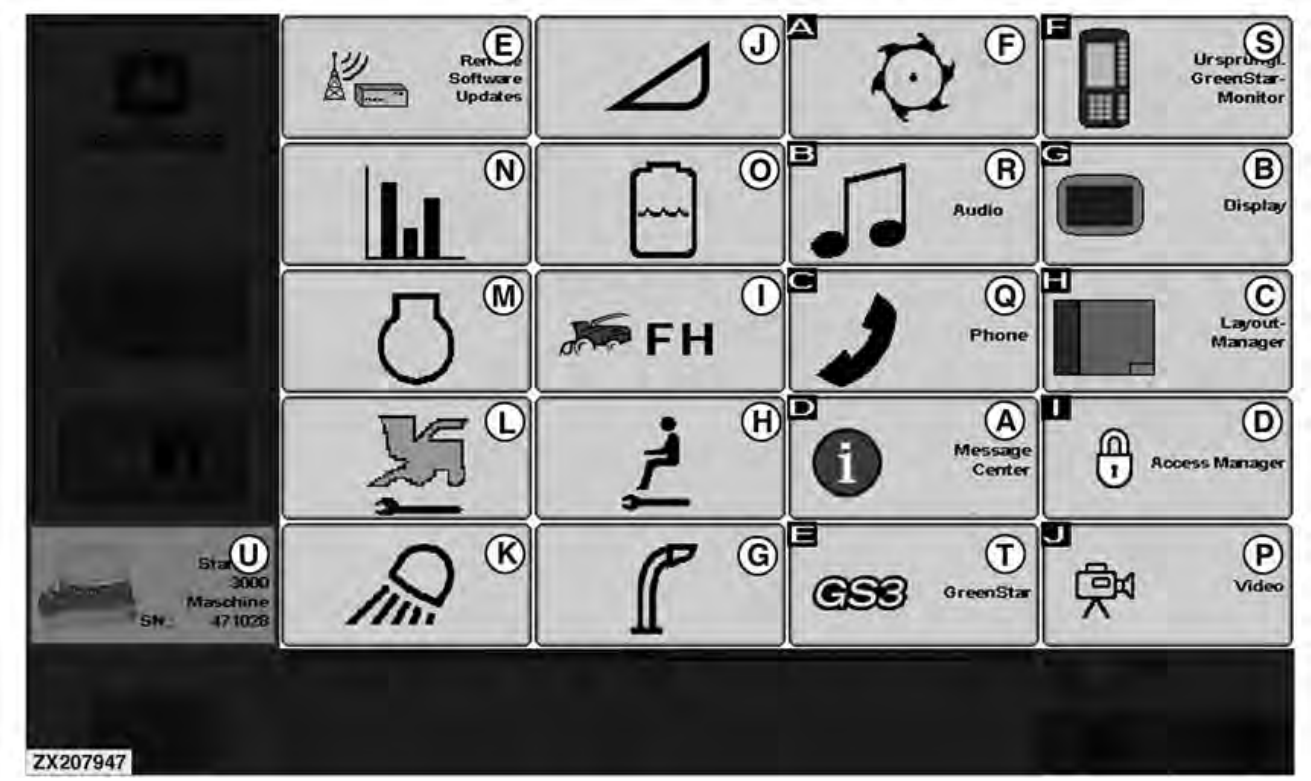
OUCC002,0004217 -19-25NOV14-3/5



ZX207947 —UN—17JUN16

Basic Display Functions Icons:

Depending on the machine equipment, the following icons are displayed when Menu button is pressed:

- A—Message Center (see **Message Center Page** in this section)
- B—Display Settings (see **Display Main Page** in this section)
- C—Layout Manager (see **Layout Manager Page** in this section)
- D—Access Manager (see **Access Manager Page** in this section)
- E—Remote Software Updates (for more information contact your John Deere dealer)

Basic Machine Functions Icons:

- F—Cutterhead Assembly Setup (see **Cutterhead Assembly Setup Page** in this section)
- G—Spout Setup (see **Spout Speeds Page** in this section)
- H—Operator Settings (see **Operator Settings Page** in this section)
- I—FH — User-defined home page (see **Home Page** in this section)
- J—Header Setup (see **Header Page** in this section)
- K—Lighting Setup (see **Lighting Setup Page** in this section)
- L—Vehicle Settings (see **Vehicle Settings Page** in this section)
- M—Engine Settings (see **Engine and Aftertreatment Page** in this section)
- N—Harvest Statistics (see **Harvest Statistics Page** in this section)

Optional Machine Functions Icons:

- O—Additive Dosing System(see **Additive Dosing System Page (Option)** in this section)

  NOTE: A blue icon indicates that machine is equipped with High Volume Dosing system only.

  A blue/green icon indicates that machine is equipped with High and Low Volume Dosing systems.

- P—Video (see **Video Interface (Option)** in this section)
- Q—Phone (see **Phone Interface (Option)** in this section)

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OUCC002,0004217 -19-25NOV14-4/5

- R—Audio (see **Audio Interface (Option)** in this section)

Optional Ag Management Solution (AMS) Functions Icons:

- S—Original GreenStar™ Monitor
- T—GS3 GreenStar™ (see **AutoTrac™ RowSense™ Guidance (Option)** in this section)
- U—StarFire™ Receiver

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Primary Display Unit (PDU)

(1)—Left Turn-Signal Indicator

(2)—Stop Engine Warning Indicator (Red) illuminates and requires machine be stopped at once and problem corrected. Diagnostic trouble code is shown on armrest display until problem is resolved.

(3)—Service Warning Indicator (Yellow) illuminates and flashes when a problem exists with machine. Requires machine be stopped at the earliest convenience. Diagnostic trouble code is shown on armrest display.

(4)—Information Indicator (Blue) illuminates and flashes when diagnostic trouble code is active. Alerts operator to be aware of a condition. When warning is acknowledged, screen message disappears and warning indicator turns OFF.

(5)—Right Turn-Signal Indicator

(6)—Turn-Signal Indicator Light for Trailer illuminates when trailer harness is connected and turn signals are activated.

(7)—High Beam Indicator Light

(8)—Exhaust Filter Cleaning Indicator (Final Tier 4/Stage IV): illuminates when exhaust filter system is actively performing exhaust filter cleaning.

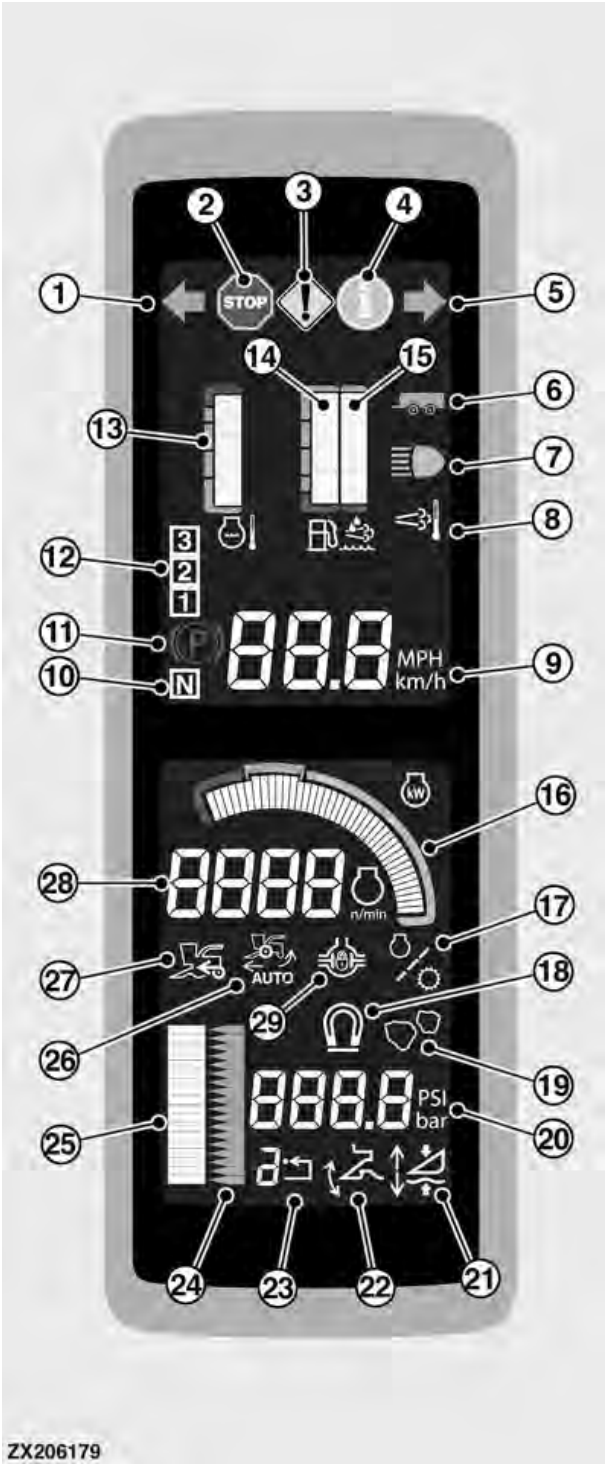
(9)—Ground Speed Indicator indicates machine ground speed (km/h or mph).

(10)—Neutral Indicator: indicates that machine is currently in neutral position.

(11)—Park Brake Indicator: illuminates when park brake is selected.

(12)—Transmission Gear or Range Indicator:

- **PBST Machines:** indicates which gear is currently selected. 1, 2, 3 indicators illuminate depending on gear selection.
- **ProDrive™ Machines:** indicates which range is currently selected. 1 and 2 indicators illuminate depending on range selection.



ZX206179 —UN—16OCT13

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OUCC002,0003F01 -19-16DEC13-1/3

(13)—Engine Temperature Indicator: 18 bars are displayed for normal operating temperature.

If alarm sounds and engine temperature message appears, stop engine and check problem immediately.

(14)—Fuel Gauge indicates how much fuel is left in the tank. When level reaches 10% (approximately one hour of operation) of remaining fuel, fuel indicator flashes, alarm sounds and low fuel message appears.

Indicator shows zero bars when fuel tank is empty.

(15)—Diesel Exhaust Fluid (DEF) Level Indicator (Final Tier 4/Stage IV) indicates how much fluid is left in the tank.

- When level reaches 10%, level indicator flashes, alarm sounds and low fluid message appears.
- When 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.

(16)—Engine Load Gauge: indicates percentage of power that engine is currently using at any given time.

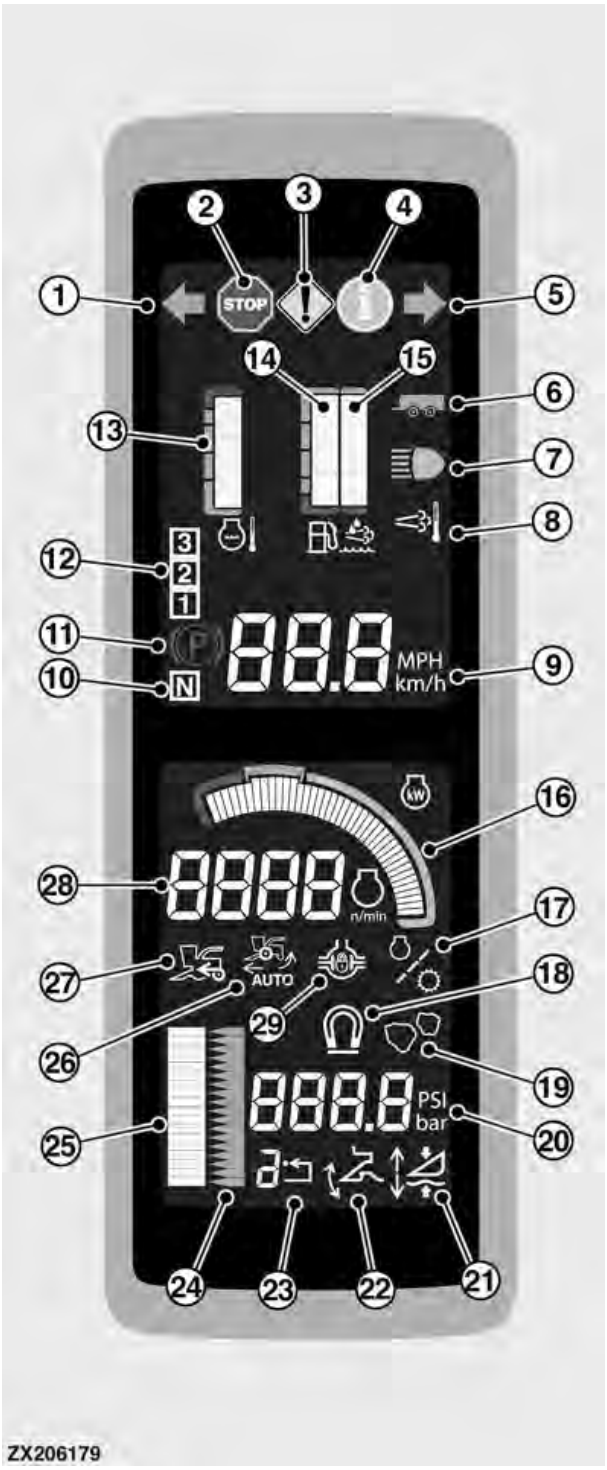
IMPORTANT: If indicator moves into red region, engine power is maximized and machine could potentially stall. Reduce load on machine until indicator moves back into green regions.

- Light Green Region (35 to 100%)
- Dark Green Region (101 to 107%)
- Red Region (108 to 114%)

(17)—Engine Speed Management Icon (ProDrive™ Machines Only): illuminates when either **HEADLAND** or **ECONOMY** field mode is selected (see **Engine and Aftertreatment Page** in this section).

(18)—Metal Detector Icon illuminates when metal detector is armed (ready to use) and flashes when metal with iron is detected (see **Cutterhead Assembly Setup Page** in this section).

(19)—Stone Detector Icon (if equipped) illuminates when stone detector is armed (ready to use) and flashes when stones are detected (see **Cutterhead Assembly Setup Page** in this section).



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OUCC002,0003F01 -19-16DEC13-2/3

(20)—Header Height/Ground Pressure Display: indicates current header height (mm) or ground pressure (psi or bar).

(21)—Header Height Sensing/Return-to-Pressure Icon: indicates relevant system is currently active.

(22)—Return-to-Position Icon: indicates system is currently active.

(23)—Header Activation Icon indicates currently selected activation button.

(24)—Header Height Setpoint Display indicates operator desired height or pressure setpoint.

(25)—Header Height Position Display indicates current header height position or header ground pressure level.

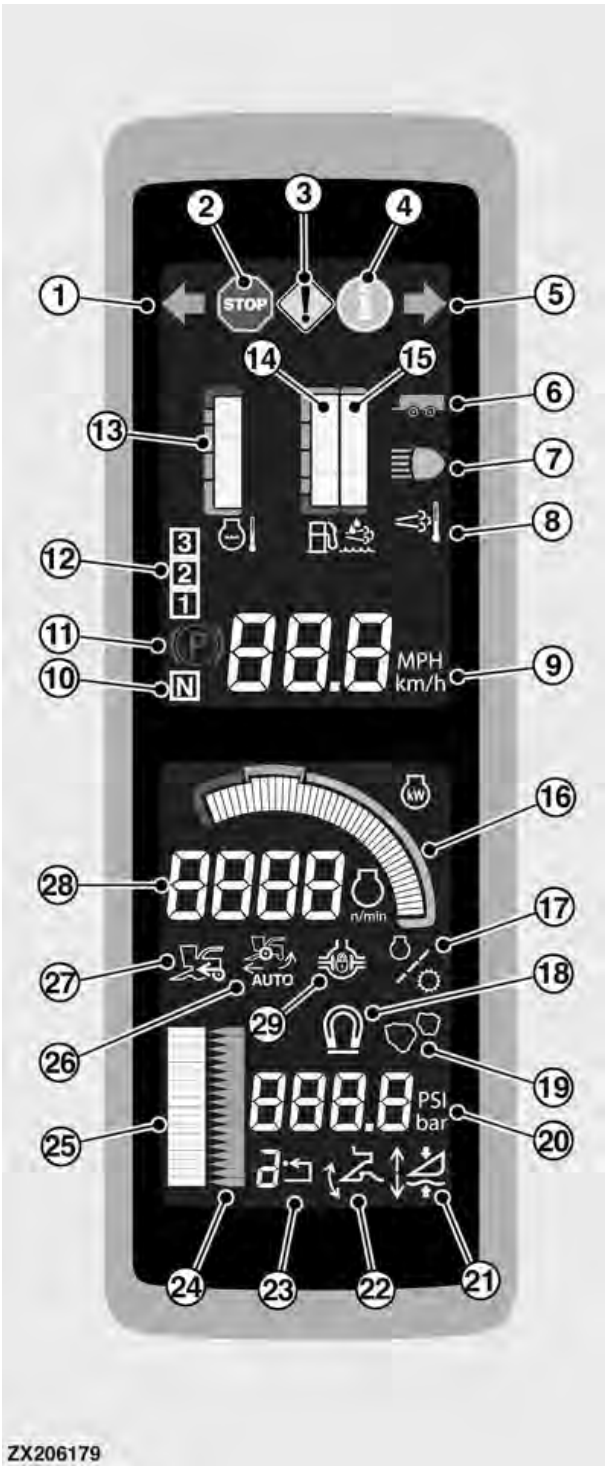
NOTE: Icons and displays 20 to 25 are described under **Multi-Function Lever***,* **Automatic Header Control***, and* **Header Setup Page** *in this section.*

(26)—Traction Control Indicator: illuminates when anti-slip control is activated.

(27)—Four-Wheel Drive Indicator illuminates when rear wheel drive is engaged.

(28)—Engine Speed Display indicates engine rpm.

(29)—Differential Lock Icon (ProDrive™ Machines Only) illuminates when differential lock is manually engaged and flashes when automatically engaged.



ZX206179 —UN—16OCT13

OUCC002,0003F01 -19-16DEC13-3/3

GreenStar™ 3 2630 Display

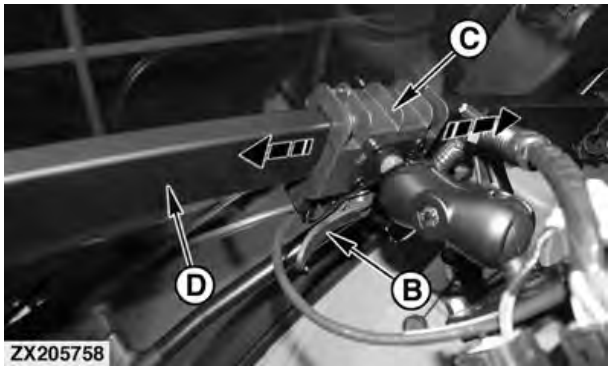
The GreenStar™ 3 2630 Display (A) allows the operator to operate Ag Management Solutions (AMS) applications when the machine is equipped with the HarvestLab™ sensor on the spout. To operate the HarvestLab™ sensor, refer to **GreenStar™ 8000 Series Forage Harvester** Operator's Manual.

The position of the GreenStar™ 3 2630 display (A) can be adjusted in a convenient location and orientation as follows:

- Use locking handle (B) to slide support (C) alongside the rail (D).
- Use locking knob (E) to pivot display (A) up or down.

A—GreenStar™ 3 2630 Display
B—Locking Handle
C—Support
D—Rail
E—Knob

ZX206256 —UN—22NOV13



ZX205758 —UN—26NOV13

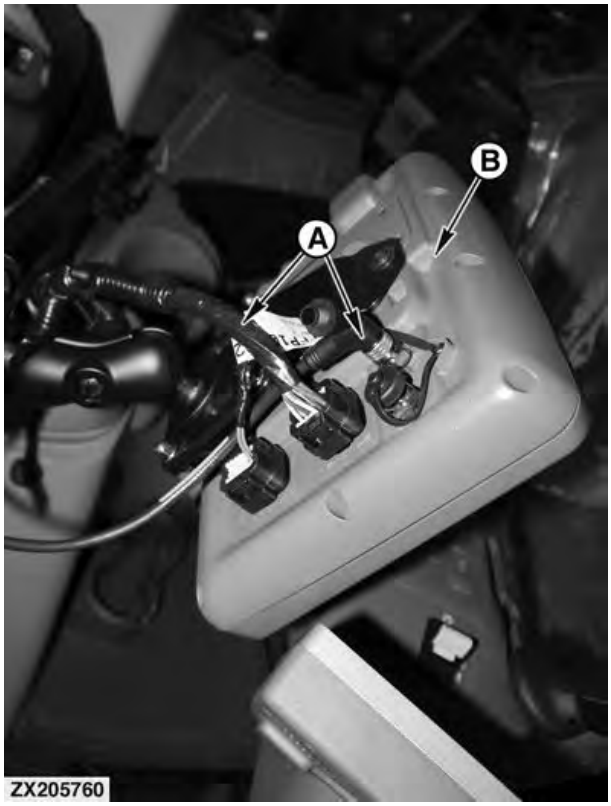
ZX205759 —UN—26NOV13

Continued on next page

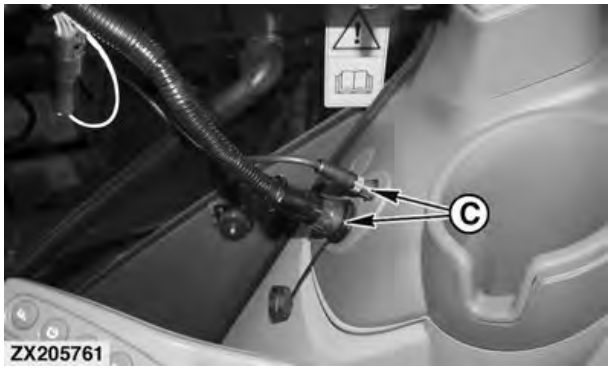
OUCC002,0003E93 -19-06DEC13-1/2

Connect wiring harnesses (A) of display (B) to machine free mating connectors (C).

A—Wiring Harnesses
B—Display
C—Connectors



ZX205760 —UN—26NOV13



ZX205761 —UN—26NOV13

OUCC002,0003E93 -19-06DEC13-2/2

Multi-Function Lever

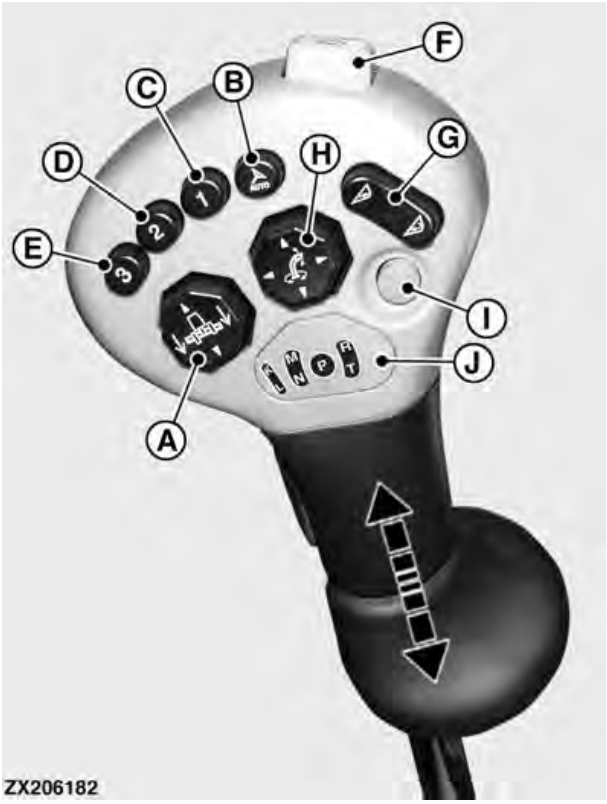
- Move lever forward to drive forward.
- Move lever to the right and rearward to drive rearward.

On machine with ProDrive™ transmission, the sensitivity of the multi-function lever can be adjusted when driving in field mode (contact your John Deere dealer).

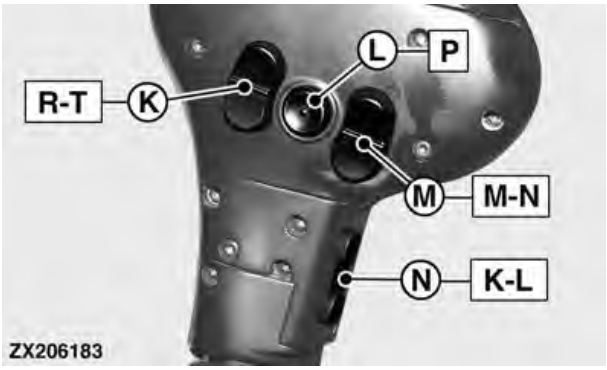
The palm rest (P) is adjustable with three detent positions:

1. Release the lever (O).
2. Lift or lower palm rest (P) into the desired position.

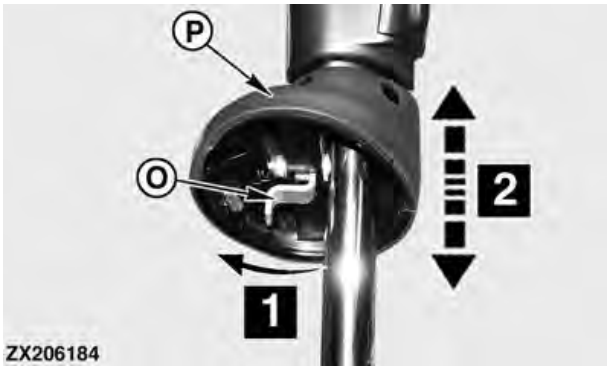
A—Header Raise/Lower and Tilt Switch
B—AutoTrac™ Button
C—Activation Button 1
D—Activation Button 2
E—Activation Button 3
F—Quick Stop Button
G—Header Engage/Reverse and Metal Detector Activate Switch
H—Spout Turn and Spout Flap Raise/Lower Switch
I—Spout Return to Home Position/Active Fill Control Button[1]
J—Configurable Switch Location Decal
K—Configurable Switch (R—T)[2]
L—Configurable Switch (P)[3]
M—Configurable Switch (M—N)[4]
N—Configurable Switch (K—L)[5]
O—Lever
P—Palm Rest



ZX206182 —UN—16OCT13



ZX206183 —UN—16OCT13



ZX206184 —UN—16OCT13

[1]*If Equipped with Automatic Spout Control or Active Fill Control Option*
[2]*Default setting: SCV I*
[3]*Default setting: Horn*
[4]*Default setting: Spout Raise/Lower*
[5]*Default setting: SCV II*

Continued on next page

OUCC002,0004C59 -19-17JUN16-1/16

Quick Stop Button:

Press quick stop button (A) to interrupt any automatic machine function that is currently in process and stop the feed roll drive.

A—Quick Stop Button

ZX206185 —UN—16OCT13

OUCC002,0004C59 -19-17JUN16-2/16

Header Engage/Reverse Switch:

System Requirements:

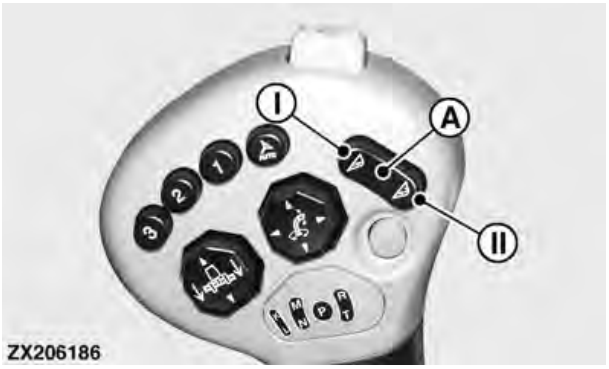
Engaging feed rolls and header is only possible with:
- Engine running
- Road safety mode button in field mode
- Feed roll housing closed
- Main clutch engaged (for feed roll forward operation only)

Operate switch (A) as follows:

- To engage the feed rolls and the header forward rotation press symbol (I) at switch (A) twice.

  IMPORTANT: Pressing symbol (I) at switch (A) twice also activates the metal detector (see Cutterhead Assembly Setup Page in this section).

- To disengage the feed rolls and the header forward rotation without reversing, press symbol (II) at switch (A) once.
- To reverse the feed rolls, press and hold symbol (II) at switch (A).



ZX206186 —UN—16OCT13

A—Header Engage/Reverse Switch
I— Engage Feed Rolls and Header
II— Reverse Feed Rolls and Header

- Press symbol (II) at switch (A) twice and hold to reverse the feed rolls ONLY (not the header) — without cutterhead running. (Engine must be running and field mode must be activated.)

Continued on next page

OUCC002,0004C59 -19-17JUN16-3/16

Activation Buttons:

When header activation buttons (A), (B) or (C) are pressed, the following header control modes are performed:

- Header Height Resume (Return to Position)
- Active Header Float (Return to Pressure)
- Header Height Sensing (with AHC option only)

Pressing header activation buttons ONCE activates the desired header height control mode and displays:

- The activated button number (E).
- The relevant mode icon (F) or display (G).
- The desired header height or ground pressure set point (H).
- The current header height or ground pressure (I).

NOTE: See Primary Display Unit (PDU) in this section.

Header control system takes control and moves header to operator selected position (see **Automatic Header Control** and **Header Advanced Settings Page** in this section).

The header function selected by the activation buttons (A), (B), or (C) depends on which header height mode (J) is enabled. To enable or disable the desired header height mode, refer to **Header Advanced Settings Page** in this section.

NOTE: Header positions obtained by pressing activation buttons can be overcome by pressing header raise/lower switch (D). Once activation buttons are manually overcome, press desired activation button to reactivate.

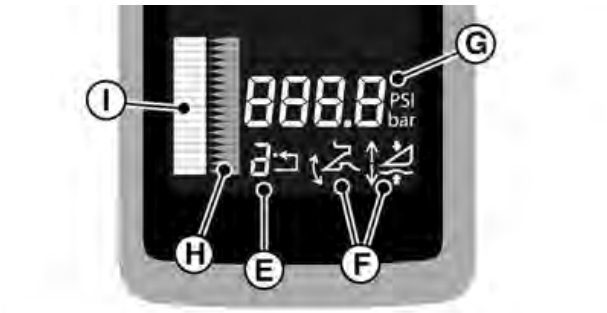
System Requirements:

- Properly equipped header is connected.
- Engine is running.
- Road safety mode button is in field mode.
- Header Height Resume, Header Height Sensing or Active Header Float mode are enabled.
- Header is engaged.

IMPORTANT: On machines with Automatic Spout Control option, pressing the activation button TWICE activates the automatic spout positioning and leveling function (see Automatic Spout Control (Option) in this section).

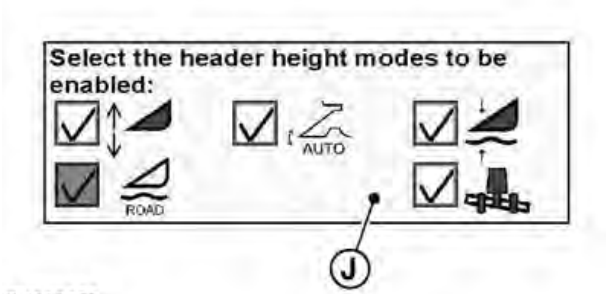
ZX206187

ZX206187 —UN—16OCT13



ZX206217

ZX206217 —UN—22NOV13



ZX220638

ZX220638 —UN—17JUN16

A—Activation Button 1
B—Activation Button 2
C—Activation Button 3
D—Header Raise/Lower Switch
E—Header Activation Icon
F—Icon
G—Header Height/Ground Pressure Display
H—Header Height Set Point Display
I— Current Header Height Display
J— Header Height Mode Check Box

Continued on next page

OUCC002,0004C59 -19-17JUN16-4/16

Header Raise/Lower Switch:

The header raise/lower switch (A) has two detent positions.

1. Pushing part way in on switch causes header to raise or lower at a slow rate.
2. Pushing all the way in causes header to raise or lower at a faster rate.

System Requirements:
- Road safety mode button is in field mode.
- Engine is running.

IMPORTANT: The header raise rate is adjustable (see Header Page in this section).

A second header raise/lower switch (B) is located outside of the cab, on the left-hand side (see **Header Raise/Lower External Switch** in this section).

CAUTION: Avoid crushing injuries or death from unexpected machine movement. Pay extreme attention and do not allow anybody inside the cab while using header raise/lower external switch (B).

NOTE: When using external switch (B), the following system requirements also apply:

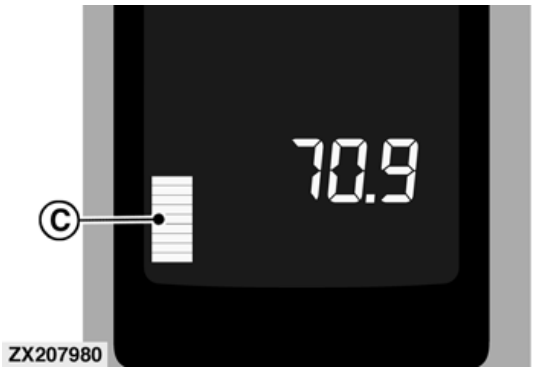
- *Machine ground speed is zero*
- *Road safety mode button is in field mode*
- *Header is disengaged*
- *Upper or lower part of switch (B) is pressed more than 1 second*

While using switch (A) or (B), the current header position (C) is displayed.

A—Header Raise/Lower Switch C—Header Position
B—External Switch

ZX206188 —UN—16OCT13

ZX220639 —UN—06OCT14



ZX207980 —UN—20DEC13

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OUCC002,0004C59 -19-17JUN16-5/16

Header Tilt Switch (With AHC Option Only):

Header tilt switch (A) allows the operator to tilt header left or right.

The header is attached to the feed roll housing through a lateral tilt frame (B). The hydraulic cylinder (C) tilts the lateral tilt frame (B).

IMPORTANT: Before tilting the header, make sure cylinder (C) is attached to lateral tilt frame and locking device (D) is unlatched. See Attach and Detach Header in Field Operation section.

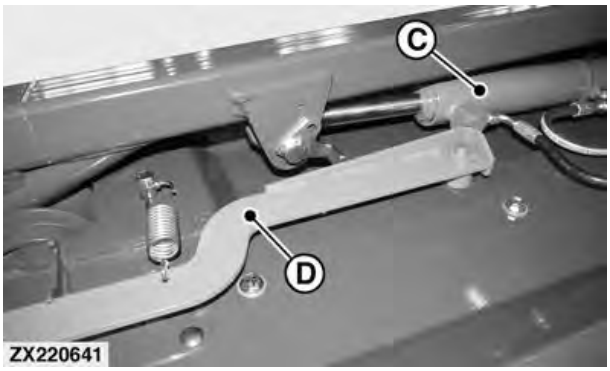
NOTE: Tilt angle is 5° on each side.

System Requirements:
- Road safety mode button is in field mode.
- Engine is running.

A—Header Tilt Switch
B—Lateral Tilt Frame
C—Hydraulic Cylinder
D—Locking Device

ZX206190 —UN—16OCT13

ZX220640 —UN—06OCT14



ZX220641 —UN—06OCT14

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OUCC002,0004C59 -19-17JUN16-6/16

Spout Turn Switch:

⚠ CAUTION: Avoid damage, crushing injuries, or death from unexpected spout movement. Pay extreme attention while rotating spout.

Press right or left part of switch (A) to rotate the spout. The spout turn switch (A) has two detent positions.

1. Pushing part way in on switch causes spout to rotate at a slow rate.
2. Pushing all the way in causes spout to rotate at a faster rate.

System Requirements:
- Road safety mode button is in field mode.
- Engine is running.
- Quick stop button not actuated.
- Operator is on the seat.

The spout slow and fast rotating speeds are adjustable (see **Spout Speeds Page** in this section).

NOTE: On machines with Automatic Spout Control option, pressing the right or left part of switch (A) all the way in twice causes spout to rotate fully to its right or left end position (see Automatic Spout Control (Option) in this section).

ZX206193 —UN—22NOV13

A—Spout Turn Switch

OUCC002,0004C59 -19-17JUN16-7/16

Spout Flap Raise/Lower Switch:

Press upper or lower part of switch (A) to raise or lower spout flap.

System Requirements:
- Road safety mode button is in field mode.
- Ignition is ON.

A—Spout Flap Raise/Lower Switch

ZX206194 —UN—22NOV13

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OUCC002,0004C59 -19-17JUN16-8/16

Spout Return to Home Position Button (If Equipped with Automatic Spout Control Option):

Press and hold the button (A) for 3 seconds to automatically place the spout in its home position on support (B). See **Automatic Spout Control (Option)** in this section.

System Requirements:
- Road safety mode button is in field mode.
- Engine is running.
- Operator is on the seat.
- Quick stop button not actuated.
- Air compressor not activated (if equipped).

A—Spout Return to Home Position Button **B—Spout Support**

ZX220642 —UN—06OCT14

ZX220643 —UN—06OCT14

OUCC002,0004C59 -19-17JUN16-9/16

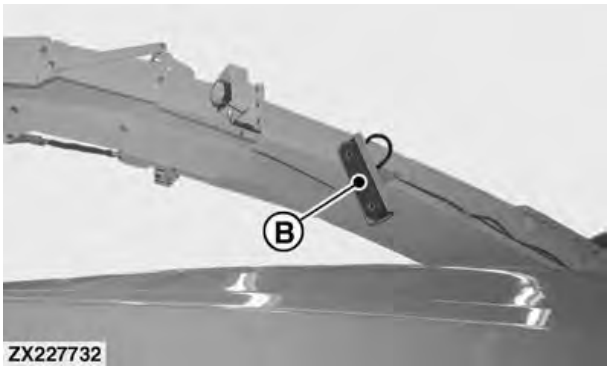
Active Fill Control Button (If Equipped with Active Fill Control Option):

Press the button (A) to activate the Active Fill Control System which uses the stereo camera (B). See **Active Fill Control (Option)** in this section.

System Requirements:
- Road safety mode button is in field mode.
- Engine is running.
- Operator is on the seat.
- Quick stop button not actuated.
- Air compressor not activated (if equipped).
- Active Fill Control function enabled.
- Main clutch is engaged.
- Feedrolls are engaged.

A—Spout Return to Home Position Button **B—Stereo Camera**

ZX220642 —UN—06OCT14



ZX227732 —UN—11JAN15

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OUCC002,0004C59 -19-17JUN16-10/16

AutoTrac™ Button:

On Machines With AutoTrac™ RowSense™ Option: AutoTrac™ button (A) activates or deactivates AutoTrac™ RowSense™ system (see **AutoTrac™ RowSense™ Guidance (Option)** in this section).

System Requirements:
- Properly equipped header is connected.
- Engine is running.
- Road safety mode button is in field mode.
- Header is engaged.

A—AutoTrac™ Button

ZX206195 —UN—22NOV13

OUCC002,0004C59 -19-17JUN16-11/16

Configurable Switches:

The switches (A, B, C and D) located at the back of the multi-function lever are configurable. Default settings of the switches are the following:

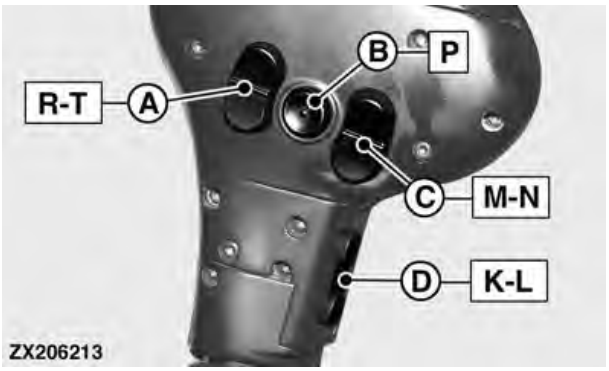
NOTE: Decal (E) indicates the switch location.

The default setting of each switch can be modified as described in **Operator Settings Page** in this section.

- Switch (A)—**R—T**: Default setting: **SCV I**.
- Switch (B)—**P**: Default setting: **Horn**.
- Switch (C)—**M—N**: Default setting: **Spout Raise/Lower**.
- Switch (D)—**K—L**: Default setting: **SCV II**.

NOTE: On machine with ProTouch option, pre-selected functions can also be assigned to switches (A, C and D) that operator can select when operating machine under road mode or field mode. See also Operator Settings Page in this section.

A—Configurable Switch (R—T)
B—Configurable Switch (P)
C—Configurable Switch (M—N)
D—Configurable Switch (K—L)
E—Decal



ZX206213 —UN—22NOV13

ZX206214 —UN—22NOV13

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OUCC002,0004C59 -19-17JUN16-12/16

Switch R—T assigned to SCV I:

In this configuration the switch (A) provides pressure oil to corresponding hydraulic connection of multicoupler (B) allowing to connect a single-acting hydraulic cylinder.

Press and hold upper part of switch (A) to extend hydraulic cylinder or lower part of switch (A) to retract (see arrows).

System Requirements:
- Properly equipped header is connected.
- Engine is running.
- Road safety mode button is in field mode.

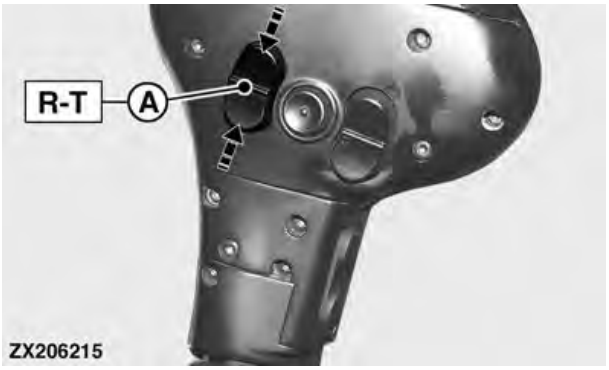
Depending on which header is installed, switch function varies:
- Cutting platform — Reel raise/lower
- Pickup — Deflector shield or crop deflector raise/lower

The selective control valve I controls any other optional hydraulic function that requires a single-acting hydraulic cylinder.

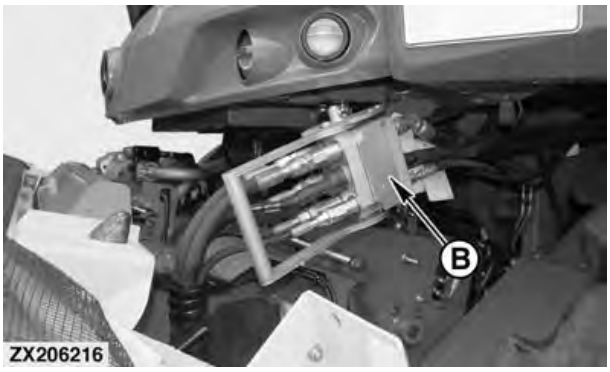
If necessary, refer to **Operator Settings Page** in this section to assign another function to the switch (A).

If another function is assigned to switch (A), use SCV switch (C) on CommandARM™ Controls console instead (see **CommandARM™ Controls** in this section).

A—Switch R—T assigned to SCV I
B—Multicoupler
C—SCV Switch



ZX206215 —UN—22NOV13



ZX206216 —UN—22NOV13

ZX206219 —UN—22NOV13

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OUCC002,0004C59 -19-17JUN16-13/16

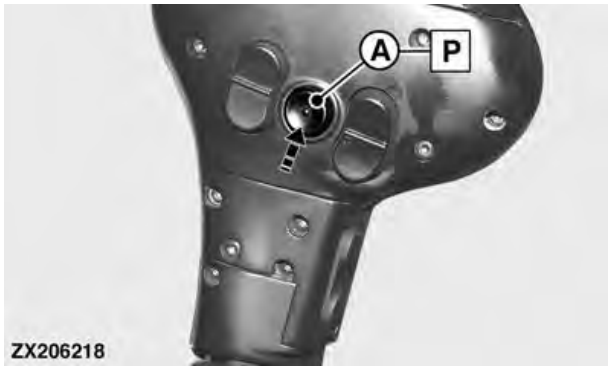
Switch P assigned to Horn:

In this configuration switch (A) can be used to communicate with the tractor driver (for example in grass harvest).

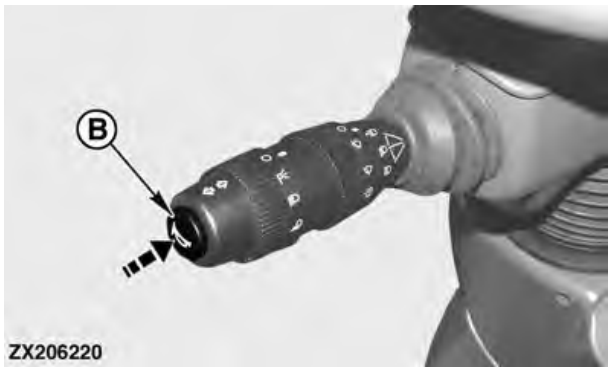
If necessary, refer to **Operator Settings Page** in this section to assign another function to the switch (A).

If another function is assigned to switch (A), use lever (B) on the steering column instead (see **Cab** in this section).

A—Switch P assigned to Horn **B—Selection Lever**



ZX206218 —UN—22NOV13



ZX206220 —UN—22NOV13

OUCC002,0004C59 -19-17JUN16-14/16

Switch M—N assigned to Spout Raise/Lower:

In this configuration switch (A) raises or lowers the spout.

Press and hold upper part of switch (A) to raise the spout or lower part of switch (A) to lower the spout (see arrows).

System Requirements:
- Engine is running.
- Road safety mode button is in field mode.
- Operator is on the seat.

If necessary, refer to **Operator Settings Page** in this section to assign another function to the switch (A).

If another function is assigned to switch (A), use spout raise/lower switch (B) on CommandARM™ Controls console instead (see **CommandARM™ Controls** in this section).

A—Switch M—N assigned to Spout Raise/Lower **B—Spout Raise/Lower Switch**

ZX206231 —UN—22NOV13

ZX206230 —UN—22NOV13

Continued on next page

OUCC002,0004C59 -19-17JUN16-15/16

Switch K—L assigned to SCV II:

In this configuration the switch (A) provides pressure oil to corresponding hydraulic connection of multicoupler (B) allowing to connect a double-acting hydraulic cylinder.

Press and hold upper part of switch (A) to extend hydraulic cylinder or lower part of switch (A) to retract hydraulic cylinder (see arrows).

System Requirements:
- Properly equipped header is connected.
- Engine is running.
- Road safety mode button is in field mode.

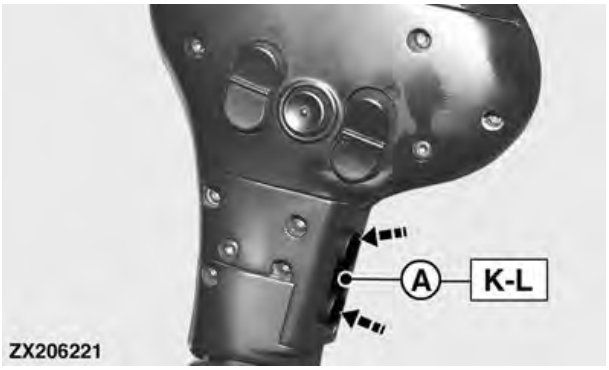
Depending on which header is installed, switch function varies:
- Cutting platform — Reel fore/aft
- Rotary harvesting unit — Fold/unfold
- Pickup — Gauge wheels in/out

The selective control valve II controls any other optional hydraulic function that requires a double-acting hydraulic cylinder.

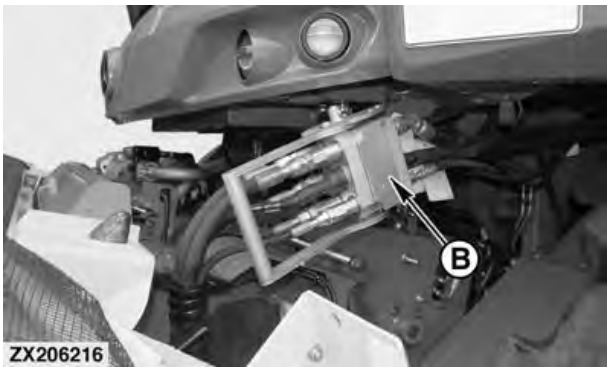
If necessary, refer to **Operator Settings Page** in this section to assign another function to the switch (A).

If another function is assigned to switch (A), use SCV switch (C) on CommandARM™ Controls console instead (see **CommandARM™ Controls** in this section).

A—Switch K—L assigned to SCV II
B—Multicoupler
C—SCV Switch



ZX206221 —UN—22NOV13

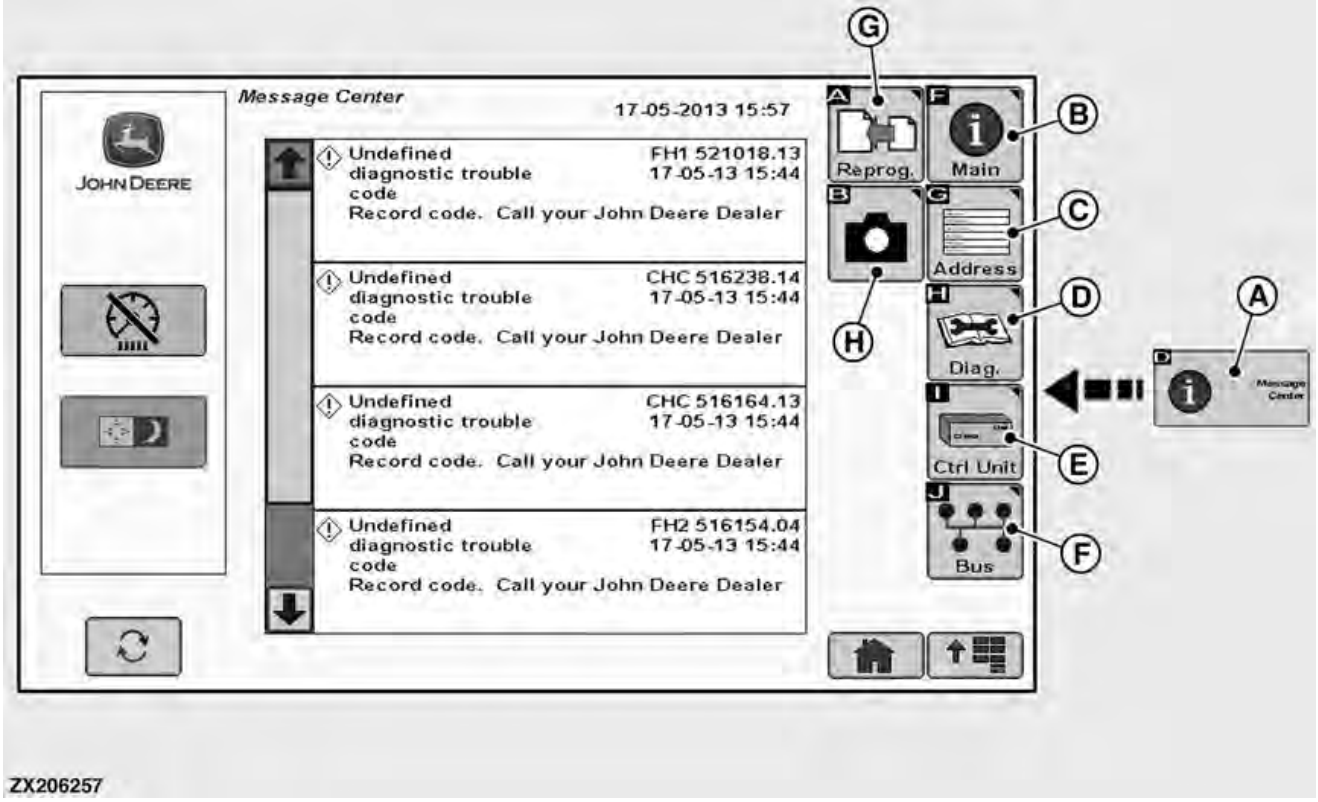


ZX206216 —UN—22NOV13

ZX206222 —UN—22NOV13

OUCC002,0004C59 -19-17JUN16-16/16

Message Center Page



A—Message Center Button
B—Message Main Button
C—Diagnostic Address Button
D—Diagnostic Trouble Codes Button
E—Electronic Control Unit Information Button
F—CAN Bus Information Button
G—Reprogram Button
H—Transfer Debug Files Button

Touch or press confirm button when message center button (A) or message main button (B) is highlighted. Message center page appears.

On this page, messages or active diagnostic trouble codes, if present, are displayed to operator.

- **Diagnostic Address Button (C):** Allows operator to select desired control units and make address modifications/changes or view addresses (contact your John Deere Dealer).

  NOTE: If equipped with optional GreenStar™ 3 2630 display, do not attempt to access diagnostic address information on both displays at the same time.

- **Diagnostic Trouble Codes Button (D):** Allows operator to view control units, diagnostic trouble codes (active or not), and how many times a diagnostic trouble code was displayed (see **Access Diagnostic Trouble Codes Menu** in this section for further information).

- **Electronic Control Unit Information Button (E):** Allows operator to view control units, addresses, message counts, control unit part numbers and serial numbers, software part numbers and versions (see your John Deere Dealer).

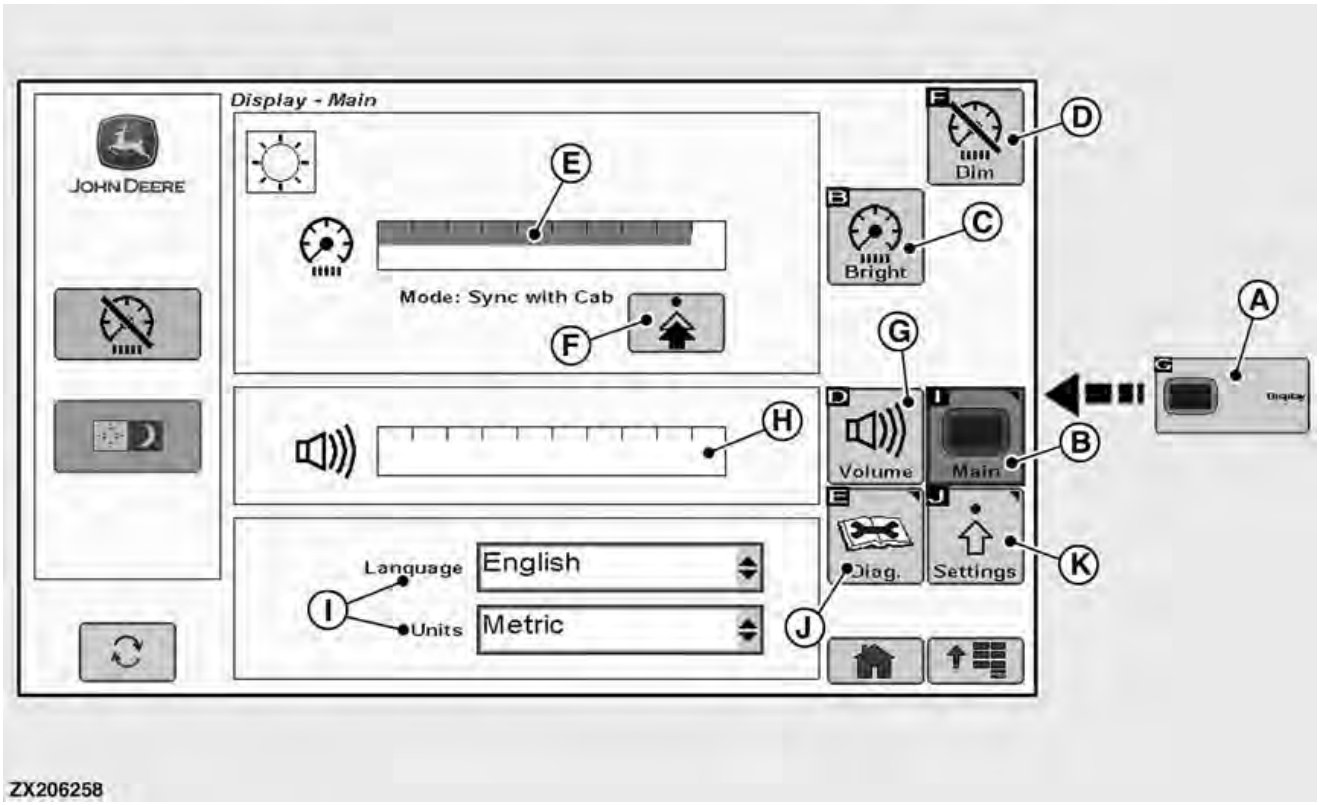
- **CAN Bus Information Button (F):** Allows operator to view if network status is active or not active, total message counts, and CAN high and low voltages (see your John Deere Dealer).

- **Reprogram Button (G):** Allows operator to view all components on the network, the software versions loaded to them, and allows to reprogram a specific control unit if necessary (see your John Deere Dealer).

- **Transfer Debug Files Button (H):** Almost any screen can be saved to internal memory and then copied to a Universal Serial Bus (USB) memory device (see your John Deere Dealer).

OUCC002,0004219 -19-24NOV14-1/1

Display Main Page



A—Display Settings Button
B—Display Main Button
C—Brightness Level Button
D—Dim Mode Button
E—Brightness Bar Graph
F—Sync With Cab Mode Button
G—Alarm Volume Setting Button
H—Alarm Volume Bar Graph
I— Language/Units Settings
J—Diagnostic Readings Button
K—Advanced Settings Button

Touch or press confirm button when display settings button (A) or display main button (B) is highlighted. Display page appears.

From this page, following settings are available:

- **Brightness Level (C):** With brightness bar graph (E) highlighted, touch plus (+) or minus (-) symbol or rotate selection dial to select brightness level of screen.
- **Dim Mode (D):** Allows operator to quickly darken screen to reduce glare.

  NOTE: Dim mode temporarily darkens screen to reduce glare. Screen resumes normal brightness when an alarm exists or any armrest switch is selected.

- **Sync With Cab Mode (F):** Allows operator to synchronize screen with cab lighting or allows screen to work independently from cab lighting.
- **Alarm Volume Setting (G):** With volume bar graph (H) highlighted, touch plus (+) or minus (-) symbol or rotate selection dial to adjust alarm volume
- **Language-Units Settings (I):** Allows operator to select language and units. Once desired choice is made from menu, touch or press confirm button.
- **Diagnostic Readings (J):** Screen displays the following:
  - Unswitched Voltage
  - Switched Voltage
  - CAN+ Voltage (Vehicle CAN Bus)
  - CAN+ Voltage (Implement CAN Bus)
  - CAN- Voltage (Vehicle CAN Bus)
  - CAN- Voltage (Implement CAN Bus)
  - Display Operation Hours
  - USB Present

  NOTE: Universal Serial Bus (USB) connector is located under armrest. Connector is used for basic diagnostic readings and to transfer data. Do not plug phone or audio devices into this connector. This connector is NOT for charging consumer devices.

- **Advanced Settings (K):** Allows operator to access the following display settings (see **Display Advanced Settings Page** in this section):
  - Setup Regional/Languages/Units
  - Setup Global Position Satellite (GPS) Date/Time (if equipped)
  - Setup Multiple Display Detection

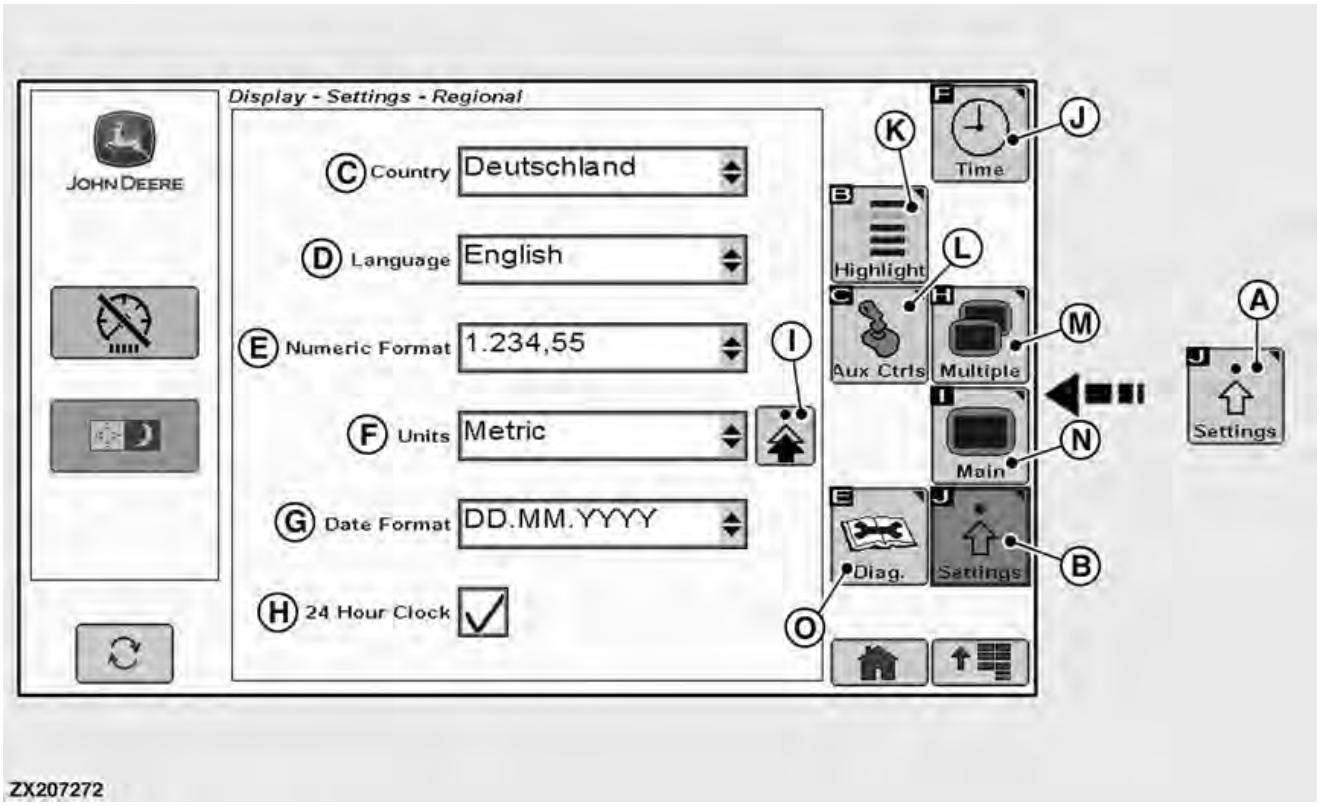
Continued on next page

OUCC002,0004190 -19-19SEP14-1/2

- Setup Auxiliary Controls

OUCC002,0004190 -19-19SEP14-2/2

Display Advanced Settings Page



A—Advanced Settings Button
B—Settings Button
C—Country
D—Language
E—Numeric Format
F—Units
G—Date Format
H—24 Hour Clock
I—Units Advanced Settings Button
J—Clock Button
K—Box Boundary Color Button
L—Auxiliary Controls Button
M—Multiple Displays Button
N—Display Main Button
O—Diagnostic Readings Button

From the display main settings page (see **Display Main Page** in this section), touch or press confirm button when display advanced settings button (A) or display settings button (B) is highlighted. Display-Settings-Regional Page appears.

Once desired choice is made from menu, touch or press confirm button.

From this page, following settings are available:

- Country Menu (C).
- Language Menu (D).
- Numeric Format Menu (E).
- Units Menu (F).
- Date Format Menu (G).
- 24 Hour Clock box (H).
  - Checked - time is displayed as military time (24 hour clock).
  - Unchecked - time is displayed in standard time (12 hour clock).
- Units Advanced Settings button (I) allows operator to display Units Page and select the desired unit format for the following units:
  - Distance
  - Area
  - Volume
  - Mass
  - Temperature
  - Pressure
  - Force
- Clock Button (J) allows the operator to adjust time and date in the appropriate time zone, and to set up daylight savings time function.
  - Daylight savings time box checked - time automatically updates if daylight savings time is used in your country/region.
  - Daylight savings time box unchecked - time must be updated manually when daylight savings time changes.

  NOTE: If a Global Position Satellite (GPS) position receiver is detected, GPS date and time will be available automatically from the receiver.

  If no position receiver is detected, date and time must be entered manually.

- Box Boundary Color Settings (K) allows operator to choose color (Green, Red, or Blue) of box boundary.

Continued on next page
OUCC002,000421A -19-24NOV14-1/2

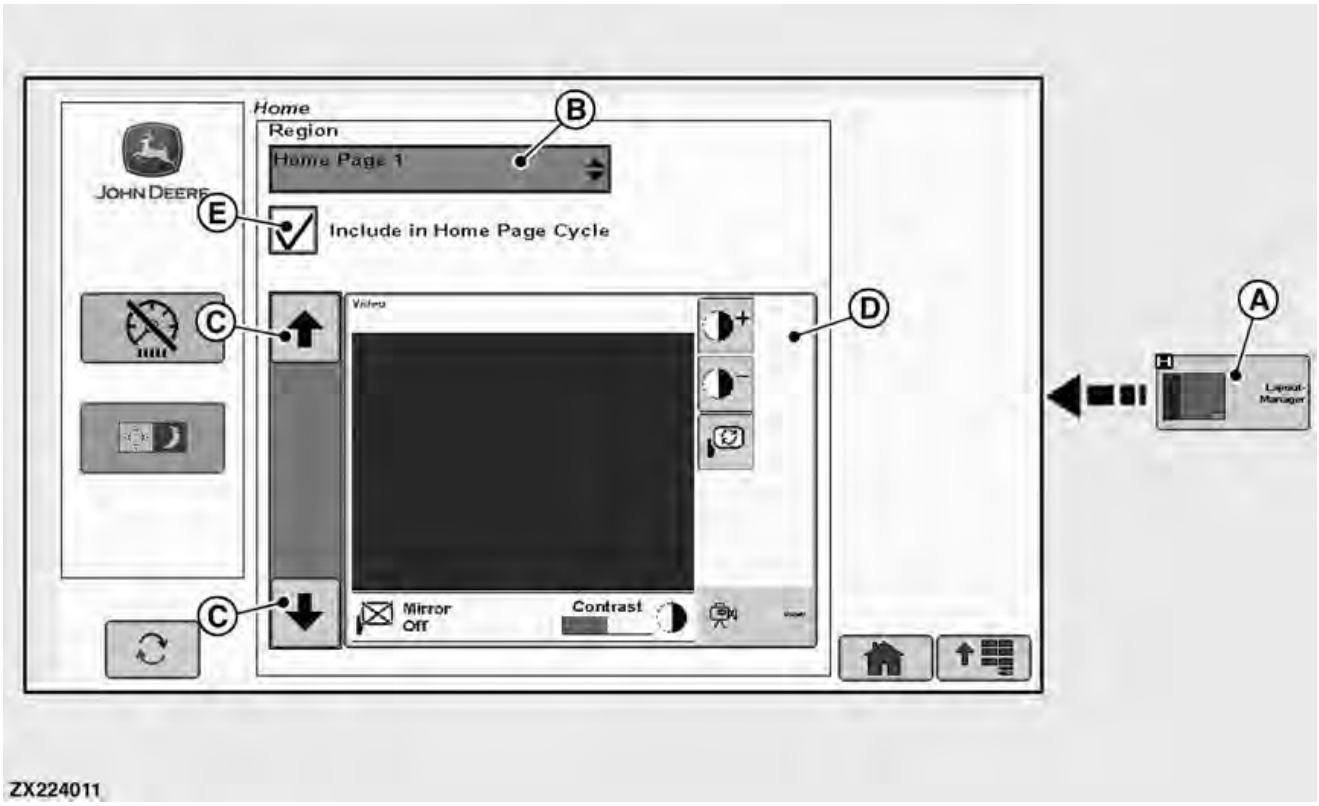
- Auxiliary Controls Button (L). Auxiliary controls feature is not available (contact your John Deere dealer).
- Multiple Displays Button (M). Software automatically detects if another display is connected. See your John Deere dealer for further information before changing any settings or if system does not detect connected display.
- Display Main Button (N). To return to display main page (see **Display Main Page** in this section).
- Diagnostic Readings Button (O). Allows the operator to display software, hardware information, and diagnostic readings such as:
  - Unswitched Voltage
  - Switched Voltage
  - CAN High Voltage (Vehicle Bus)
  - CAN High Voltage (Implement Bus)
  - CAN Low Voltage (Vehicle Bus)
  - CAN Low Voltage (Implement Bus)
  - Display Operation Hours
  - USB Present

  NOTE: Universal Serial Bus (USB) connector is located under armrest. Connector is used for basic diagnostic readings and to transfer data. Do not plug phone or audio devices into this connector. This connector is NOT for charging consumer devices.

  - Copyright Information

OUCC002,000421A -19-24NOV14-2/2

Layout Manager Page



A—Layout Manager Button
B—Region Menu
C—Up/Down Arrow Icon
D—Different Home Pages
E—Include in Home Page Cycle Box

On the display main page (see **Display Main Page** in this section), touch or press confirm button when layout manager button (A) is highlighted. Layout Manager Page appears.

From this page, different home pages can be selected.

Touch or press confirm switch when region menu (B) is highlighted.

Screen displays the following:

- Home Page 1
- Home Page 2
- Home Page 3

Once desired home page is chosen, touch or press confirm switch.

Touch or press confirm switch when up/down arrow icons (C) are highlighted to scroll through home pages (D).

Choose desired home page.

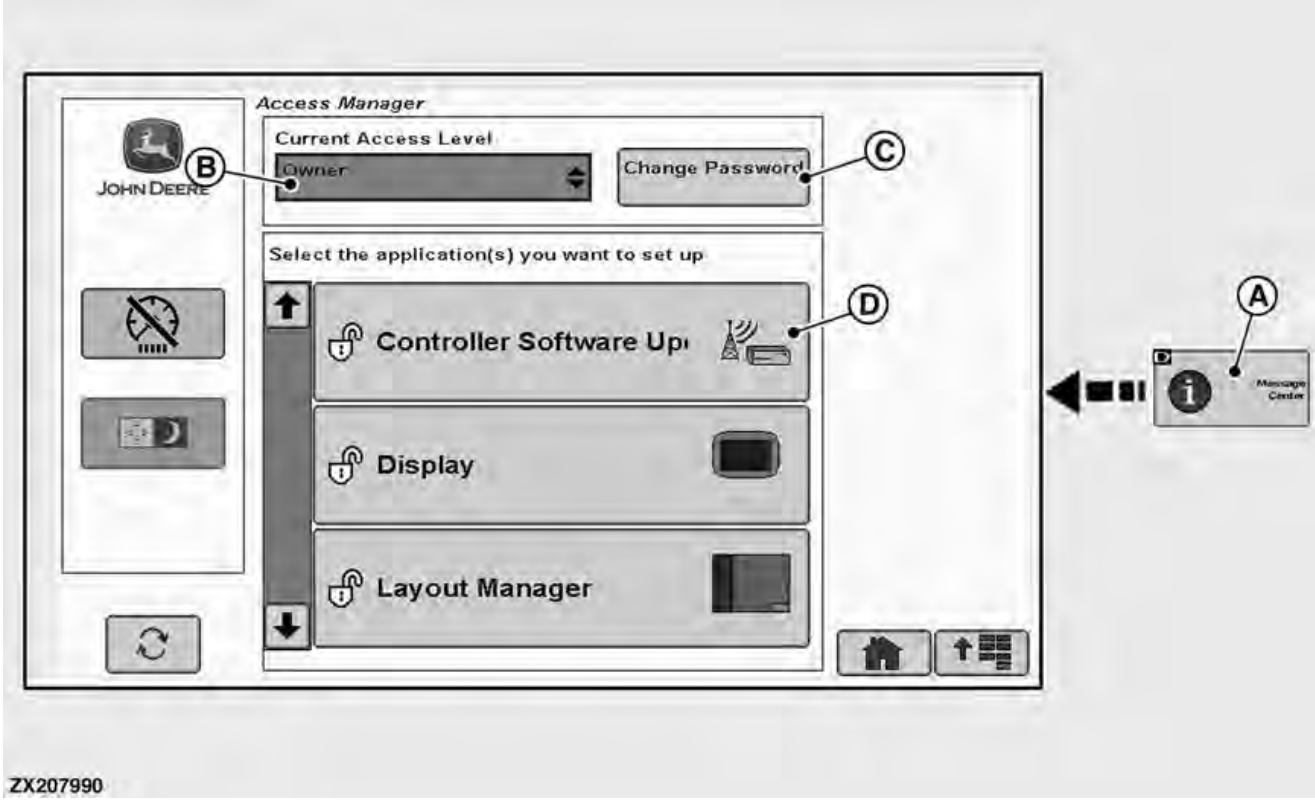
Touch or press confirm switch when include in home page cycle box (E) is highlighted.

- Checked - selected home page is included in home page cycle.
- Unchecked - selected home page will not be included in home page cycle.

NOTE: Touch or press confirm switch when home icon on any screen is highlighted to cycle through selected home pages. Home page switch on armrest also cycles through selected home pages.

OUCC002,0003EA2 -19-17NOV14-1/1

Access Manager Page



A—Access Manager Button **B—Access Level Menu** **C—Change Password Button** **D—Applications**

On the display main page (see **Display Main Page** in this section) , touch or press confirm button when access manager button (A) is highlighted. Access Manager Page appears.

From this page, following settings are available:

Access Level Settings:

Allows owner of machine to lock/unlock certain features. If feature is locked, only the owner is able to make changes/adjustments. If feature is unlocked, both the owner and operator are able to make changes/adjustments.

Touch or press confirm switch when access level menu (B) is highlighted.

Screen displays the following:

NOTE: Must be in owner mode to lock/unlock application (D). Password is required when changing from operator mode back to owner mode.

- Operator Mode - certain changes/adjustments are made available when previously set by owner.
- Owner Mode - determines which changes/adjustments are made available to operators.

Touch or press confirm switch when desired access level is highlighted.

Change Password:

Allows owner of machine to set password preventing operator from making changes/adjustments previously set by owner.

NOTE: If password is lost or forgotten, see your John Deere dealer for further information.

Touch or press confirm switch when change password button (C) is highlighted.

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Home Page

CAUTION: The warning message "Improper operation can cause unintended movement of hydraulic functions" (A) appears on screen at each start of the CommandCenter™ display and before the Home Page (B) is loaded on screen. Switches on back of multi-function lever are configurable. Reconfigurated switches can lead the operator who is not aware of the latest switch configuration to put the machine and/or bystander at risk. Press the relevant button (C, D, E) in regard to the situation:

- If the latest multi-function lever switch configuration is known, press Accept button (C) to continue Home Page (B) loading process and enable Configurable Controls (see Operator Settings Page in this section). Latest multi-function lever configuration is then applied to switches.

- If multi-function lever switch configuration must be modified, press Operator Settings Page Access button (D) to reach Operator Settings Page and configure switches (see Operator Settings Page in this section).

- If multi-function lever switch configuration must not be enabled or modified, press Dismiss button (E) to continue Home Page (B) loading process.

A—Warning Message
B—Home Page
C—Accept
D—Operator Settings Page Access Button
E—Dismiss Button

ZX226388

ZX226388 —UN—21NOV14

ZX226386

ZX226386 —UN—21NOV14

ZX226387

ZX226387 —UN—21NOV14

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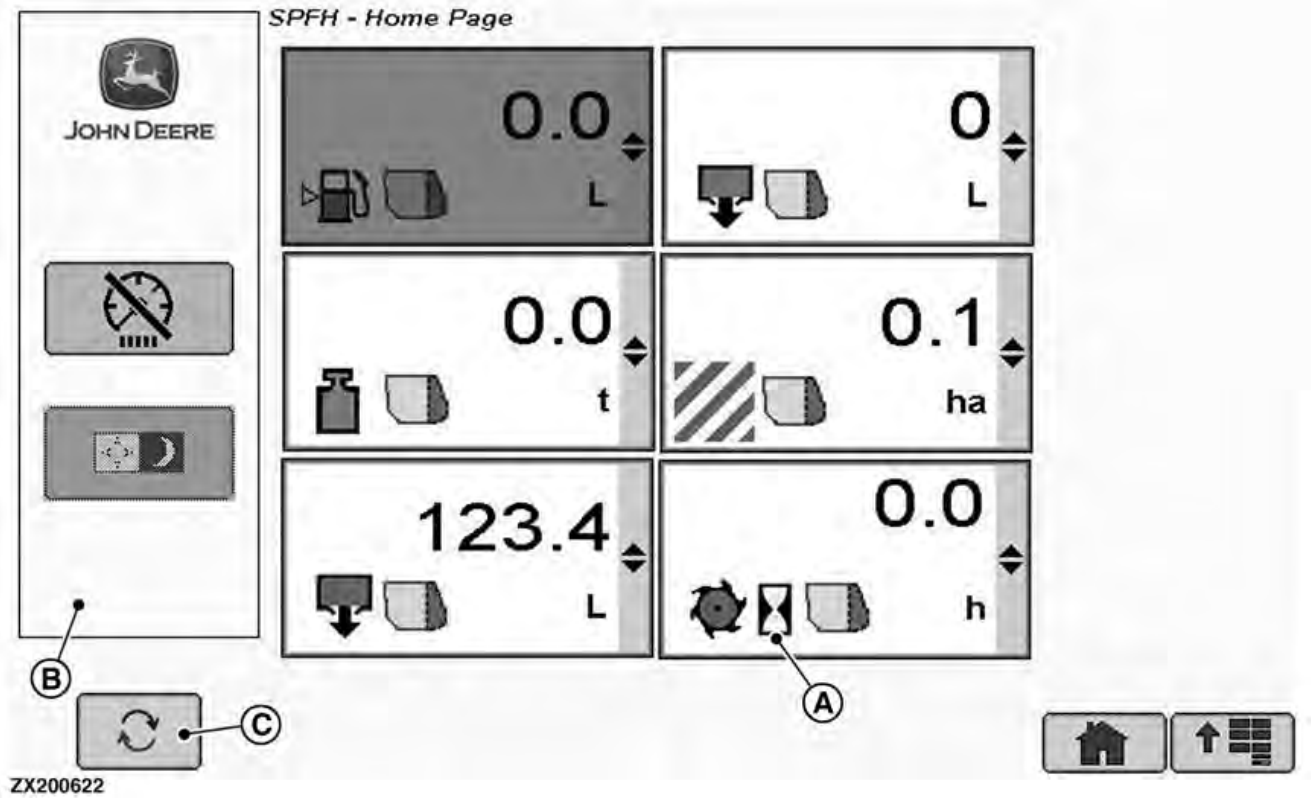
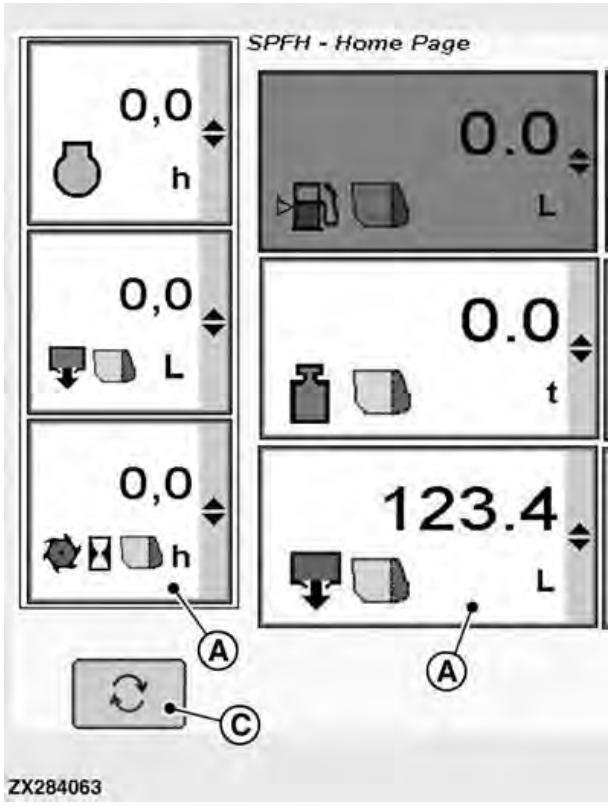


ZX200622 —UN—19JUN16

Home page displays different information at each of the six display boxes (A) or on the left hand side region (B). To change the display of the left hand region (B), press toggle button (C). Three display boxes (A) can be displayed on this region.

Use the drop-down menu of each of the display box (A) to select the desired information to be displayed:

A—Display Box
B—Region
C—Toggle Button



ZX284063 —UN—19JUN16

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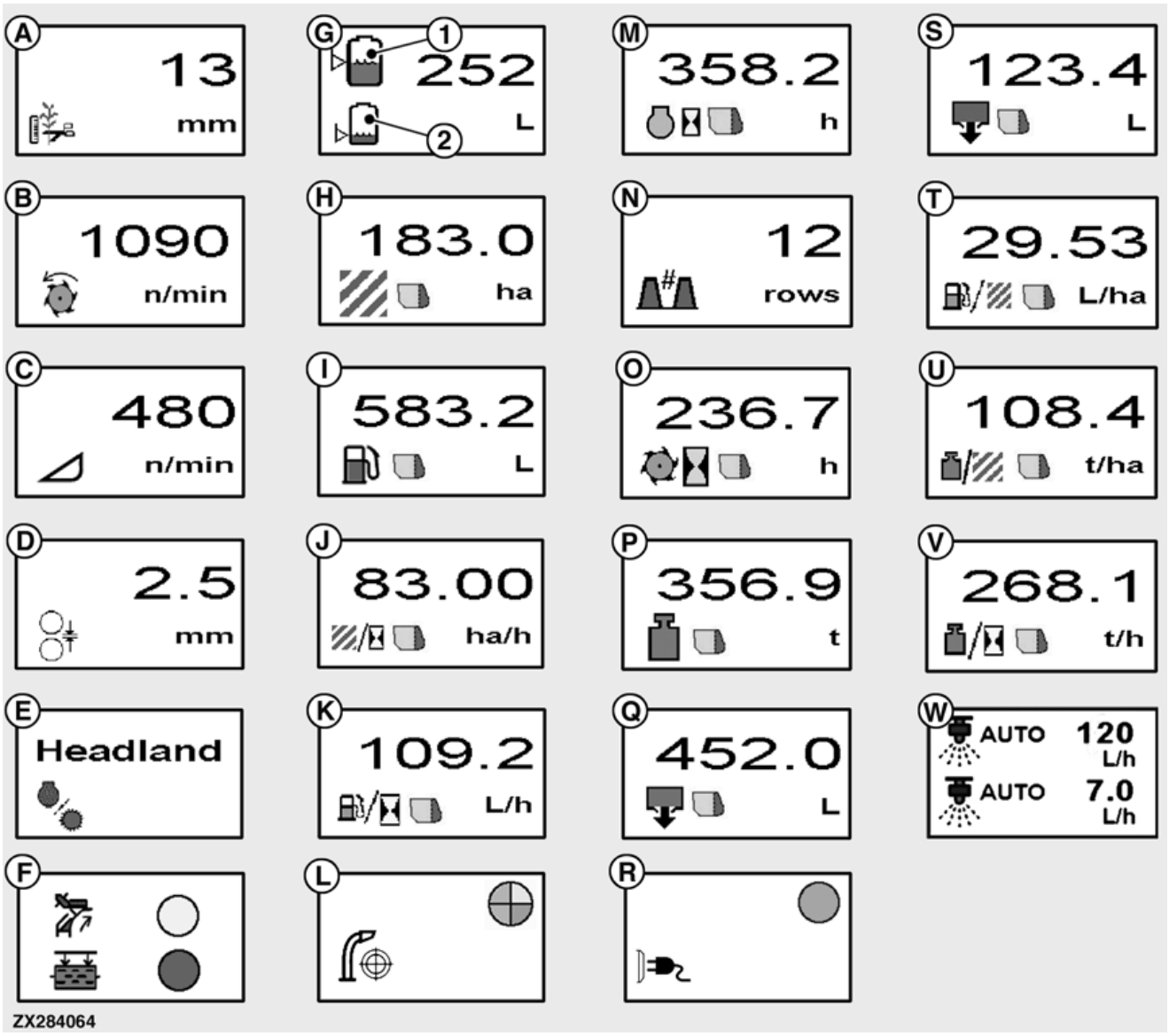
OUCC002,0004CAA -19-17JUN16-2/4



- A—Lenght-of-cut (see **Cutterhead Assembly Setup Page** in this section).
- B—Cutterhead speed (see **Cutterhead Assembly Setup Page** in this section).
- C—Header drive speed (see **Header Page** in this section).
- D—Kernel processor gap[1] (see **Cutterhead Assembly Setup Page** in this section).
- E—Engine speed management mode (see **Engine and Aftertreatment Page** in this section).
  The following engine speed management modes are available:
  - Manual mode
  - Headland mode
  - Economy mode
- F—Stationary knife and knife sharpening status[1] (see **Cutterhead Assembly Setup Page** in this section).
  Displays the stationary knife gap and the cutterhead knife wear/sharpness status (ProCut Option).
- G—Additive tank level[1] (see **Additive Dosing System Page (Option)** in this section).
  Icon (1) represents the high volume system and its relevant level value.
  Icon (2) represents the low volume fill state and changes between full and empty.
- H—Area counter (see **Harvest Statistics Page** in this section).
  Displays the harvested area of the current field.
- I—Fuel used (see **Harvest Statistics Page** in this section).
  Displays the fuel used for the current field.
- J—Area / hour (see **Harvest Statistics Page** in this section).
  Displays the machine output for the current field.
  Range: 0 – 99.99 ha/h in steps of 0.01.

  NOTE: If value is bigger than 99.99 ha/h then 99.99 ha/h is displayed.

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OUCC002,0004CAA -19-17JUN16-3/4

- K—Fuel / hour (see **Harvest Statistics Page** in this section).
  Displays the average fuel consumption for the current field.
  Range: 0 – 999.9 L/h in steps of 0.1.

  NOTE: If value is bigger than 999.9 L/h then 999.9 L/h is displayed.

- L—Active Fill Control status pie[1] (see **Active Fill Control (Option)** in this section).
  Indicates the stage that Active Fill Control is in.
- M—Engine hours
- N—Number of rows (see **Header Page** in this section).
  Displays the number of rows of the current header attached to the machine.
- O—Cutterhead hours (see **Harvest Statistics Page** in this section).
- P—Tons harvested (see **Harvest Statistics Page** in this section).
  Displays the total wet mass harvested if machine is equipped with mass flow sensor.

  NOTE: Cannot be selected if mass flow sensor is not installed. Is not displayed if a GreenStar™ 3 2630 display is detected.

- Q—Additives high volume tank used[1] (see **Harvest Statistics Page** in this section).
  Range: 0 – 9999 L in steps of 1 L.

  NOTE: Cannot be selected if additive dosing system is not installed.

  If value is bigger than 9999 L then counter is reset to 0 L.

- R—3rd party additive dosing system status[1] (see **Additive Dosing System Page — High and Low Volume (Option)** in this section).
  Display the status of a 3rd party dosing system connected to the external power outlet located in the service compartment of the machine.
- S—Additives low volume tank used[1] (see **Harvest Statistics Page** in this section).
  Range: 0 – 999.9 L in steps of 0.1 L.

  NOTE: Cannot be selected if additive dosing system is not installed.

  If value is bigger than 999.9 L then counter is reset to 0.0 L.

- T—Fuel / area (see **Harvest Statistics Page** in this section).
  Range: 0 – 99.99 L/ha in steps of 0.1.

  NOTE: If value is bigger than 99.99 L/ha then 99.99 L/ha is displayed.

- U—Tons / area (see **Harvest Statistics Page** in this section).
  Displays the machine output for the current field if machine is equipped with mass flow sensor.
  Range: 0 – 999.9 t/ha in steps of 0.1.

  NOTE: If value is bigger than 999.9 t/ha then 999.9 t/ha is displayed.

  Cannot be selected if mass flow sensor is not installed. Is not displayed if a GreenStar™ 3 2630 display is detected.

- V—Tons / hour (see **Harvest Statistics Page** in this section).
  Displays the machine throughput for the current field if machine is equipped with mass flow sensor.
  Range: 0 – 999.9 t/h in steps of 0.1.

  NOTE: If value is bigger than 999.9 t/h then 999.9 t/h is displayed.

  Cannot be selected if mass flow sensor is not installed. Is not displayed if a GreenStar™ 3 2630 display is detected.

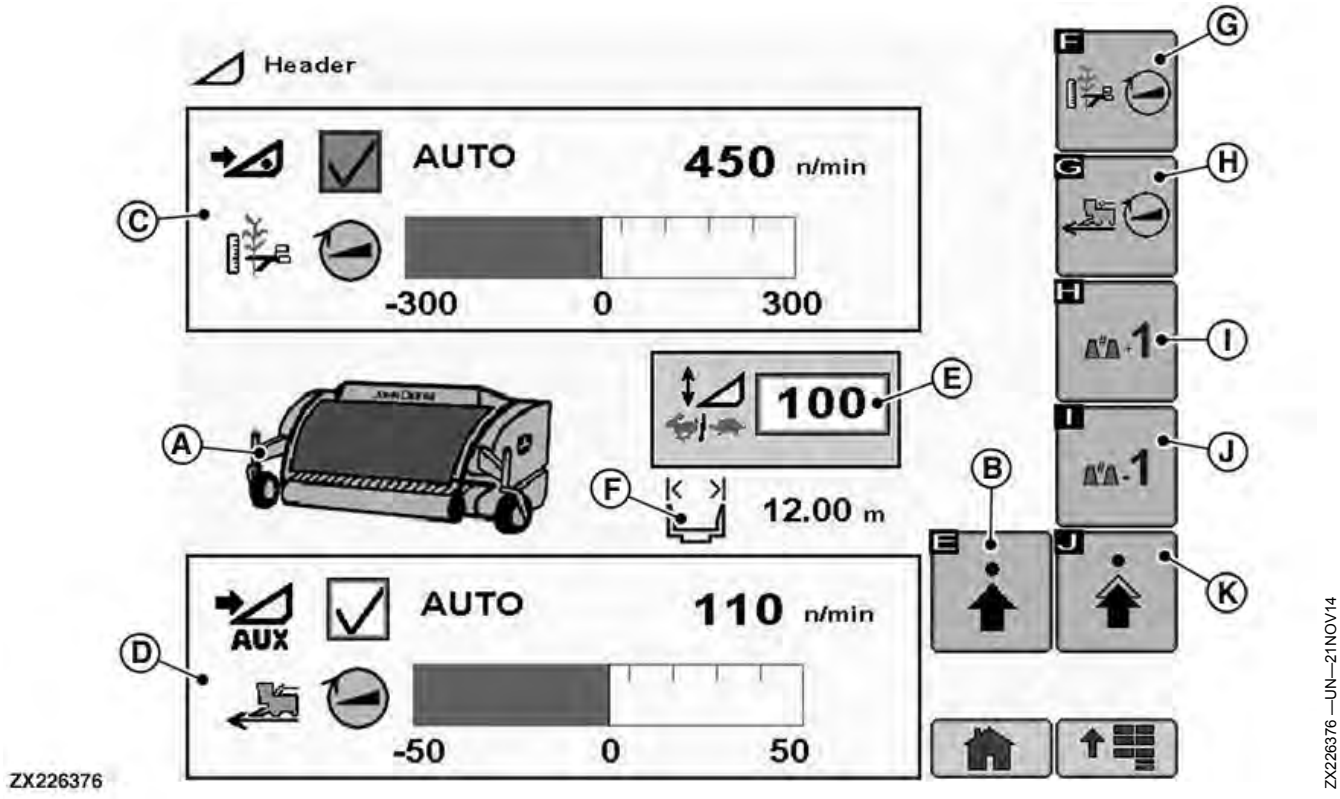
- W—Liters / hour (see **Harvest Statistics Page** in this section).
  Displays the high and low volume dosing flow rates and status.
  Range: Depends on nozzle size.

  NOTE: Cannot be selected if additive dosing system is not installed.

[1] *If equipped*

OUCC002,0004CAA -19-17JUN16-4/4

Header Page



A—Header Graphic
B—Header Setup Page Access Button
C—Header Speed Control
D—Auxiliary Drive Speed Control (If equipped)
E—Header Raise Rate Display
F—Maximum Header Width Display
G—Header Drive Speed Adjustment Button
H—Auxiliary Drive Speed Adjustment Button (If equipped)
I— Row Increment Button
J— Row Decrement Button
K—Header Advanced Settings Page Access Button

The machine is equipped with a header detection system that automatically enables and displays specific header data or functions. Attach the header to the machine and connect multicoupler, then access the Header Setup Page to check or set up the header, if necessary.

NOTE: To access the Header Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

Upon automatic header detection, the following information are displayed:

- Header graphic (A). Each header has a specific graphic display. If the header is not detected, press the header setup page access button (B) to set up the desired header for the display. See **Header Setup Page** in this section.
- Header speed control (C). The drive speed of the header can be automatically or manually controlled. See **Header Drive Speed Control—Auto Mode** or **Header Drive Speed Control—Manual Mode** in this section.

  NOTE: In Auto mode, the drive speed is synchronized with the selected length-of-cut.
- Auxiliary drive speed control (D). If the pickup attached to the machine is equipped with a dual drive and the machine with the auxiliary drive option (Dual Header Drive), the auger drive speed can be automatically or manually controlled independently from the header drive speed. See **Header Drive Speed Control—Auto Mode** or **Header Drive Speed Control—Manual Mode** in this section.

  IMPORTANT: Only if the header is equipped with the relevant hydraulic function, the auxiliary drive speed control (D) is displayed and the auxiliary drive speed adjustment button (H) is enabled.

  NOTE: In Auto mode, the auxiliary drive speed is synchronized with the machine ground speed.
- Header raise rate (E) indicates the speed rate at which the header is raised or lowered. The raise rate (E) is 1 to 100 % of the calibrated header raise rate. See **Interactive Calibration Procedures** in Lubrication and Maintenance section.
  Select to input the desired raise rate and use the rotary switch on the CommandARM™ to modify the value.

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- Header width (F) indicates the maximum header width.
- Press header drive speed adjustment button (G) to adjust header drive speed (C). See **Header Drive Speed Control** in this section.
- Press auxiliary drive speed adjustment button (H) to adjust auxiliary drive speed (D). See **Header Drive Speed Control** in this section.
- The current number of rows value can be reduced or increased by pressing row decrement button (J) or row increment button (I). See **Header Setup Page** in this section.

  NOTE: Changing the value for number of rows also changes the header working width (Number of row X Row spacing). This impacts the GreenStar™ Documentation application.

- Header advanced settings page access button (K). See **Header Advanced Settings Page** in this section.

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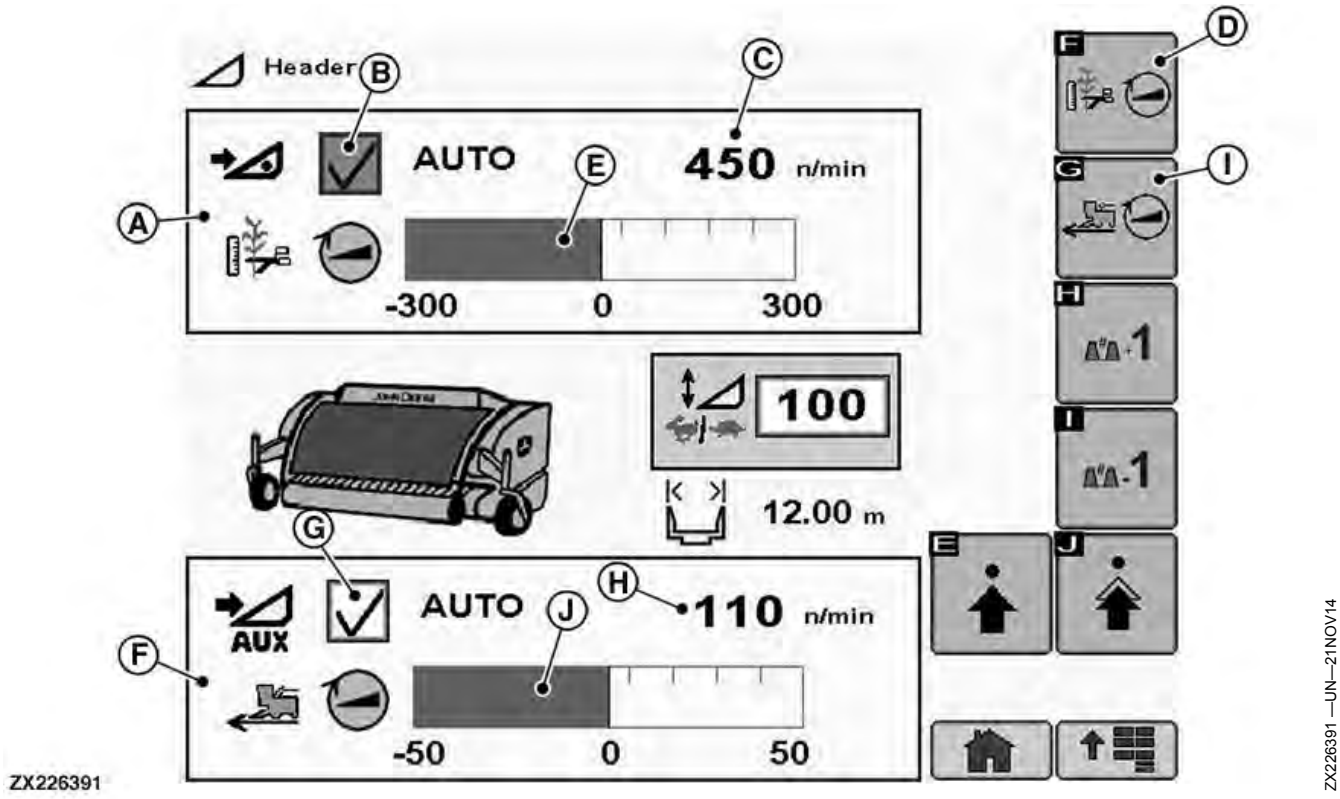

Header Speed Page—Auto Mode

A—Header Drive Speed Control
B—Auto Mode Box
C—Actual Header Drive Speed
D—Header Drive Speed Adjustment Button
E—Header Drive Speed Ratio
F—Auxiliary Drive Speed Control
G—Auto Mode Box
H—Actual Auxiliary Drive Speed
I—Auxiliary Drive Speed Adjustment Button
J—Auxiliary Drive Speed Ratio

Header Drive Speed Control—Auto Mode

To let the machine automatically control the header drive speed (A), proceed as follows:

1. Check auto mode box (B) to synchronize the header drive speed with the desired length of cut based on feed roll speed.
2. The actual header drive speed (C) is calculated upon desired length of cut (feed roll speed).
3. If necessary, press header drive speed adjustment button (D) to adjust the header drive speed ratio (E). Fine-tuning is possible within the range of -300 rpm and +300 rpm added or subtracted to the actual header drive speed (C).

To let the machine automatically control the auxiliary drive speed (F), proceed as follows:

1. Check auto mode box (G) to synchronize the auxiliary drive speed with the machine ground speed.
2. The actual auxiliary drive speed (H) is calculated.
3. If necessary, press auxiliary drive speed adjustment button (I) to adjust the auxiliary drive speed ratio (J). Fine-tuning is possible within the range of -50 rpm and +50 rpm added or subtracted to the actual auxiliary drive speed (H).

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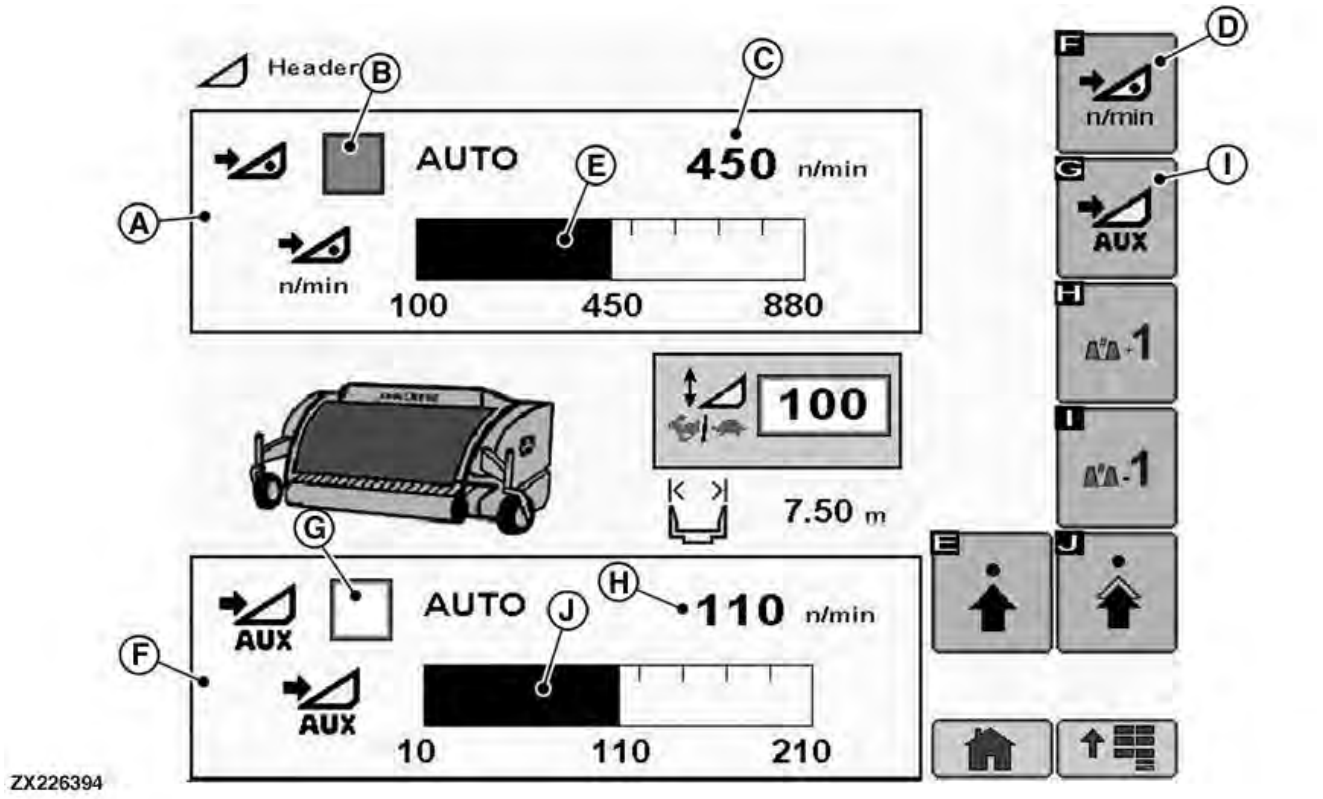

Header Speed Page—Manual Mode

A—Header Drive Speed Control
B—Auto Mode Box
C—Actual Header Drive Speed
D—Header Drive Speed Adjustment Button
E—Header Drive Speed
F—Auxiliary Drive Speed Control
G—Auto Mode Box
H—Actual Auxiliary Drive Speed
I— Auxiliary Drive Speed Adjustment Button
J— Auxiliary Drive Speed

Header Drive Speed Control—Manual Mode

To manually control the header drive speed (A), proceed as follows:

1. Uncheck auto mode box (B).
2. Press header drive speed adjustment button (D) to adjust the header drive speed (E). Depending on the header detected, header drive speed indicator (C) displays different speed ranges.
   - Pickup: 100—880 rpm.
   - 300 Series RHU: 100—760 rpm.
   - 400 Series RHU: 100—610 rpm.

To manually control the auxiliary drive speed (F), proceed as follows:

1. Uncheck auto mode box (G).
2. Press auxiliary drive speed adjustment button (I) to adjust the auxiliary drive speed (J) to 10—210 rpm. Actual auxiliary drive speed (H) is displayed.

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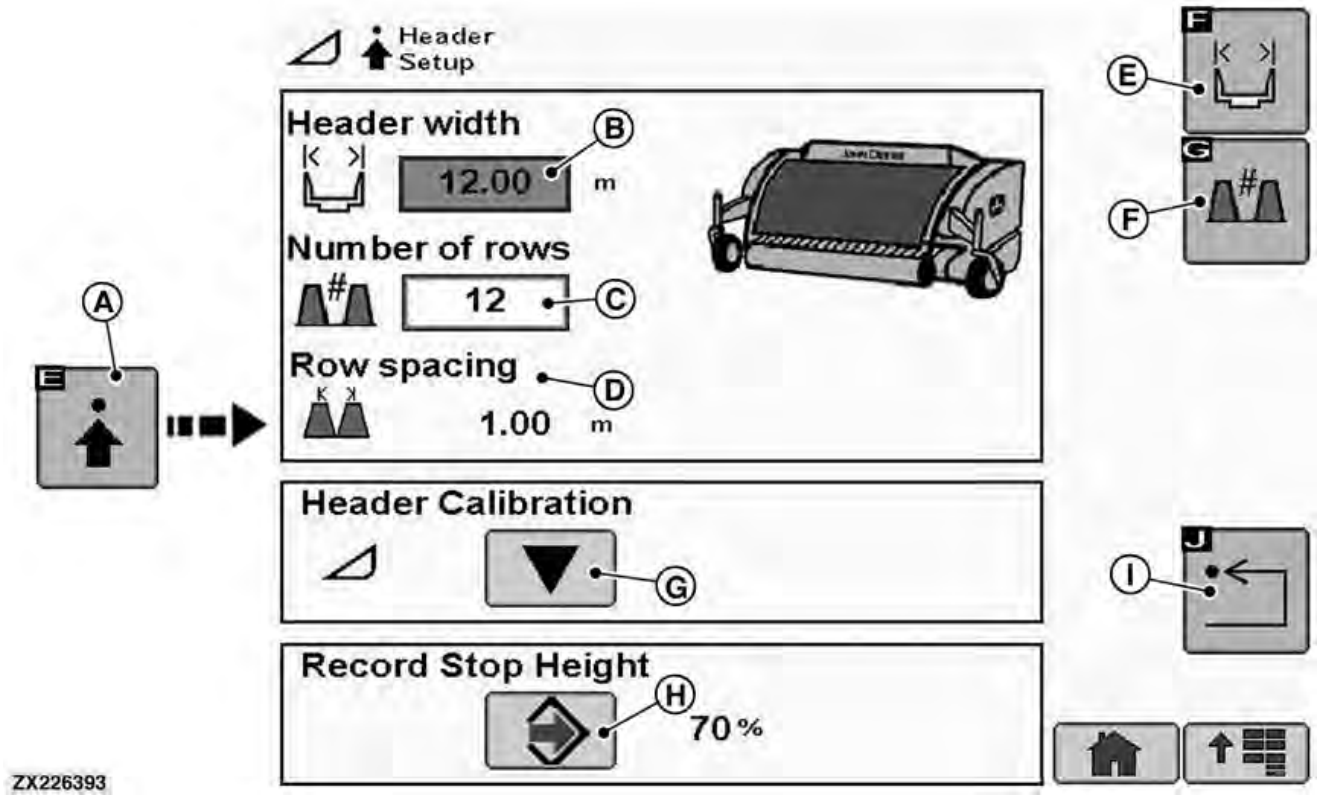
OUCC002,000421B -19-08SEP15-4/7



A—Header Setup Page Access Button
B—Total Header Width
C—Number of Rows
D—Row Spacing
E—Header Width Adjust Button
F—Number of Row Adjust Button
G—Header Calibration Button
H—Record Stop Height Button
I— Return Button

Header Setup Page

On the Header Page press the header setup page access button (A) to enter header specifications, initiate a header calibration or input a record stop height value for engine speed management purpose.

IMPORTANT: In case of header detection malfunction (that is, damaged wire on the header wiring harness), a check box "No header detected-Use default settings" appears instead of the header graphic. In this case, check the box to allow header drive engagement.

NOTE: Define the header total width (B) and number of rows (C) if the header attached to the machine is not automatically recognized by the system.

To define the header attached to the machine, proceed as follows:

1. Press the header width adjust button (E) and input the total header width (B).
2. Press the number of row adjust button (F) to input the number of rows (C).

   IMPORTANT: Row spacing (D) of 0.125—1.5 m (4.9 in—4 ft 11 in) is automatically calculated in steps of 0.125 m (4.9 in).

   Possible input for number of rows (C): 1—96.

   Possible input for total width (B): 3.00—12.0 m (9 ft 10 in—39 ft 4.4 in) in steps of 0.125 m (4.9 in).

3. Carry out the header calibration. Press the header calibration button (G) to start procedure and follow indications provided on display.

   NOTE: Calibration of header raise rate is first initiated followed by the header calibration.

- Record stop height allows the operator to define a header raised position as a trigger for the engine speed management headland mode (see **Engine Speed Management—Field Mode (ProDrive™ Machines Only)** in this section).
  Raise the header and watch for the desired percentage of maximal height then press record stop height button (H) to save the current header position as record stop height.

  NOTE: This does not impact the GreenStar™ Documentation application.

- Press return button (I) to go back to the Header Page.

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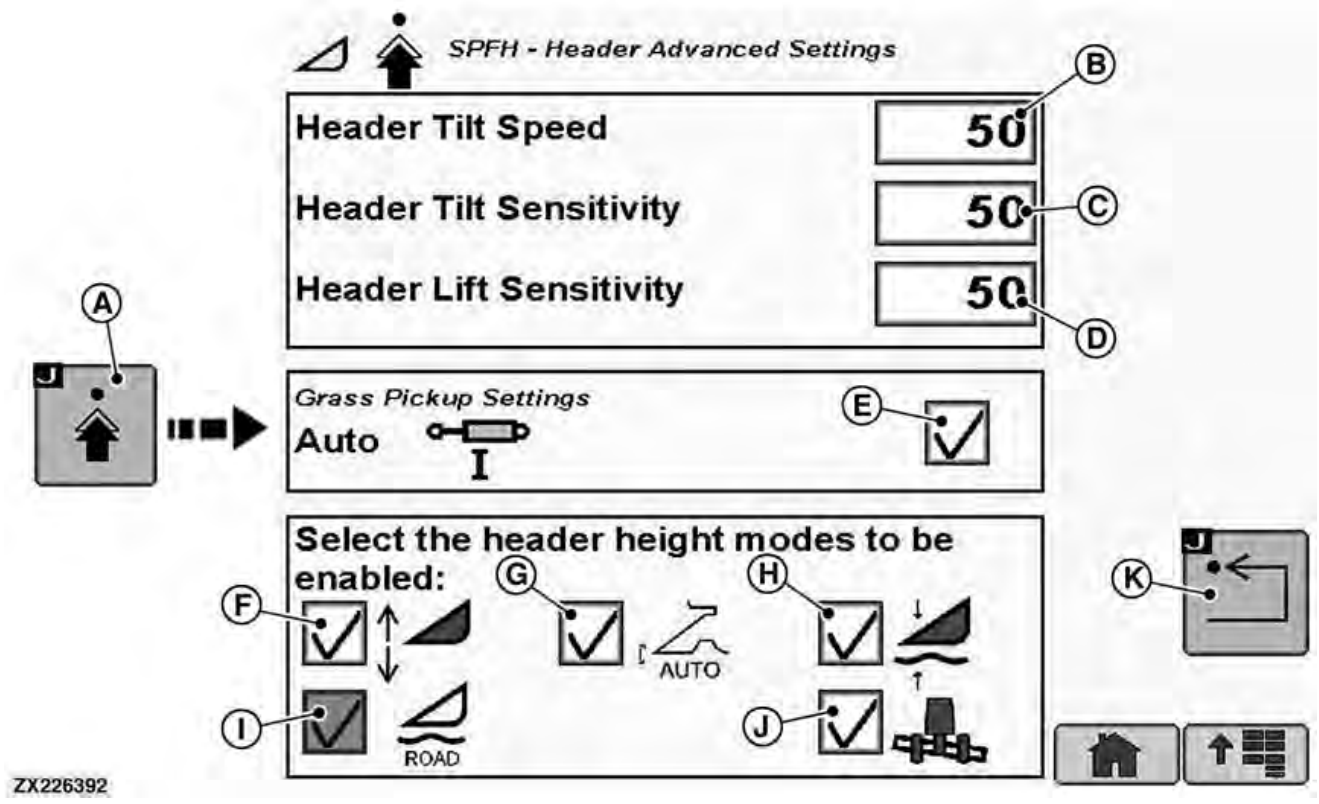
OUCC002,000421B -19-08SEP15-5/7



A—Header Advanced Settings Page Access Button
B—Header Tilt Speed
C—Header Tilt Sensitivity
D—Header Raise Sensitivity
E—Auto SCV1 Box
F—Header Height Sensing Mode Check Box/Icon
G—Header Height Resume Mode Check Box/Icon
H—Header Ground Pressure Mode Check Box/Icon
I— Header Road Float Mode Check Box/Icon
J—Header Tilt Mode Check Box/Icon
K—Return Button

Header Advanced Settings Page

On the Header Page press the header advanced settings page access button (A) to fine-tune various calibrated header functions, activate specific header functions or select which automatic header height control mode is associated to the attached header (see **Primary Display Unit (PDU)** and **CommandTouch™ Armrest Console** in this section).

IMPORTANT: Upon selection, relevant control mode icon (F, G, H) is displayed on the Primary Display Unit to indicate that function is currently active.

NOTE: Depending on machine and header installed options, the Header Advanced Settings page layout differs.

IMPORTANT: If the header and the machine are equipped with the lateral tilt option, check box (J) for header tilt mode is displayed.

For road transport, the rotary harvesting units 375+, 390+, and 475/475+ are only allowed on machine with support wheel. If a 375+, 390+, or 475/475+ rotary harvesting unit is attached to the machine, check box (I) to activate header road float mode.

- An adjustment in the header tilt speed (B) results in a different speed, when manual tilt is requested. This speed does not change the tilt speed in automatic modes.
- An adjustment in the header tilt sensitivity (C) results in a different response time, when automatic tilt is requested by one of the AHC automatic functions. This response time does not change the tilt response time in manual mode.
- An adjustment in the header lift sensitivity (D) results in a different response time, when automatic raise or lower is requested by one of the AHC automatic functions. This response time does not change the raise response time in manual mode.
- Use Auto SCV1 box (E) to enable or disable the function. If the header is detected by the system, the box is automatically checked or unchecked, accordingly.
- Check box (F) to activate header height sensing mode.

Continued on next page

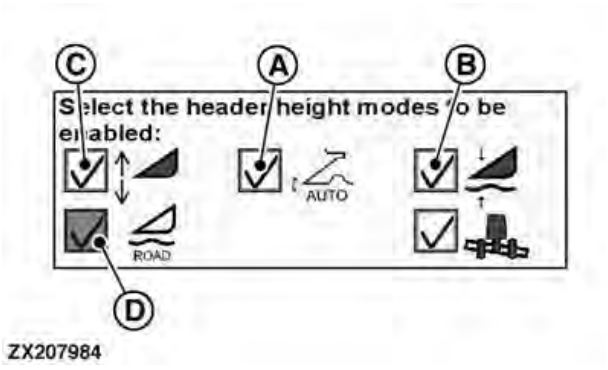
- Check box (G) to activate header height resume mode.
- Check box (H) to activate header height ground pressure mode.
- Check box (I) to activate header road float mode.
- Check box (J) to activate header tilt mode.

Press return button (K) to go back to the Header Page.

OUCC002,000421B -19-08SEP15-7/7

Automatic Header Control

ZX207982 —UN—20DEC13



ZX207984 —UN—17JUN16

The automatic header control is activated by pressing activation button (1), (2) or (3) on the multi-function lever (see arrows).

Depending on which header height mode is enabled (see **Header Advanced Settings** in **Header Page** in this section), the activation buttons activate the following header control mode:

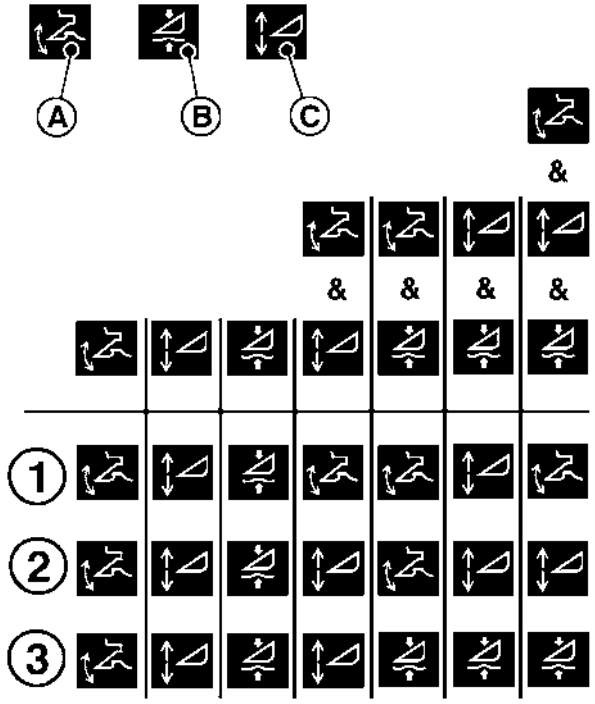
- A—Header Height Resume (return to position—not applicable with activation button 2 on pickup header)
- B—Active Header Float (return to pressure)
- C—Header Height Sensing (machines with AHC option only)

IMPORTANT: Always use the return to pressure mode (B) and check header road float mode (D) when a header equipped with support wheel is installed (375+, 390+, and 475/475+ rotary harvesting units).

The header height sensing mode (C) can only be activated if the rotary harvesting unit is equipped with height sensors. Contact your John Deere dealer.

Depending on which control modes are enabled, each activation button is automatically assigned to one of the header control modes (A), (B), or (C) with different default set points (see assignment chart below and illustration).

Activation Button Assignment Chart			
Enabled Mode	Activation Button 1	Activation Button 2	Activation Button 3
(A) only	**A1**	**A2**	**A3**
(B) only	(B)	(B)	(B)
(C) only	**C1**	**C2**	**C3**
(A) and (B) and Pickup detected	**A1**	(B)	(B)
(A) and (B) and Rotary Harvesting Unit detected	**A1**	**A2**	(B)
(B) and (C)	**C1**	**C2**	(B)
(A) and (C)	**A1**	**C2**	**A3**
(A), (B), and (C)	**A1**	**C2**	(B)



ZX226411 —UN—22NOV14

A—Header Height Resume
B—Active Header Float
C—Header Height Sensing
D—Header Road Float Mode

- **A1**—Default Set Point = 90% of calibrated lift range of machine with header attached.
- **A2**—Default Set Point = 30% of calibrated lift range of machine with header attached.
- **A3**—Default Set Point = 30% of calibrated lift range of machine with header attached.
- **C1**—Default Set Point = 80% of calibrated height range of header (with height sensors).
- **C2**—Default Set Point = 50% of calibrated height range of header (with height sensors).

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OUCC002,0004C9C -19-15JUN16-1/5

- **C3**—Default Set Point = 20% of calibrated height range of header (with height sensors).

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Header Height Resume (Return to position) - Operation

When the Header Height Resume (return to position) mode is active, the return to position icon (A) and the relevant activation button (B) are displayed.

NOTE: When return to upper or lower position is activated and the AHC option is installed, the header will be automatically levelled.

The header height position display (C) represents the current header position with respect to the machine.

Header height set point display (D) represents the default set point or the desired header position with respect to the machine.

When the Header Height Resume (return to position) mode is first activated or reactivated, the header height display (E) displays the desired height value (mm), for a maximum of 3 seconds.

To ensure that header height position display (C) represents the maximum motion of the header that is currently in use, a calibration is required. This calibration determines which potentiometer readings correspond to the lowest and the highest header positions.

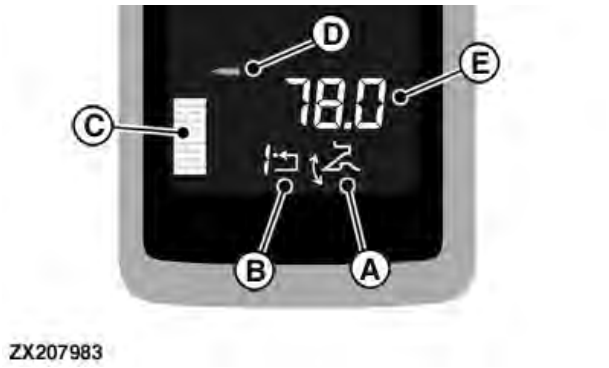
IMPORTANT: Without doing this calibration, the header height position display (C) may not show the complete range of motion of the header.

To calibrate the upper and lower header height limit, refer to **Vehicle Settings Page** in this section.

Changes to header height set point (D) can be made by turning header height control dial (F).

A—Return-to-Position Icon
B—Header Activation Icon
C—Header Height Position Display
D—Header Height Set Point Display
E—Header Height Display
F—Header Height Control Dial

ZX226408 —UN—22NOV14



ZX207983 —UN—22NOV14

ZX207987 —UN—20DEC13

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OUCC002,0004C9C -19-15JUN16-3/5

Active Header Float (return to pressure) - Operation

When the Active Header Float (return to pressure) mode is active, the return to pressure icon (A) and the relevant activation button (B) are displayed.

The header height position display (C) is used to graphically represent the current pressure.

Additionally, the previously stored desired pressure value is used to determine which pointer element of the header height set point display (D) is displayed.

When the Active Header Float (Return to pressure) mode is first activated or reactivated, the header ground pressure display (E) displays the desired pressure value (bars or psi), for a maximum of 3 seconds.

To ensure that the header height position display (C) represents the maximum pressure range of the header that is currently in use, a calibration is required. This calibration determines which pressure readings correspond to the operating range of the header.

IMPORTANT: Without doing this calibration, the header height position display (C) may not show the complete range of pressure of the header.

To calibrate the upper and lower header ground pressure limit, refer to **Vehicle Settings Page** in this section.

Changes to ground pressure set point (D) can be made by turning header height control dial (F).

A—Return-to-Pressure Icon
B—Header Activation Icon
C—Header Height Position Display
D—Header Height Set Point Display
E—Header Ground Pressure Display
F—Header Height/Ground Pressure Control Dial

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ZX207986 —UN—20DEC13

ZX207987 —UN—20DEC13

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Header Height Sensing (Machines with AHC Option Only) - Operation

When the Header Height Sensing mode is active, the header height sensing icon (A) and the relevant activation button (B) are displayed.

IMPORTANT: To be activated, the header height sensing mode requires the rotary harvesting unit being equipped with height sensors. Contact your John Deere dealer.

The header height position display (C) represents the current header height with respect to the header height sensors.

Header height set point display (D) represents the default set point or the desired header height with respect to the header height sensors.

When the Header Height Sensing mode is first activated or reactivated, the header height display (E) shows the desired height value (mm), for a maximum of 3 seconds.

To ensure that the header height position display (C) represents the maximum motion of the header that is currently in use, a calibration is required. This calibration determines which header height sensor readings correspond to the lowest and the highest header positions.

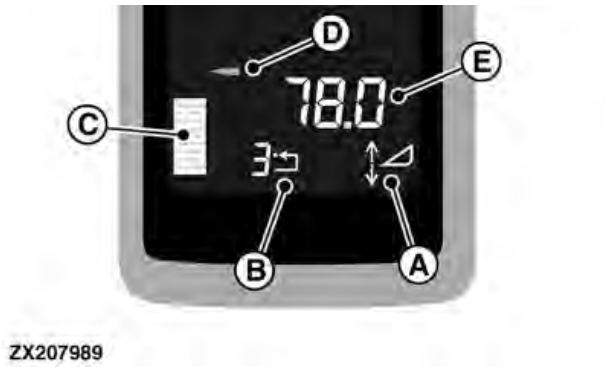
IMPORTANT: Without doing this calibration, the header height position display (C) may not show the complete range of motion of the header.

To calibrate the upper and lower header ground pressure limit, refer to **Vehicle Settings Page** in this section.

Changes to the header height set point (D) can be made by turning header height control dial (F).

A—Header Height Sensing Icon
B—Header Activation Icon
C—Header Height Position Display
D—Header Height Set Point Display
E—Header Height Display
F—Header Height Control Dial

ZX226410 —UN—22NOV14



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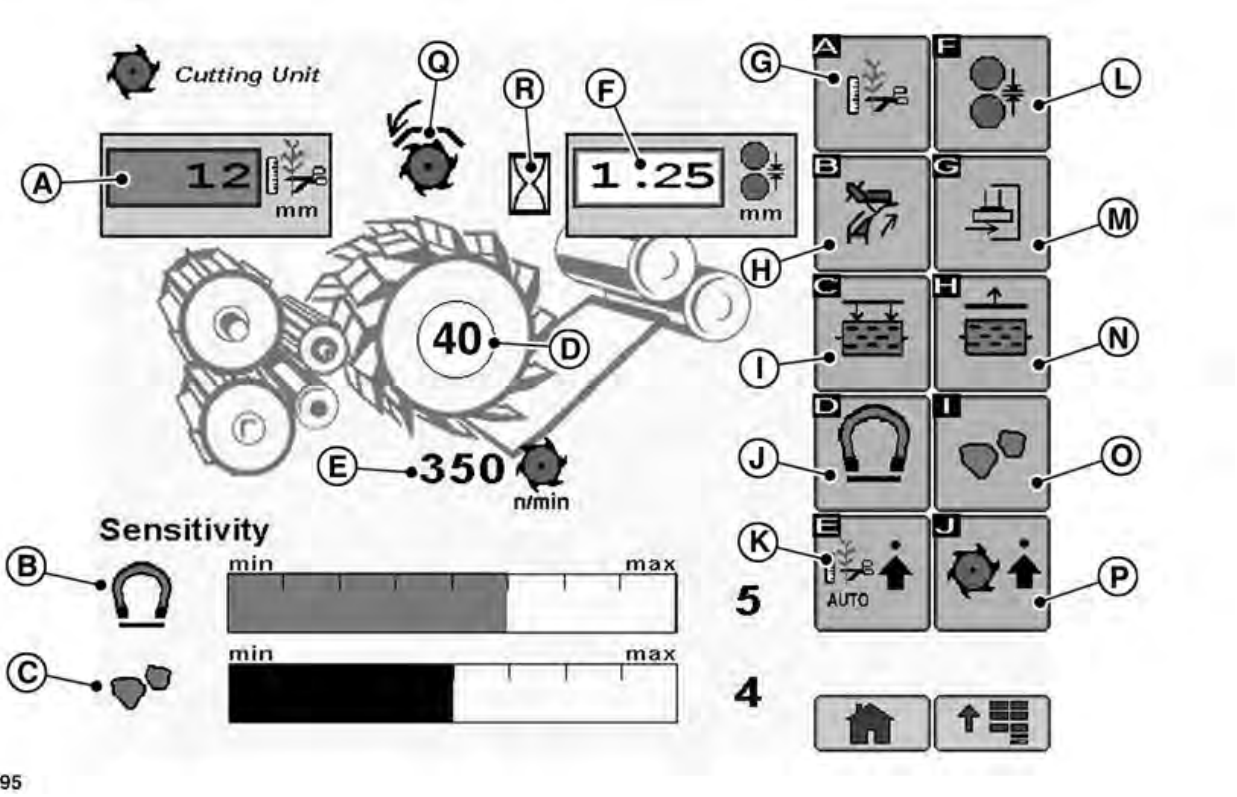
Cutterhead Assembly Setup Page



A—Length of Cut
B—Metal Detector Sensitivity Display
C—Stone Detector Sensitivity Display
D—Number of Knives
E—Cutterhead Speed
F—Kernel Processor Gap (Option)
G—Length-of-Cut Adjust Button
H—Knife Sharpening Request Button
I— Stationary Knife Adjustment Request Button
J— Metal Detector Sensitivity Adjust Button
K—AutoLoc™ Page Access Button
L—Kernel Processor Gap Adjust Button (Option)
M—Park Stone Button
N—Stationary Knife Away Button
O—Stone Detector Sensitivity Adjust Button
P—Cutterhead Assembly Advanced Settings Page Access Button
Q—Knife Sharpening Door Position Status
R—Kernel Processor Gap Adjust Hour Glass (Option)

NOTE: To access the Cutterhead Assembly Setup Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

The Cutterhead Assembly Setup Page displays the following information related to the cutterhead knives, grinding process, length of cut, metal detector, kernel processor, and stone detector:

- Current length of cut (A):
  - 3—15 mm (0.12—0.59 in) with 64 knives.
  - 5—19 mm (0.19—0.74 in) with 56 knives.
  - 6—22 mm (0.24—0.86 in) with 48 knives.
  - 7—26 mm (0.28—1.02 in) with 40 knives.

  With half a set of cutterhead knives:
  - 6—30 mm (0.24—1.18 in) with 32 knives.
  - 10—38 mm (0.39—1.49 in) with 28 knives.
  - 12—44 mm (0.48—1.73 in) with 24 knives.
  - 14—52 mm (0.55—2.04 in) with 20 knives.

NOTE: If the AutoLoc™ function is active the length-of-cut value is grayed out and **Auto** *is displayed instead.*

Press length-of-cut adjust button (G) and use the rotary switch on the CommandARM™ to modify the length of cut.

- Metal detector sensitivity (initial threshold) display (B). Press metal detector sensitivity adjust button (J) to temporarily modify the initial threshold value (see **Metal/Stone Detector Operation** in this section).

  NOTE: Metal detector sensitivity display range: 1 to 8

- Stone detector sensitivity (threshold) display (C). Press stone detector sensitivity adjust button (O) to temporarily modify the initial threshold value (see **Metal/Stone Detector Operation** in this section).

  NOTE: Stone detector sensitivity display (C) does not appear on machines without stone detector option.

  Stone detector sensitivity display range: 1 to 8

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- Current number of knives (D). Press cutterhead assembly advanced settings page access button (P) to modify the number of knives installed. See **Cutterhead Assembly Advanced Settings Page** in this section.
- Current cutterhead speed (E).
- Current kernel processor gap (F). Depending on kernel processor type installed on machine, select to input gap value from:
  - 0.5—4.5 mm (0.020—0.177 in) in steps of 0.25 mm (0.010 in) with roll-type kernel processor.
  - 0.5—3 mm (0.020—0.118 in) in steps of 0.25 mm (0.010 in) with KernelStar™.

  IMPORTANT: Desired gap adjustment starts once value is accepted. Hour glass (R) is displayed until the desired gap (F) is reached. Kernel processor gap cannot be modified when hour glass (R) is displayed.

  IMPORTANT: On machine with KernelStar™, it is recommended to reduce the kernel processor gap over its lifetime regularly thus ensuring similar processing quality and increasing lifetime of discs.

  NOTE: To select which kernel processor type is installed on machine, see **Cutterhead Assembly Advanced Settings Page** *in this section.*

  The current kernel processor gap (F) and adjust button (L) appear on machine with automatic (electrical) adjustment option only. To adjust kernel processor gap on machine with manual adjustment option, refer to **Adjust Kernel Processor Gap (Manual Adjustment)** in Field Operation section.
- Press knife sharpening request button (H) to start knife sharpening and stationary knife adjustment processes. See **Knife Sharpening/Stationary Knife Adjustment** in this section.

  IMPORTANT: Before initiating a knife sharpening process, briefly engage the main clutch especially at the start in the morning.

  NOTE: During knife sharpening process, the knife sharpening door position (Q) is displayed.
- Press stationary knife adjustment request button (I) to initiate a stationary knife adjustment without sharpening process. See **Knife Sharpening/Stationary Knife Adjustment** in this section.

  IMPORTANT: Before initiating a stationary knife adjustment process, briefly engage the main clutch especially at the start in the morning.

  NOTE: Stationary knife adjustment is started at step 3/4 of knife sharpening/stationary knife adjustment process.
- If the stone is out of home position, after a knife sharpening process abort or error condition, press park stone button (M) to initiate sharpening stone parking procedure.

  IMPORTANT: Park stone button (M) is disabled under the following conditions:

  - Knife sharpening stone is in park position or

  - Engine not running for more than 1 s, or

  - Main clutch is activated, or

  - Quick stop button is pressed, or

  - Field mode is not active.
- Press stationary knife away button (N) once (less than 0.5 seconds) to put stationary knife away from cutterhead for a 25 seconds period.
- Press and hold stationary knife away button (N) longer than 0.5 seconds to put stationary knife away from cutterhead as long as the button is held.
- If machine is equipped with the HarvestLab™ sensor, press AutoLoc™ advanced settings page access button (K) to fine-tune the desired length of cut in regard with dry matter level. See **AutoLoc™ Page** in this section.

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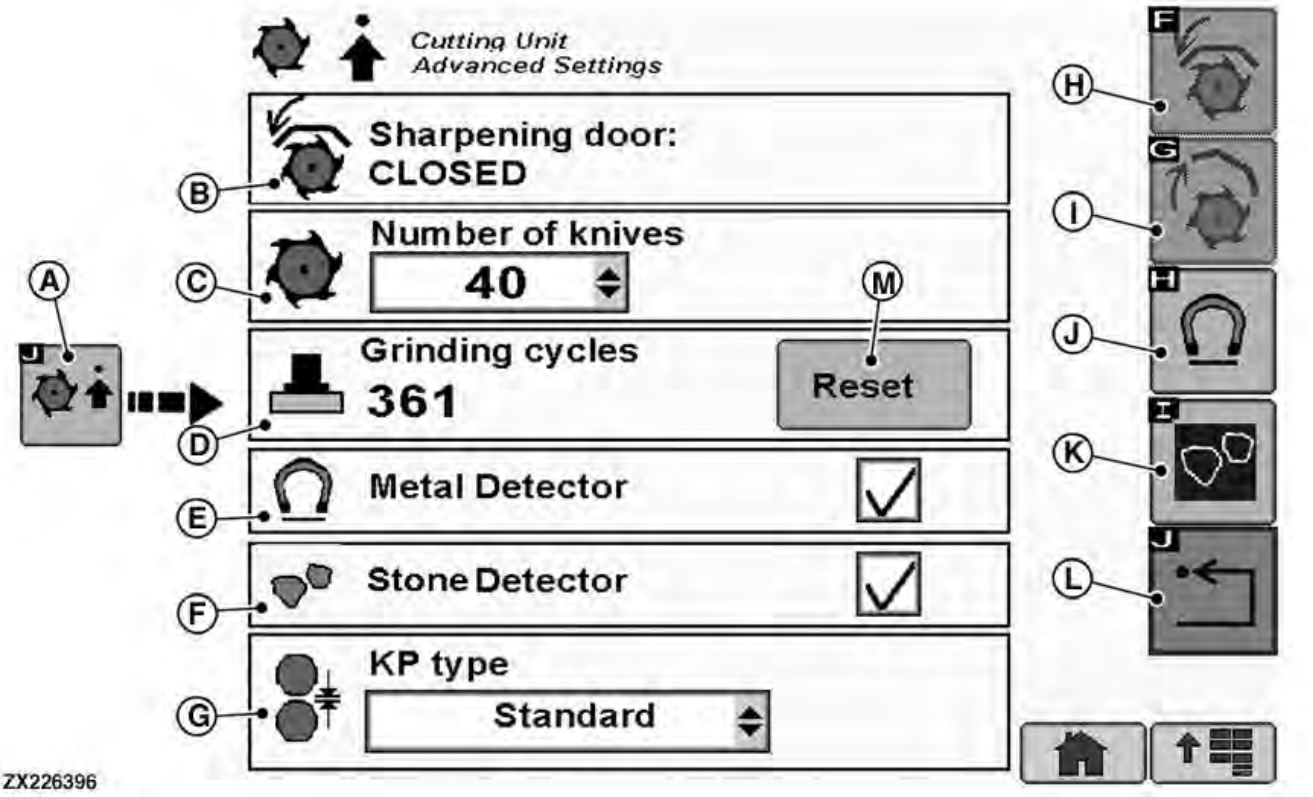

A—Cutterhead Assembly Advanced Settings Page Access Button
B—Sharpening Door Status
C—Number of Knives
D—Grinding Cycles
E—Metal Detector Enable Box
F—Stone Detector Enable Box
G—Kernel Processor Type Selection
H—Close Sharpening Door Button
I— Open Sharpening Door Button
J— Metal Detector Enable Button
K—Stone Detector Enable Button
L—Return Button
M—Reset Button

Cutterhead Assembly Advanced Settings Page

On the Cutterhead Assembly Setup Page press the cutterhead assembly advanced settings page access button (A) to perform the following:

- Open or close sharpening door (B) if the sharpening stone is in home position. Press close or open sharpening door button (H) (I) accordingly.

  NOTE: If the sharpening stone is not in its home position, the buttons (H) and (I) are not activated (grayed out). Press park stone button to place sharpening stone in home position.

- Modify the current number of knives (C). Select 20, 24, 28, 32, 40, 48, 56, or 64 knives.

  NOTE: Changing the number of knives modifies the length-of-cut range.

- Grinding cycles (D) indicates the overall number of sharpening stone processes carried out since the first start of the machine or the last sharpening stone replacement. Every time the sharpening stone is replaced, press reset button (M) to reset grinding cycle count (D).

  IMPORTANT: Replace the sharpening stone after 450 cycles. Count increases by 1 after each completed grinding cycle only.

- Enable metal detector (E). Press enable metal detector button (J) to enable (checked) or temporarily disable (unchecked) metal detector functionality.

  IMPORTANT: If metal and/or stone detector are disabled, they remain disabled until the key switch is cycled.

- Enable stone detector (F). Press enable stone detector button (K) to enable (checked) or temporarily disable (unchecked) stone detector functionality.

- Use drop-down menu to select the kernel processor type (G) installed on the machine.

  NOTE: Standard= Kernel processor with rolls.

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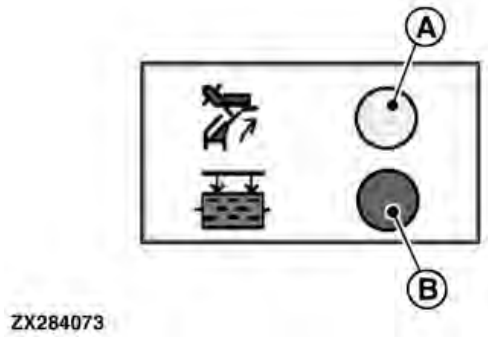

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ZX284074

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Knife Sharpening/Stationary Knife Adjustment

IMPORTANT: Knife sharpening request button (C) is enabled if the following conditions are met:

- **Field mode is active**
- **Engine is running**
- **Main clutch is not activated**
- **Quick stop button is not actuated**

NOTE: Knife sharpening process can be aborted at any step.

On machine with the ProCut (cutting management) option, the ProCut interface[1] indicates when the knife sharpening (A) and/or the stationary knife adjustment (B) processes should be carried out. The stationary knife gap and knife sharpness values calculated by the cutting management system provides recommendations for grinding cycles (D) and finishing cycles (E) values.

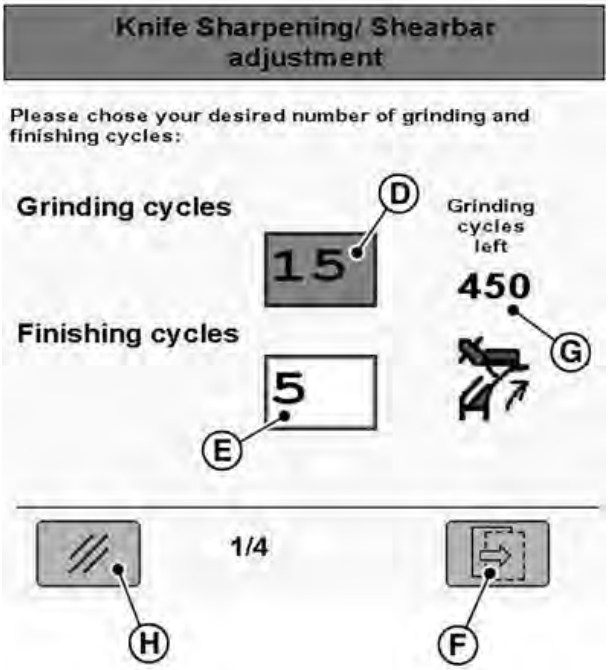
Knife sharpening status icon (A) description:

- A **red** icon indicates that a knife sharpening process must be initiated as soon as possible.
- A **yellow** icon indicates that the knife sharpness is acceptable and no sharpening process must be initiated yet.
- A **green** icon indicates that the knife sharpness is in good condition and no sharpening process is required.

Stationary knife adjustment status icon (B) description:

- A **red** icon indicates that a stationary knife adjustment process must be initiated as soon as possible.
- A **yellow** icon indicates that the stationary knife gap is acceptable and no adjustment process must be initiated yet.
- A **green** icon indicates that the stationary knife gap is optimal and no adjustment process is required.

On the Cutterhead Assembly Setup Page press knife sharpening request button (C) to initiate the knife sharpening and stationary knife adjust processes as follows:



ZX284075

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A—Knife Sharpening Status Icon
B—Cutterhead Knife Status Icon
C—Knife Sharpening Request Button
D—Grinding Cycles Input
E—Finishing Cycles Input
F—Next Page Button
G—Grinding Cycles Left
H—Abort Button

1. Check or input the desired/recommended grinding cycles (D) and finishing cycles (E) then press next page button (F).

NOTE: Grinding cycles: up to 90

Finishing cycles: up to 10

Continued on next page

Sharpening cycles left (G) until optimal sharpening stone replacement. The display counts down from **450 to 0**.

IMPORTANT: Replace the sharpening stone after 450 cycles. Countdown decreases by 1 after each completed grinding cycle only.

[1]Displayed on the home page

NOTE: Once countdown has reached 0, the display counts up again and "overdue" is displayed below the number.

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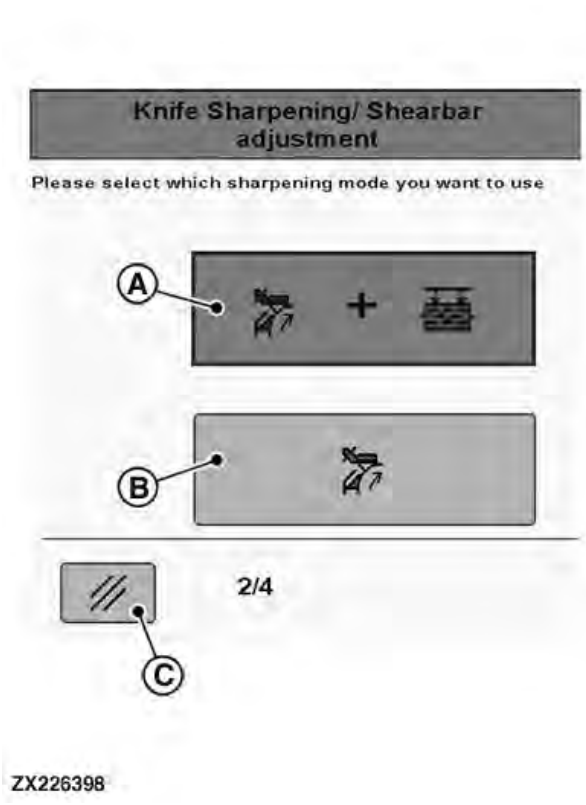
2. Select the desired sharpening mode:
   a. Press standard mode button (A) to initiate sharpening and stationary knife adjustment processes.
   b. Press quick mode button (B) to initiate sharpening process only.

NOTE: Once sharpening mode is selected the cutterhead reverse drive is engaged and sharpening process started.

A—Standard Mode Button
B—Quick Mode Button
C—Abort Button



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CAUTION: Before servicing or adjusting the machine, always disengage all drives, shut off engine and wait until all moving parts have stopped.

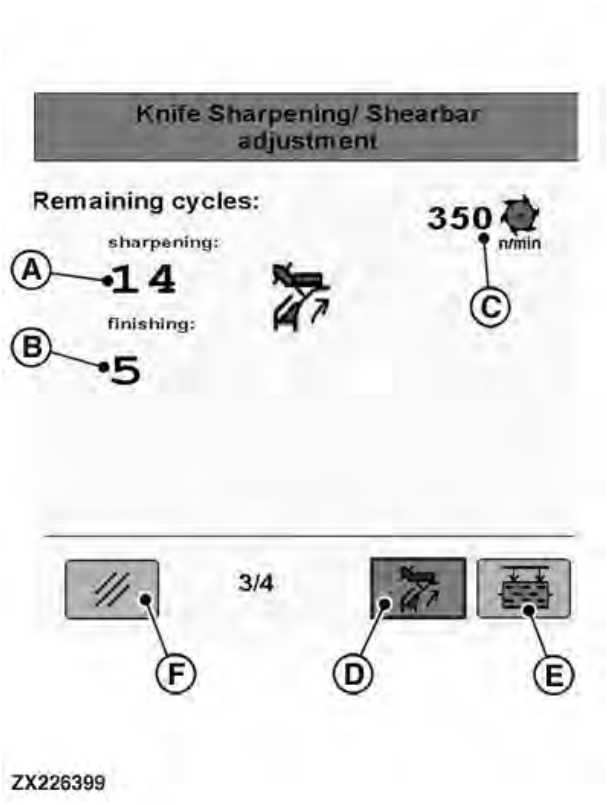
3. This page displays information on the status of the knife sharpening process including number of remaining cycles (A) and (B) and cutterhead speed (C).

   a. If the sharpening standard mode has been selected in step 2/4, the knife sharpening button (D) and stationary knife adjustment button (E) are not displayed and the stationary knife adjustment process starts right after the stone sharpening process has completed.

   b. If the sharpening quick mode has been selected in step 2/4, a completion message is displayed once sharpening process has ended. The cutterhead reverse rotation is stopped. Press stationary knife adjustment button (E) to initiate the process or knife sharpening button (D) to start a new sharpening process if necessary.

IMPORTANT: If during the sharpening process the abort button (F) or the quick stop button is pressed then the Cutterhead Assembly Setup Page is displayed. Press the stone park position button (G) prior to starting a new sharpening process.

A—Remaining Grinding Cycles
B—Remaining Finishing Cycles
C—Cutterhead Speed
D—Knife Sharpening Button
E—Stationary Knife Adjustment Button
F—Abort Button
G—Park Stone Button



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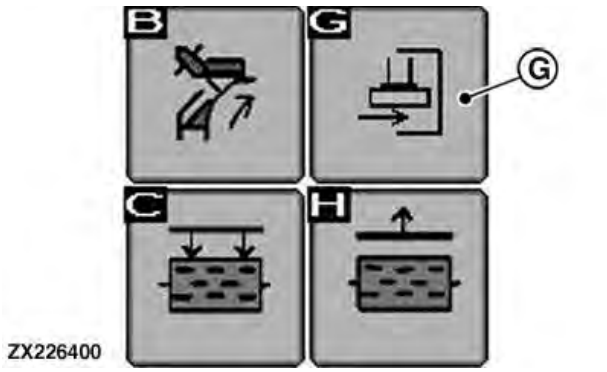

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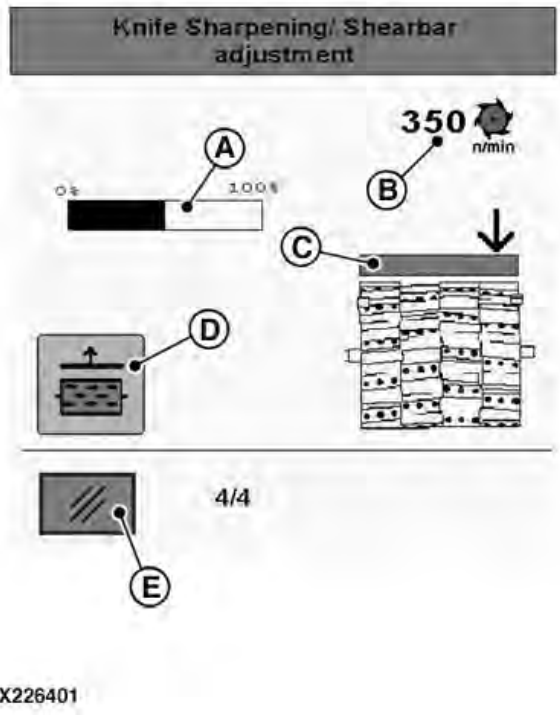
4. This page displays information on the progression of the stationary knife adjustment process (A), the current cutterhead speed (B), and the side of the stationary knife (C) currently adjusted (see arrow).

   Press the stationary knife away button (D) to move the stationary knife away from the cutterhead in case of an emergency or if an error occurred during adjustment.

   At the end of the process, the display returns to the Cutterhead Assembly Setup Page.

A—Stationary Knife Adjustment Progression
B—Cutterhead Speed
C—Stationary Knife Adjustment Side Location
D—Stationary Knife Away Button
E—Abort Button



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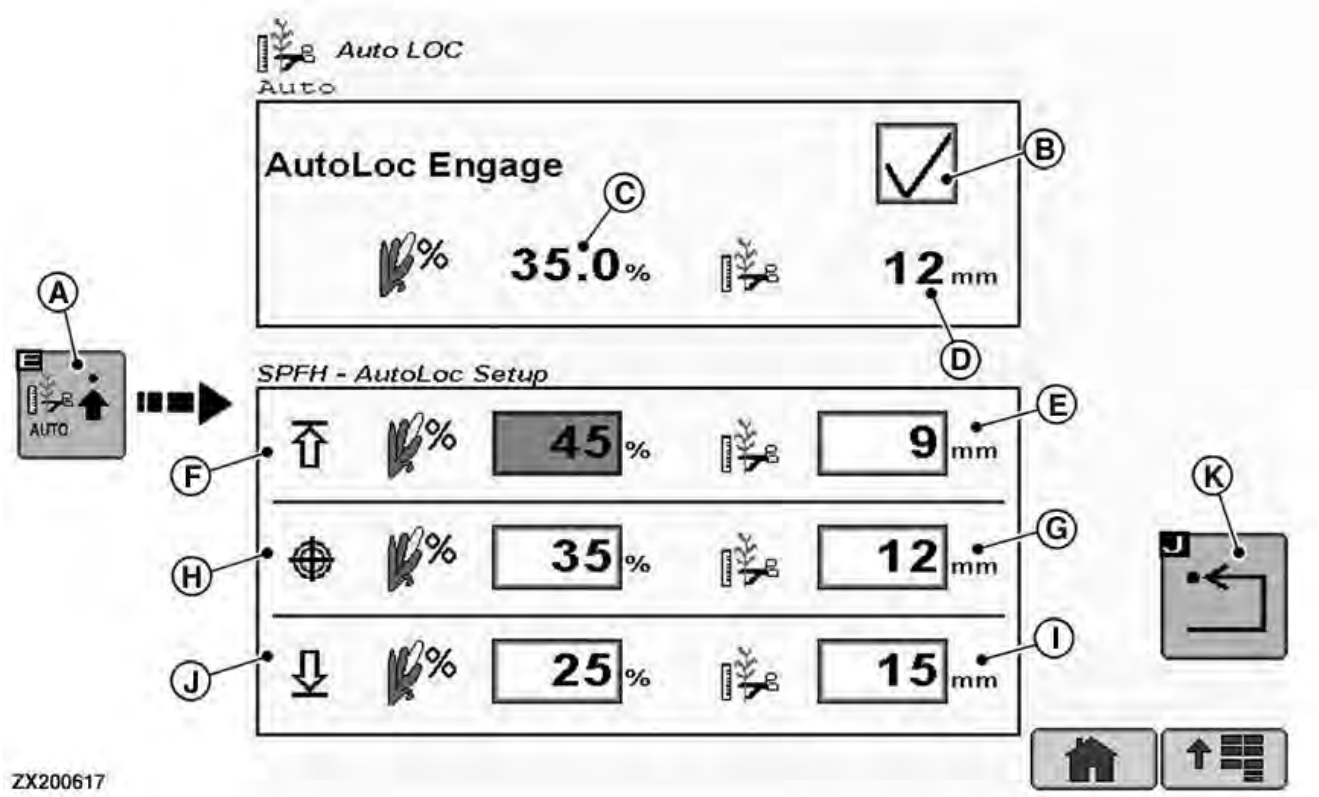

A—AutoLoc™ Page Access Button
B—AutoLoc™ Engage Box
C—Dry Matter Level
D—Actual Length of Cut (mm)
E—Maximum Length of Cut (mm)
F—Maximum Dry Matter Level (%)
G—Optimum Length of Cut (mm)
H—Optimum Dry Matter Level (%)
I— Minimum Length of Cut (mm)
J— Minimum Dry Matter Level (%)
K—Return Button

AutoLoc™ Page

On the Cutterhead Assembly Setup Page press the AutoLoc™ page access button (A) to activate the automatic length-of-cut function or adjust the desired length of cut depending on the dry matter level as follows:

- Check AutoLoc™ engage box (B) to activate the function. Dry matter level (C) and actual length of cut (D) are then monitored and displayed.

  NOTE: If the AutoLoc™ function is active, the length-of-cut value displayed on Header Page is grayed out and **Auto** *is displayed instead.*

- Depending on the number of knives:
  - Input the maximum length of cut [mm] (E) in relation to the maximum dry matter level [%] (F).
  - Input the Optimum length of cut [mm] (G) in relation to the optimum dry matter level [%] (H).
  - Input the Minimum length of cut [mm] (I) in relation to the minimum dry matter level [%] (J).

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Metal/Stone Detector Operation

To operate the metal/stone detector, the following conditions must be met:

- Engine is running
- Road safety mode button in field mode
- Quick stop switch not actuated
- Main clutch engaged

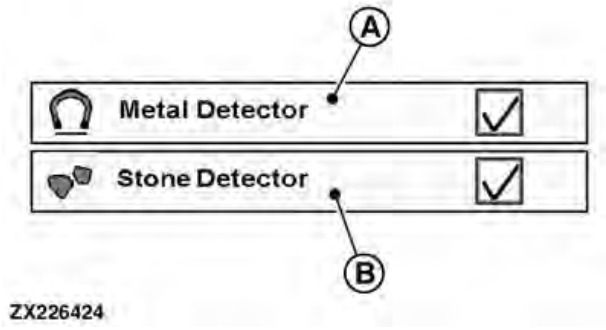
To operate, the metal/stone detector must be first enabled and then activated. Proceed as follows:

Enable/Activate The Metal/Stone Detector:

1. Access the Cutterhead Assembly Advanced Settings Page (see **Cutterhead Assembly Setup Page** in this section) and ensure that relevant box (A) or (B) is checked to enable metal or stone detector.
2. On multi-function lever, press symbol (1) at switch (C) twice to engage the feed rolls in forward operation and activate metal/stone detector. Metal detector icon (D) and stone detector icon (E) indicate that metal detector and stone detector are armed (ready to use).
3. On Cutterhead Assembly Setup Page, the actual metal detector sensitivity (F) and stone detector sensitivity (G) levels (initial threshold) are displayed.

IMPORTANT: Depending on metal or stone detection (frequency of occurrence), this sensitivity (F), (G) can be temporarily modified (see When Ferrous Metal is Detected or When Stone is Detected in this section).

A—Box—Enable Metal Detector
B—Box—Enable Stone Detector (If equipped)
C—Header Engage/Reverse Switch
D—Metal Detector Icon
E—Stone Detector Icon
F—Metal Detector Sensitivity
G—Stone Detector Sensitivity



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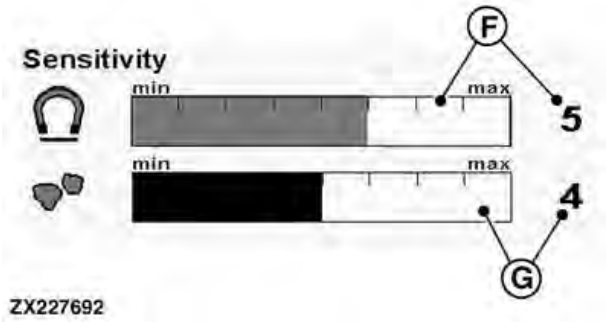

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CAUTION: To avoid personal injury, never search for metal unless all drives are disengaged, engine and ignition switch shut off and all moving parts have stopped.

When Ferrous Metal is Detected:

When piece of metal is detected, the metal detector icon (A) flashes, and the sound alarm is activated for 5 seconds. The feed rolls are immediately disengaged.

The feed rolls must be reversed. Press the symbol (1) at switch (B) three times and hold to reverse the feed rolls.

NOTE: Only the feed rolls are reversed, not the header.

IMPORTANT: Reverse the feed rolls long enough to reverse the crop out of the feed roll housing.

Disengage the main clutch.

Shut off engine and wait until all moving parts have stopped.

To help finding the piece of metal detected, a Metal Detected warning message (C) is displayed. Use the metal location information (D) to find the piece of metal and remove it.

Once piece of metal is removed, press enter button (E) to erase this message.

NOTE: Position indication (D) seen in direction of travel.

A—Metal Detector Icon
B—Header Engage/Reverse Switch
C—Warning Message
D—Position Indication
E—Enter Button

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ZX227696

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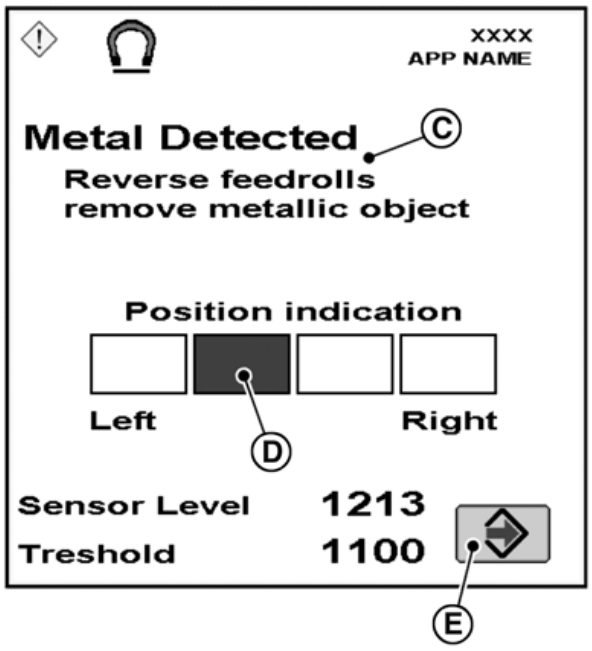

ZX227695

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If false tripping occurs, the metal detector sensitivity can be temporarily modified.

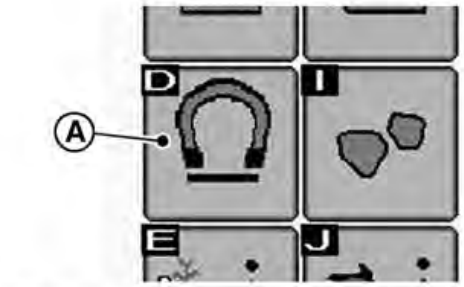
On Cutterhead Assembly Setup Page, press metal detector sensitivity adjust button (A) then use the rotary switch on the CommandARM™ to modify the sensitivity level (B).

NOTE: Always start with a sensitivity level (B) set to 8 (maximal sensitivity) then decrease level according to the false tripping occurrence.

Sensitivity adjusting range is 1 to 8, corresponding to Min and Max level on bar graph (C).

- Select level 8 if small piece of metal must be detected.
- Select level 0 if only big piece of metal must be detected.

A—Metal Detector Sensitivity Adjust Button
B—Sensitivity Level
C—Sensitivity Level Bar Graph



ZX227693

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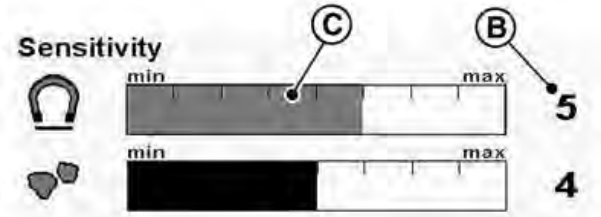

ZX227697

ZX227697 —UN—23NOV14

OUCC002,0004C57 -19-01JUN16-3/5

⚠ CAUTION: To avoid personal injury, never search for stone unless all drives are disengaged, engine and ignition switch shut off and all moving parts have stopped.

When Stone is Detected:

When stones are detected, the stone detector icon (A) flashes, and the sound alarm is activated for 5 seconds. The feed rolls are immediately disengaged.

The feed rolls must be reversed. Press the symbol (1) at switch (B) three times and hold to reverse the feed rolls.

NOTE: Only the feed rolls are reversed, not the header.

IMPORTANT: Reverse the feed rolls long enough to reverse the crop out of the feed roll housing.

Disengage the main clutch.

Shut off engine and wait until all moving parts have stopped.

A—Stone Detector Icon
B—Header Engage/Reverse Switch

ZX227698

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ZX227696

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Continued on next page

OUCC002,0004C57 -19-01JUN16-4/5

If false tripping occurs, the stone detector sensitivity can be temporarily modified.

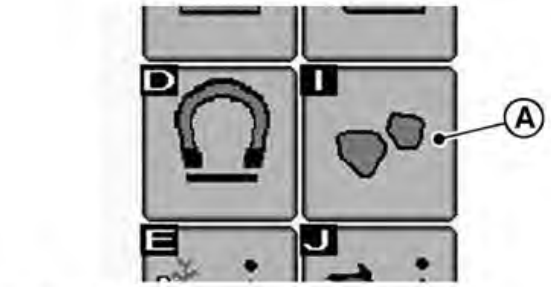
On Cutterhead Assembly Setup Page, press stone detector sensitivity adjust button (A) then use the rotary switch on the CommandARM™ to modify the sensitivity level (B).

NOTE: Always start with a sensitivity level (B) set to 8 (maximal sensitivity) then decrease level according to the false tripping occurrence.

Sensitivity adjusting range is 1 to 8, corresponding to Min and Max level on bar graph (C).

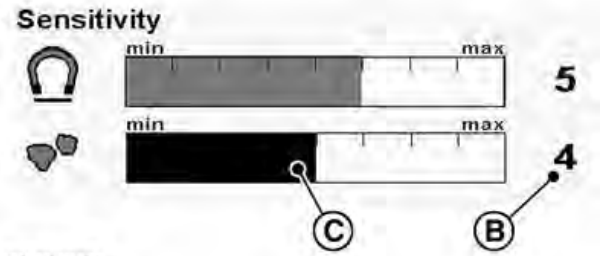
- Select level 8 if small stones must be detected.
- Select level 0 if only big stones must be detected.

A—Stone Detector Sensitivity Adjust Button
B—Sensitivity Level
C—Sensitivity Level Bar Graph



ZX227699

ZX227699 —UN—23NOV14

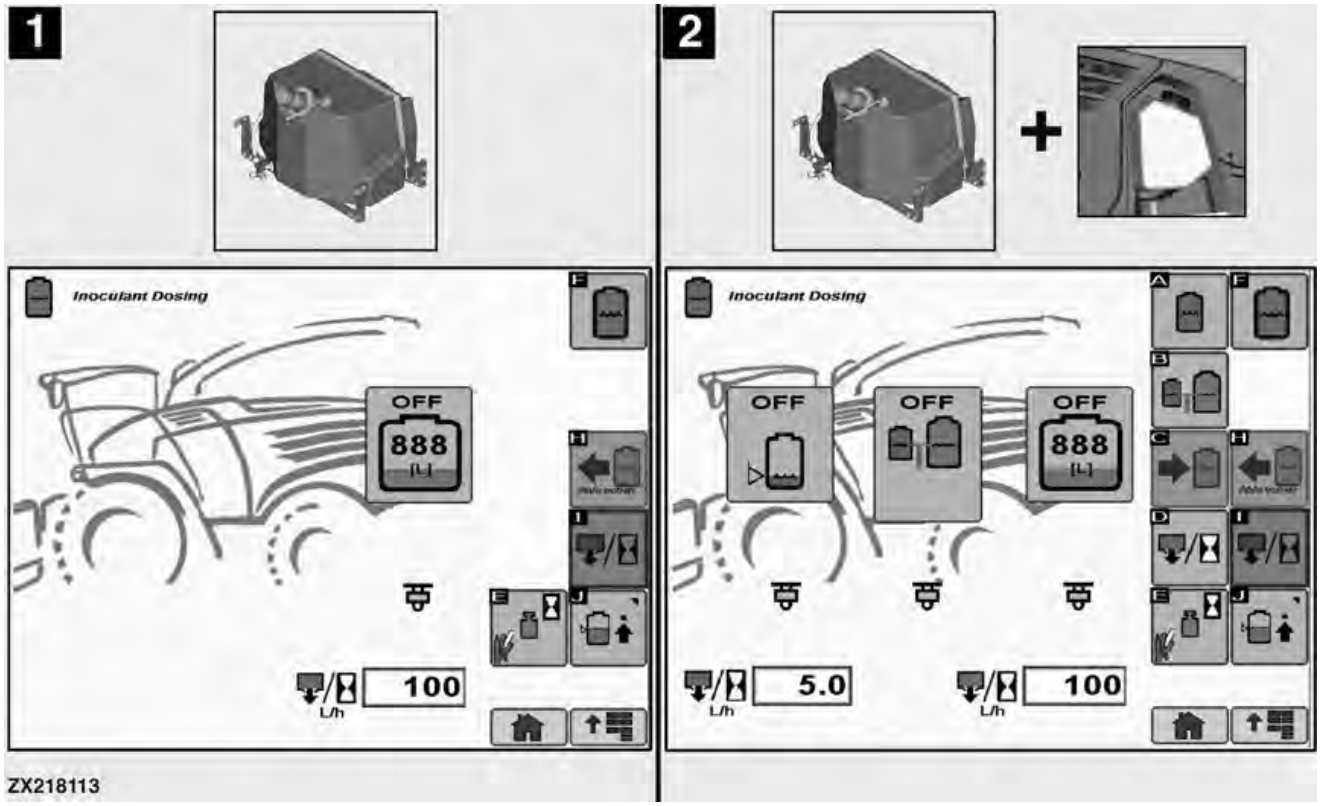


ZX227700

ZX227700 —UN—23NOV14

OUCC002,0004C57 -19-01JUN16-5/5

Additive Dosing System Page (Option)



1— High Volume Additive Dosing System Page
2— High and Low Volume Additive Dosing System Page

Overview:

In addition to the basic high volume dosing system, machines with TL System (Twin Line) are equipped with an additional low volume (concentrate) dosing system and a secondary dosing pump. Activate the TL System (Twin Line) to mix low volume and high volume contents (see **Additive Dosing System Page—High and Low Volume (Option)**).

The components of the system are rated to handle the following active ingredients listed in forage preservative products:

High Volume System Only:
- Water soluble silage inoculants
- Water soluble enzymes
- Ammonium Isobutyrate
- Formic Acid
- Potassium Sorbate
- Propionic Acid
- Sodium Benzoate

Low Volume System Only:
- Water soluble silage inoculants
- Water soluble enzymes

Ingredients not mentioned may attack the relevant system components.

Depending on the dosing system installed on machine, relevant additive dosing system page (1) or (2) is displayed.

IMPORTANT: In several harvesting conditions fluid temperature of silage additive mixture in high volume and/or low volume tank might exceed the permissible temperature of lactic acid bacteria (LAB).

Exceeding temperatures can harm the viability of LAB depending on the time exposed and LAB type. To avoid damage of additive please refer to the specifications of used LAB and monitor temperature of additive during usage.

Please carry only as much liquid as you need and/or use thermo resistant LAB additives which are tolerating higher temperatures.

Continued on next page

OUCC002,0004192 -19-04SEP15-1/2

IMPORTANT: When harvesting at temperatures below freezing point, additive dosing system application may be insufficient due to frozen inoculant.

To avoid malfunction or damage please refer to the manufacturer specifications of used inoculants and monitor temperature of additive during usage. Never use alcohol-based antifreeze in the system.

NOTE: To access the Additive Dosing System Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

Additive dosing system operating mode can be set to **AUTO** or **ON**.

NOTE: Default operating mode at each machine start-up is OFF.

- Select **AUTO** mode if system must begin dosing when crop flow is detected only.
- Select **ON** mode if system must begin dosing immediately after this operating mode is selected.

To set up the relevant additive dosing system, refer to **Additive Dosing System Page—High Volume (Option)** or **Additive Dosing System Page—High and Low Volume (Option)** in this section.

Before operating additive dosing system, ensure that no air is caught in the circuit. To fulfill the required dosing rate, the system should be primed every time the tank runs dry, components in dosing cabinet have been removed, or the system was not operated for day. Refer to **Additive Dosing System (Option)** in Lubrication and Maintenance section.

IMPORTANT: Additive dosing system requires particular attention. Always follow instructions listed and refer to Additive Dosing System (Option) in Lubrication and Maintenance section.

IMPORTANT: Before conducting any maintenance, look at the product label that is being used for any special handling procedures. Also check if there is any protective gear required to handle the product (face shield or goggles, chemically resistant apron, boots, respirator, or gloves).

Daily Maintenance:

- Nozzle and nozzle screen cleaning
- System cleaning
- Filter bowl cleaning (High volume dosing system)
- Tank lid cleaning (High volume dosing system)
- Tank cleaning (Low volume dosing system)

Miscellaneous Maintenance:

Depending on the product being used, the high volume dosing system shall be flushed with water at a regular interval (Refer to product manufacturer instructions.)

Although the pump can run dry, extended operation of a dry pump increases wear. Watch the relevant tank level.

If bacterial inoculants are used, flush the system daily after every use.

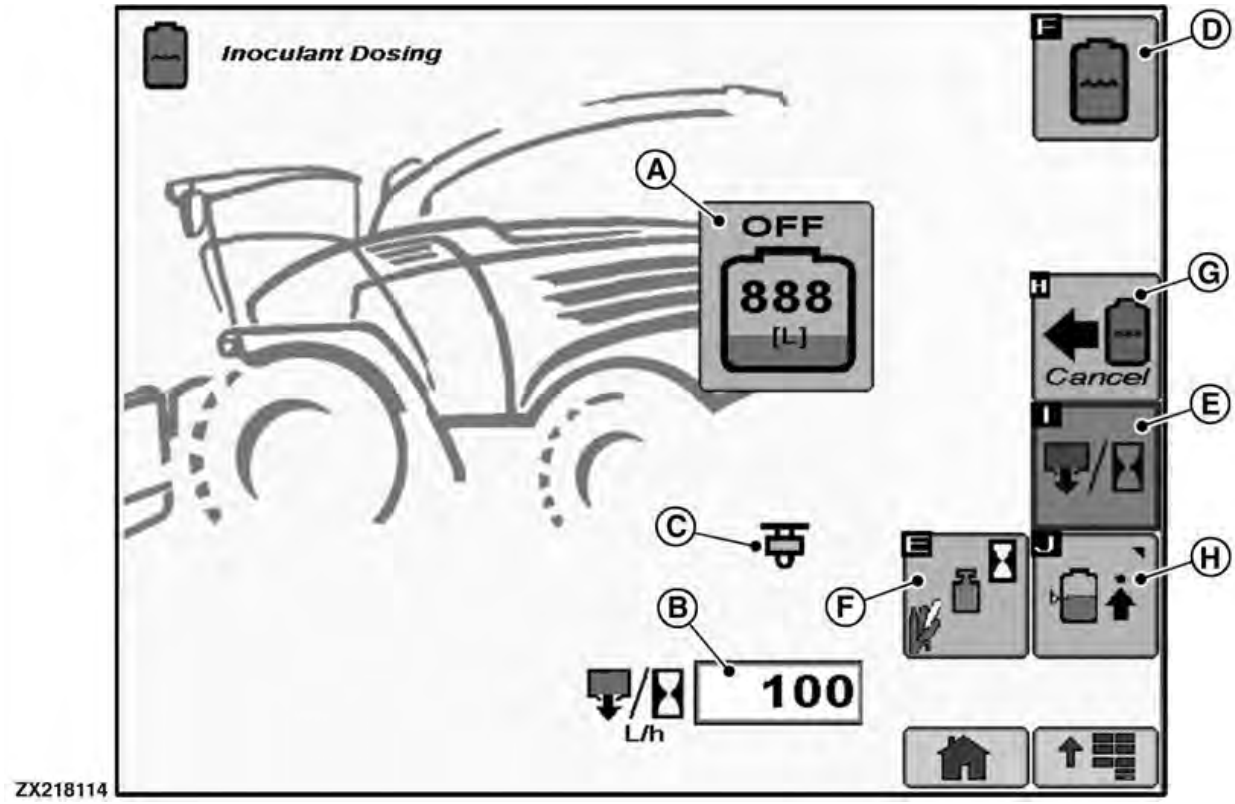
Between crops and also at the end of the season, sanitize the system. Sanitizing process keeps the system free of plugged lines and clogged nozzles.

Winter Storage:

- Thoroughly flush the system with water.
- Remove the filter bowl and run dry until the water has cleared out of the intake side.
- Drain all lines on the outlet side.
- Never use oils or alcohol-based antifreeze in the system.
- For spring start-up, if the pump is frozen, turn off the power immediately to avoid burning the motor out or blowing a fuse.

OUCC002,0004192 -19-04SEP15-2/2

Additive Dosing System Page—High Volume (Option)



ZX218114 —UN—06OCT14

A—High Volume Fill Level and Operating Mode
B—High Volume Flow Rate Adjust
C—High Volume Status
D—High Volume Operating Mode Button
E—High Volume Flow Rate Adjust Button
F—Dosing Mode Button
G—Clean Mode Button
H—Additive Dosing Nozzle Page Access Button

If the machine is equipped with high volume additive dosing system, this page displays operating mode (A), flow rate (B), and dosing status (C).

NOTE: To access the relevant Additive Dosing System Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

- **High Volume Fill Level and Operating Mode:** Indicates the high volume fill level and the current operating mode (A). Press high volume operating mode button (D) to toggle between the following operating modes:
  - AUTO: Select this mode if system must begin dosing when crop flow is detected only.
  - ON: Select this mode if system must begin dosing immediately after this operating mode is selected.

    NOTE: This mode is available only if a dosing per time flow rate has been selected (see High Volume Flow Rate Adjust).

  - OFF: Default mode at machine start-up.

    NOTE: If the operating mode is in AUTO or ON mode and clean mode button (G) is pressed, the operating mode is automatically set to OFF after the cleaning process is complete.

    Fill level (A) is displayed. Range: 0—360 L in steps of 3 L.

- **High Volume Flow Rate Adjust:** To adjust the high volume flow rate (B) refer to **High Volume Flow Rate Adjust** in this section.
- **High Volume Status:** Indicates the high volume dosing status (C). See **High Volume Status** in this section.
- To start a cleaning process, press Clean mode button (G). See **Clean Mode** in this section.
- To access additive dosing advanced settings page, press Additive Dosing Nozzle Page access button (H). See **Additive Dosing Nozzle Page** in this section.

Continued on next page

OUCC002,0004CA1 -19-18JUN16-1/6

High Volume Flow Rate Adjust

Depending on the machine configuration (mass flow sensor and/or HarvestLab™ sensor installed) and the nozzle size, the high volume flow rate can be adjusted as follows:

- Dosing per time (A). Range: 30—382 L/h in steps of 1 L/h (default: 100 L/h).
- Dosing per wet mass (B). Range: 0.1—5.0 L/t in steps of 0.1 L/t (default: 1.0 L/t).

  NOTE: Does not appear on machines without mass flow sensor option.

- Dosing per dry mass (C). Range: 0.1—15.0 L/t in steps of 0.1 L/t (default: 3.0 L/t).

  NOTE: Does not appear on machines without mass flow sensor and HarvestLab™ sensor options.

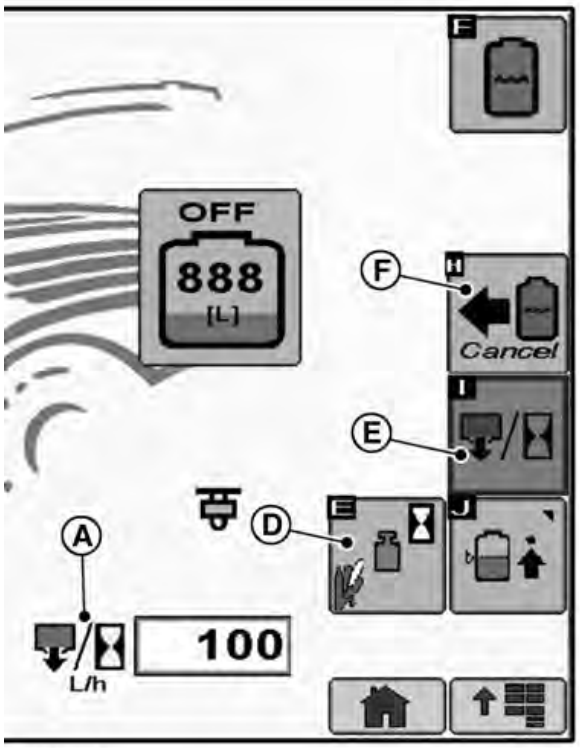
To toggle between the dosing modes (A, B, C) press dosing mode button (D). The icon on the high volume flow rate adjust button (E) will show the relevant dosing mode.

Press high volume flow rate adjust button (E) and use the rotary switch on the CommandARM™ to modify the flow rate accordingly.

IMPORTANT: The desired flow rate must be within the specification for the size of the high volume nozzle installed. See Additive Dosing Advanced Settings in Additive Dosing Nozzle Page and Change Additive Dosing System Nozzle in this section.

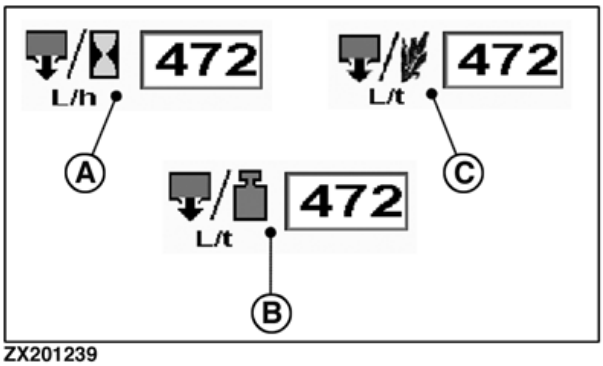
NOTE: The dosing modes (A, B, C) are grayed out while clean mode (F) is active (2 min.). See Clean Mode in this section.

A—Dosing Rate Per Time
B—Dosing Rate Per Wet Mass
C—Dosing Rate Per Dry Mass
D—Dosing Mode Button
E—High Volume Flow Rate Adjust Button
F—Clean Mode Button



ZX218115

ZX218115 —UN—06OCT14



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ZX201239 —UN—21JUN13

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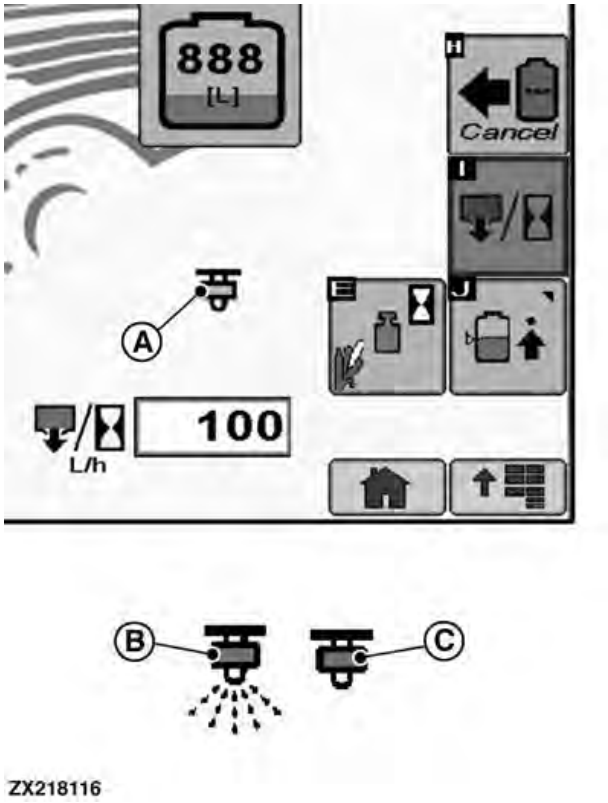
OUCC002,0004CA1 -19-18JUN16-2/6

High Volume Status

The high volume dosing status (A) is indicated by nozzle icon (B) or (C). Depending on the high volume operating modes (AUTO/ON/OFF) selected, nozzle icon (B) or (C) is displayed.

A—High Volume Dosing Status
B—Nozzle Icon—Dosing Activated
C—Nozzle Icon—Dosing Deactivated



ZX218116

ZX218116 —UN—06OCT14

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OUCC002,0004CA1 -19-18JUN16-3/6

Clean Mode

At end of work or day remove all residual from the tank and fill the tank with approximately 20 L (5.3 gal.) of clean water to clean the dosing system circuit. The operating mode must be set to AUTO or ON to start the cleaning mode.

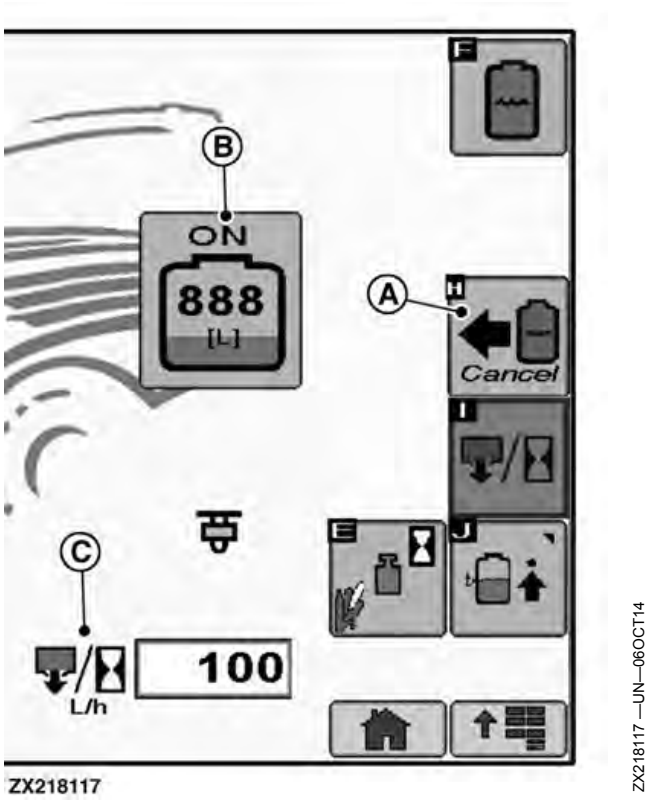
Press clean mode button (A) to start the cleaning process.

While the cleaning mode is active (about 2 min.):

- **Cancel** is displayed on the clean mode button (A). Press clean mode button (A) to cancel process if necessary.
- Operating mode (B) is set to ON.
- Flow rate setting (C) is automatically set to maximum flow allowed by the installed nozzle (Dosing per time value is grayed out and cannot be modified).

After the cleaning process has finished, the operating mode (B) is automatically set to OFF.

A—Clean Mode Button
B—Operating Mode Status
C—Flow Rate Setting



ZX218117 —UN—06OCT14

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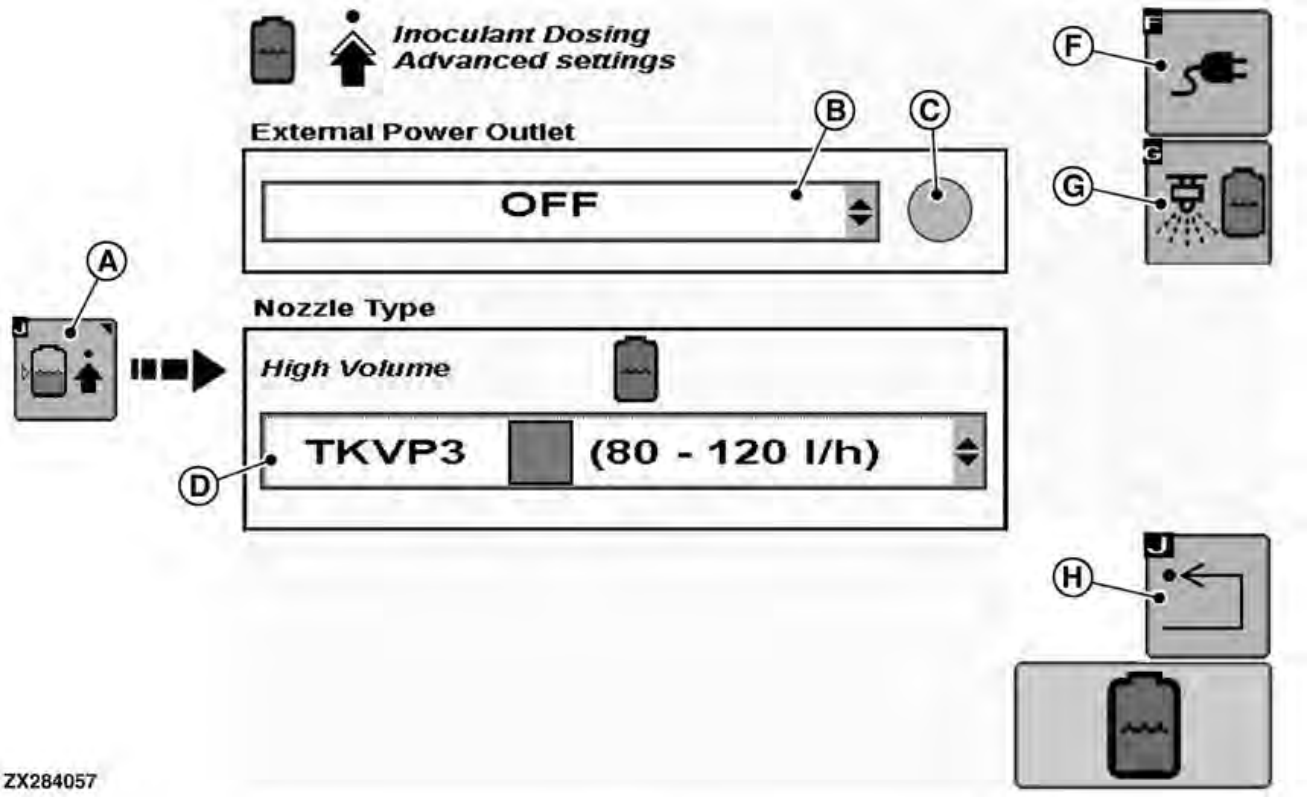
OUCC002,0004CA1 -19-18JUN16-4/6



ZX284057

ZX284057 —UN—19JUN16

Additive Dosing Nozzle Page

On the Additive Dosing System Page press additive dosing nozzle page access button (A) to access the advanced settings page. Access this page to set up the dosing system power outlet mode (B) if an external dosing system has to be powered, and the nozzle size (D).

- Press power outlet button (F) to set up the external power outlet (E) located in service compartment as follows:
  - OFF (default): Icon (C) is gray.
  - ON: Icon (C) is green and checked.
  - AUTO (using key switch): Select this mode if external dosing system must be started when crop flow is detected. Icon (C) changes from gray to green and checked when crop flow is detected.

NOTE: Icon (C) can also be displayed on Home Page.

- Press high volume nozzle size button (G) and select the desired high volume nozzle size (D) from the drop-down menu:

IMPORTANT: Make sure that nozzle size selected is the same as the nozzle installed on nozzle support. See Change Additive Dosing System Nozzle in Lubrication and Maintenance section.

ZX284058

ZX284058 —UN—18JUN16

A—Additive Dosing Nozzle Page Access Button
B—External Power Outlet Mode
C—External Power Outlet Status Icon
D—High Volume Nozzle Size
E—Power Outlet
F—Power Outlet Button
G—High Volume Nozzle Size Button
H—Return Button

High Volume Nozzle Size		
Nozzle Type	**Color**	**Flow Rate Range (L/h)**
TK-VP1	Yellow	30—50
TK-VP2	Red	50—80
TK-VP3 (default)	**Gray**	**80—120**
TK-VP4	White	110—160
TK-VP5	Blue	130—190
TK-VP7.5	Green	190—290
TK-VP10	Black	250—382

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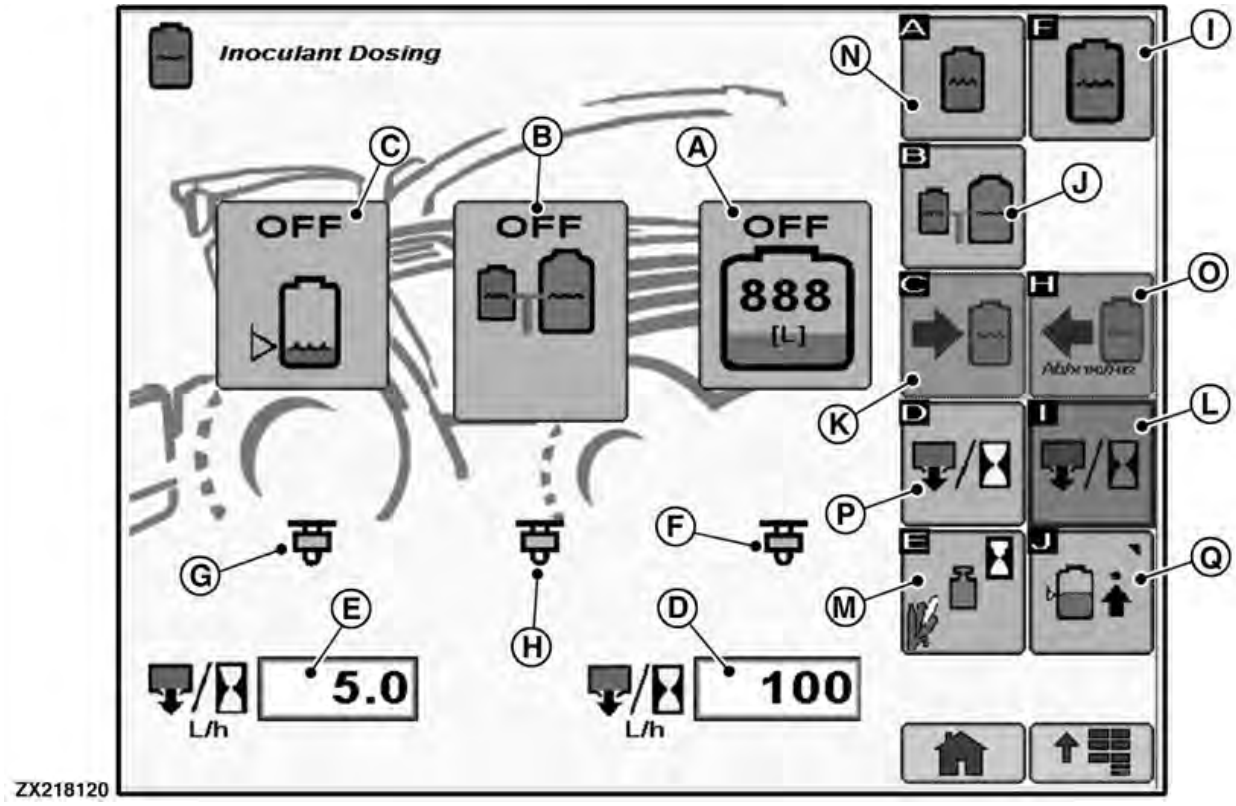
- Press return button (H) to go back to Additive Dosing System Page.

OUCC002,0004CA1 -19-18JUN16-6/6

Additive Dosing System Page—High and Low Volume (Option)



ZX218120 —UN—06OCT14

A—High Volume Fill Level and Operating Mode
B—TL Operating mode
C—Low Volume Fill Level and Operating Mode
D—High Volume Flow Rate Adjust
E—Low Volume Flow Rate Adjust
F—High Volume Status
G—Low Volume Status
H—TL System Status and Dosing Ratio
I— High Volume Operating Mode Button
J— TL Operating Mode Button
K—Return Concentrate to Tank Button
L—High Volume Flow Rate Adjust Button
M—Dosing Mode Button
N—Low Volume Operating Mode Button
O—Clean Mode Button
P—Low Volume Flow Rate Adjust Button
Q—Additive Dosing Nozzle Page Access Button

If the machine is equipped with an additive dosing system, this page displays operating modes (A, B, C), flow rates (D, E), and dosing ratio (H). In addition to the basic high volume dosing system, machines with TL system are equipped with an additional low volume (concentrate) dosing system and a secondary dosing pump.

NOTE: To access the Additive Dosing System Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

- **High Volume Fill Level and Operating Mode:** Indicates the high volume fill level and the current operating mode (A). Press high volume operating mode button (I) to toggle between the following operating modes:
  - AUTO: Select this mode if system must begin dosing when crop flow is detected only.
  - ON: Select this mode if system must begin dosing immediately after this operating mode is selected.

  NOTE: This mode is available only if a dosing per time flow rate has been selected (see High Volume Flow Rate Adjust).

  - OFF: Default mode at machine start-up.

  NOTE: If high volume operating mode is AUTO or ON and return concentrate to tank button (K) is pressed, the operating mode is automatically set to OFF after the return concentrate to tank process is complete.

  NOTE: If high volume operating mode is in AUTO or ON mode and clean mode button (O) is pressed, the operating mode is automatically set to OFF after the cleaning process is complete.

  Fill level (A) is displayed. Range: 0—360 L in steps of 3 L.

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OUCC002,0004CA0 -19-16JUN16-1/9

- **TL Operating Mode:** Indicates the operating mode (B) of the TL system. The TL system mixes the high and low volumes together. Press TL operating mode button (J) to toggle operating mode between:
  - AUTO: Select this mode if system must begin dosing when crop flow is detected only.
  - ON: Select this mode if system must begin dosing immediately after this operating mode is selected.

    NOTE: This mode is available only if a dosing per time flow rate has been selected (see High Volume Flow Rate Adjust).

  - OFF: Default mode at machine start-up.

  NOTE: If high volume operating mode (A) or low volume operating mode (C) is not set to OFF, TL operating mode is automatically set to OFF.

  NOTE: If TL operating mode is AUTO or ON and return concentrate to tank button (K) is pressed, the operating mode is automatically set to OFF after the return concentrate to tank process is complete.

  If TL operating mode is AUTO or ON and clean mode button (O) is pressed, the operating mode is automatically set to OFF after the cleaning process is complete.

- **Low Volume Fill Level and Operating Mode:** Indicates the low volume fill level and the current operating mode (C). Press low volume operating mode button (N) to toggle operating mode between:
  - AUTO: Select this mode if system must begin dosing when crop flow is detected only.
  - ON: Select this mode if system must begin dosing immediately after this operating mode is selected.

    NOTE: This mode is available only if a dosing per time flow rate has been selected (see Low Volume Flow Rate Adjust).

  - OFF: Default mode at machine start-up.

  NOTE: If TL operating mode (B) is set to AUTO or ON, low volume operating mode is automatically set to OFF.

  NOTE: If low volume operating mode is AUTO or ON and return concentrate to tank button (K) is pressed, the operating mode is automatically set to OFF after the return concentrate to tank process is complete.

  If low volume operating mode is AUTO or ON and clean mode button (O) is pressed, the operating mode is automatically set to OFF after the cleaning process is complete.

  The low volume fill level icon (C) only displays if the tank level is at maximum or minimum (maximum level illustrated).
- **High Volume Flow Rate Adjust:** To adjust the high volume flow rate (D) refer to **High Volume Flow Rate Adjust** in this section.
- **Low Volume Flow Rate Adjust:** To adjust the low volume flow rate (E) refer to **Low Volume Flow Rate Adjust** in this section.
- **High Volume Status:** Indicates the high volume dosing status (F). See **High/Low Volume Status** in this section.
- **Low Volume Status:** Indicates the low volume dosing status (G). See **High/Low Volume Status** in this section.
- **TL System Status and Dosing Ratio:** Indicates the TL system dosing status (H). See **TL System Status and Dosing Ratio** in this section.
- Return Concentrate to Tank button (K). See **Return Concentrate to Tank and Clean Modes** in this section.
- Clean mode button (O). See **Return Concentrate to Tank and Clean Modes** in this section.
- Additive dosing advanced settings page access button (Q). See **Additive Dosing Nozzle Page** in this section.

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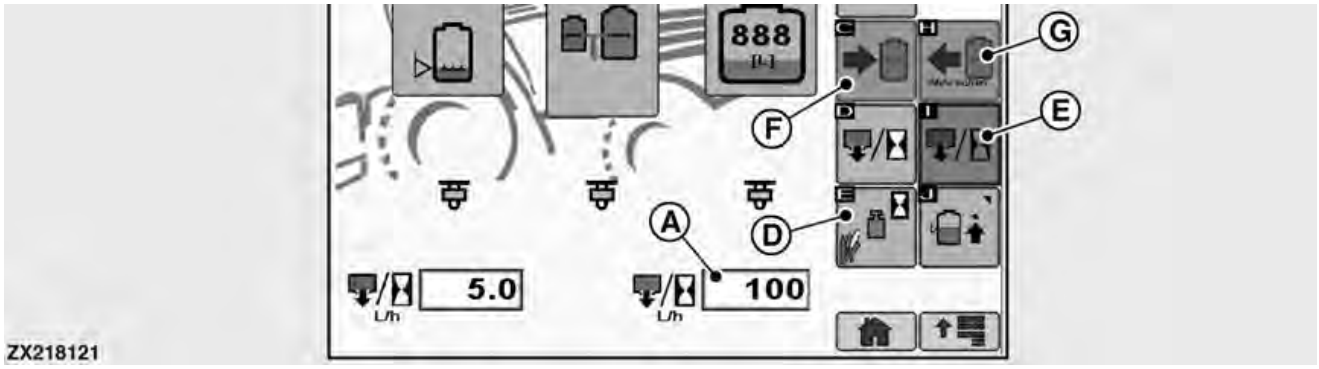


ZX218121 —UN—06OCT14

High Volume Flow Rate Adjust

Depending on the machine configuration (mass flow sensor and/or HarvestLab™ sensor installed), the high volume flow rate can be adjusted as follows:

- Dosing per time (A). Range: 30—382 L/h in steps of 1 L/h (default: 100 L/h).
- Dosing per wet mass (B). Range: 0.1—5.0 L/t in steps of 0.1 L/t (default: 1.0 L/t).

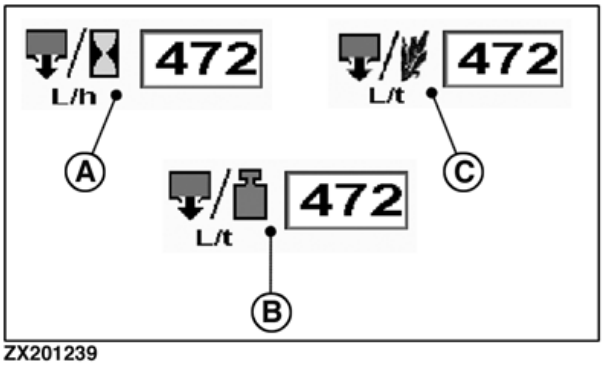
  NOTE: Does not appear on machines without mass flow sensor option.
- Dosing per dry mass (C). Range: 0.1—15.0 L/t in steps of 0.1 L/t (default: 3.0 L/t).

  NOTE: Does not appear on machines without mass flow sensor and HarvestLab™ sensor options.

To toggle between the dosing modes (A, B, C) press dosing mode button (D). The icon on the high volume flow rate adjust button (E) will show the relevant dosing mode.

Press high volume flow rate adjust button (E) and use the rotary switch on the CommandARM™ to modify the flow rate accordingly.

IMPORTANT: The desired flow rate must be within the specification for the size of the high volume nozzle installed. See Additive Dosing Advanced Settings in Additive Dosing Nozzle Page in this section.



ZX201239 —UN—21JUN13

A—Dosing Rate Per Time
B—Dosing Rate Per Wet Mass
C—Dosing Rate Per Dry Mass
D—Dosing Mode Button
E—High Volume Flow Rate Adjust Button
F—Return Concentrate to Tank Button
G—Clean Mode Button

NOTE: The dosing modes (A, B, C) are grayed out while the return concentrate to tank mode (F) or the clean mode (G) are active. See Return Concentrate to Tank Mode and Clean Mode in this section.

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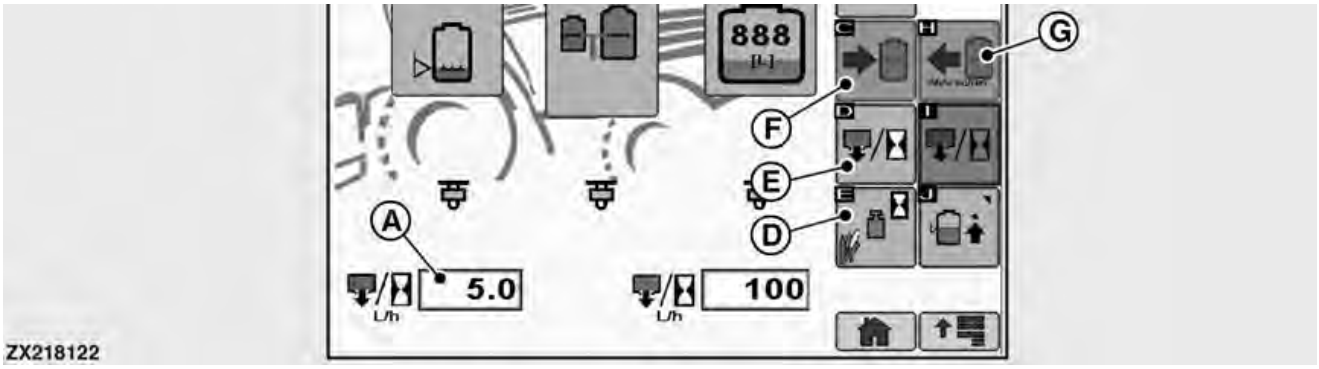
OUCC002,0004CA0 -19-16JUN16-3/9



ZX218122

ZX218122 —UN—06OCT14

Low Volume Flow Rate Adjust

Depending on the machine configuration (mass flow sensor and/or HarvestLab™ sensor installed), the low volume flow rate can be adjusted as follows:

- Dosing per time (A). Range: 2 —13 L/h in steps of 0.1 L/h (default: 5.0 L/h).
- Dosing per wet mass (B). Range: 50—500 mL/t in steps of 10 mL/t (default: 100 mL/t).

  NOTE: Does not appear on machines without mass flow sensor option.
- Dosing per dry mass (C). Range: 150—1500 mL/t in steps of 10 mL/t (default: 300 mL/t).

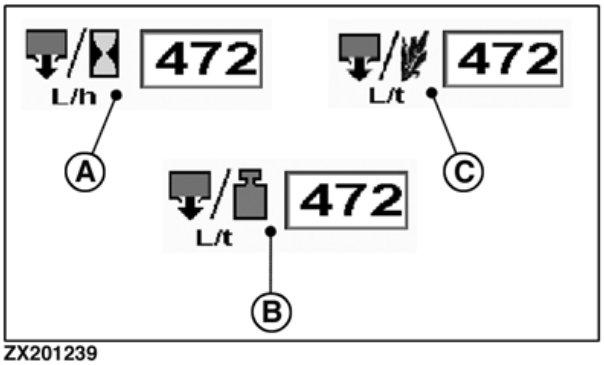
  NOTE: Does not appear on machines without mass flow sensor and HarvestLab™ sensor options.

To toggle between the dosing modes (A, B, C) press dosing mode button (D). The icon on low volume flow rate adjust button (E) will show the relevant dosing mode.

Press low volume flow rate adjust button (E) and use the rotary switch on the CommandARM™ to modify the flow rate accordingly.

For a better dosing accuracy, the low volume flow rate can be calibrated (see **Interactive Calibration Procedures** in **Lubrication and Maintenance** section).

IMPORTANT: The desired flow rate must be within the specification for the size of the low volume nozzle installed. See Additive Dosing Advanced Settings in Additive Dosing Nozzle Page in this section.



ZX201239

ZX201239 —UN—21JUN13

A—Dosing Rate Per Time
B—Dosing Rate Per Wet Mass
C—Dosing Rate Per Dry Mass
D—Dosing Mode Button
E—Low Volume Flow Rate Adjust Button
F—Return Concentrate to Tank Button
G—Clean Mode Button

NOTE: The dosing modes (A, B, C) are grayed out while the return concentrate to tank mode (F) or the clean mode (G) are active. See Return Concentrate to Tank Mode and Clean Mode in this section.

Continued on next page

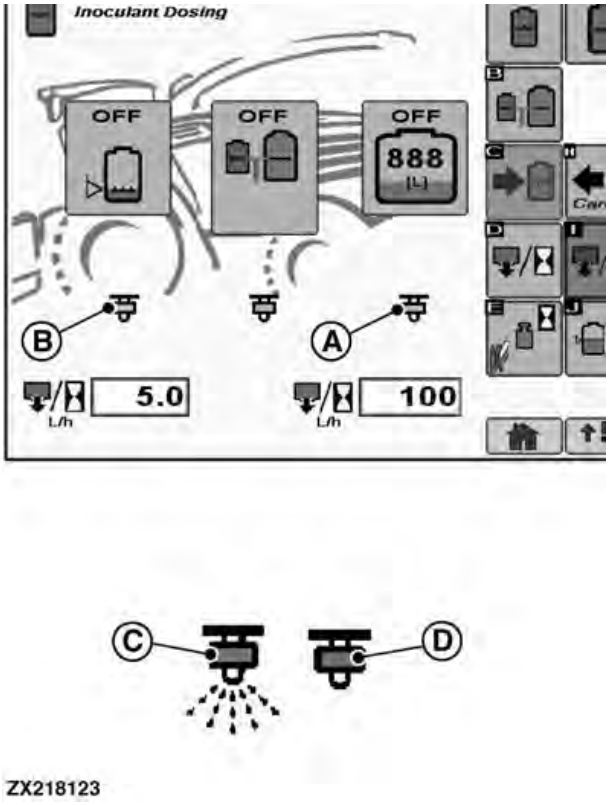
OUCC002,0004CA0 -19-16JUN16-4/9

High/Low Volume Status

The high volume dosing status (A) and low volume dosing status (B) are indicated by nozzle icon (C) or (D). Depending on the high and low volume operating modes (AUTO/ON/OFF) selected, nozzle icon (C) or (D) is displayed.

- In AUTO mode, dosing starts and the nozzle icon (C) is displayed as soon as crop flow is detected. If no crop flow is detected the nozzle icon (D) is displayed.
- In ON mode, dosing starts and the nozzle icon (C) is displayed immediately after the ON mode is selected.
- In OFF mode, only the nozzle icon (D) is displayed.

A—High Volume Dosing Status
B—Low Volume Dosing Status
C—Nozzle Icon—Dosing Activated
D—Nozzle Icon—Dosing Deactivated



ZX218123

ZX218123 —UN—06OCT14

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OUCC002,0004CA0 -19-16JUN16-5/9

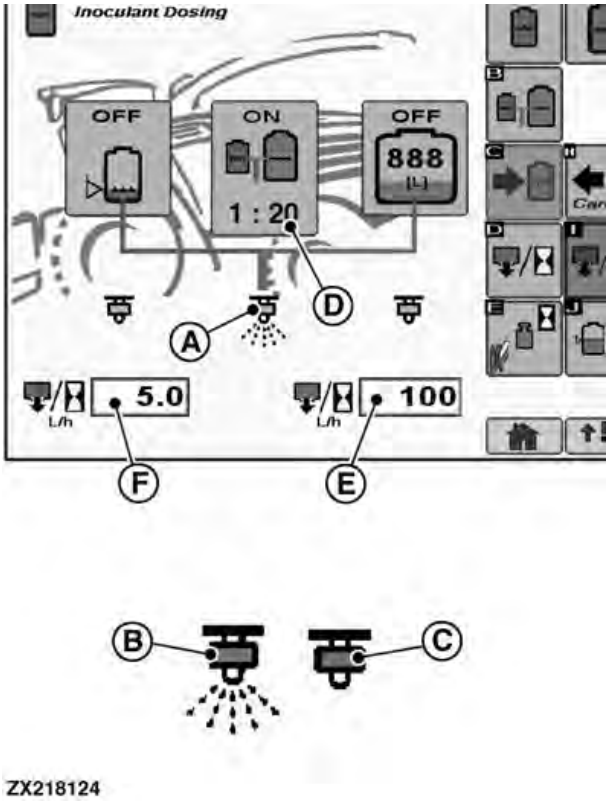
TL System Status and Dosing Ratio

The TL system dosing status (A) is indicated by the nozzle icon (B) or (C). The dosing ratio (D) is high volume flow rate divided by low volume flow rate (100/5 = 1:20) with a minimum flow rate of 50 mL/t.

Depending on the operating modes (AUTO-ON-OFF) selected for high volume, low volume, and TL systems:

- The nozzle icon (B) or (C) is displayed.
- Ratio (D) is displayed if the TL system is activated.

A—TL System Dosing Status
B—Nozzle Icon—Dosing Activated
C—Nozzle Icon—Dosing Deactivated
D—Dosing Ratio
E—High Volume Flow Rate
F—Low Volume Flow Rate



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ZX218124 —UN—06OCT14

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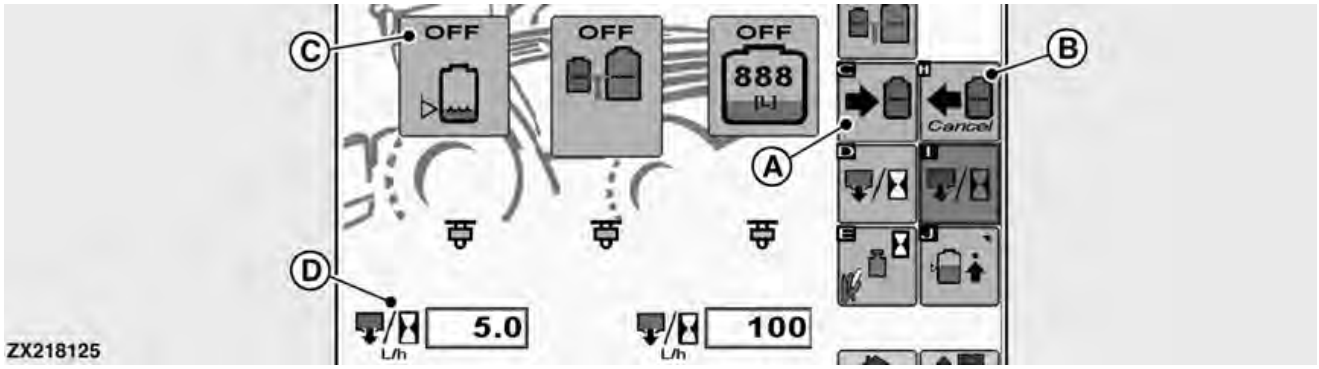
OUCC002,0004CA0 -19-16JUN16-6/9



ZX218125 —UN—06OCT14

A—Return Concentrate to Tank Button
B—Clean Mode Button
C—Operating Mode Status
D—Flow Rate Setting

Return Concentrate to Tank and Clean Modes

IMPORTANT: It is essential to run a cleaning procedure every day. If the system is not flushed with clean water correctly, the solenoid and low level sensor may become inoperable due to the growth of bacteria in the lines (see Additive Dosing System in Lubrication and Maintenance section).

Press return concentrate to tank button (A) to start the secondary (concentrate) pump reverse drive and return the concentrate back to tank. While this mode is active:

- The main pump (high volume system) is turned off.
- The operating mode status field (C) shows the return concentrate to tank status:
  - Return concentrate to tank mode active for 40 seconds (secondary pump running in reverse): High volume operating mode set to OFF and Low volume operating mode set to ON when low volume operating mode was AUTO or ON prior to activation of return concentrate to tank process.
  - Return concentrate to tank mode active for 60 seconds (secondary pump running in reverse): High and Low volume operating modes set to OFF and TL operating mode set to ON when TL operating mode was AUTO or ON prior to activation of return concentrate to tank process.
- The flow rate setting (D) is grayed out; adjustment is not allowed.

At end of work or day remove all residual from the high volume and/or low volume tank. Fill the high volume tank with approximately 20 L (5.3 gal.) and/or low volume tank with 4 L (1 gal.) clean water to clean the dosing system circuit. The operating mode must be set to AUTO or ON to start the cleaning mode.

Press clean mode button (B) to start the cleaning process for the lines of that additive dosing system (high volume, low volume, and/or TL system) activated immediately before.

While the cleaning mode is active:

- **Cancel** is displayed on the clean mode button (B). Press clean mode button (B) to cancel process if necessary.
- Operating mode (C) is set to ON.
- Flow rate setting (D) is automatically set to maximum flow allowed by the installed nozzle (Dosing per time value is grayed out and cannot be modified).

After the cleaning process has finished, the operating mode (C) is automatically set to OFF.

NOTE: Cleaning mode process takes 2 min. on high volume and 15 min. on low volume and TL system.

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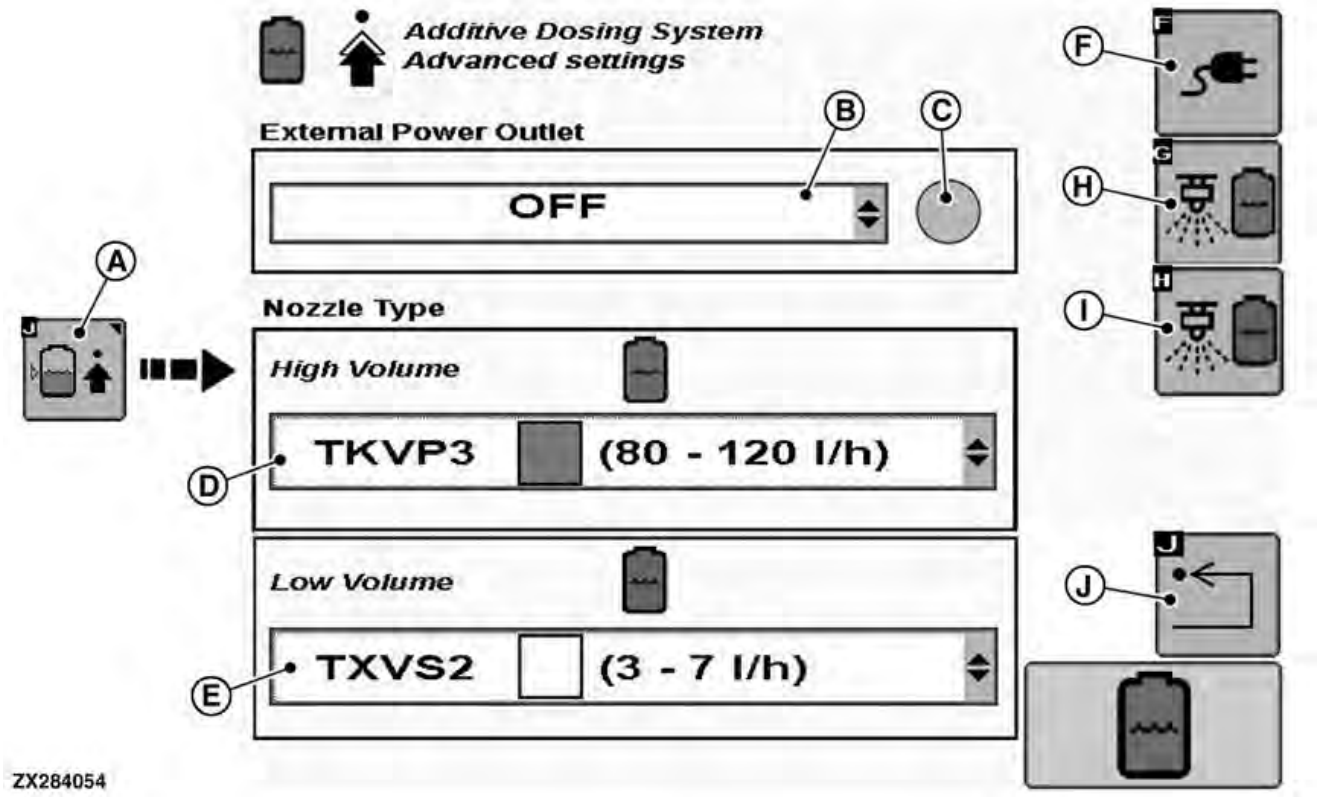


ZX284054 —UN—18JUN16

Additive Dosing Nozzle Page

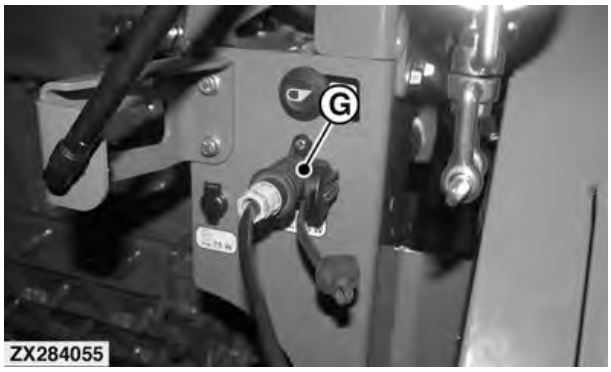
On the Additive Dosing System Page press additive dosing nozzle page access button (A) to access the advanced settings page. Access this page to set up the dosing system power outlet mode (B) if an external dosing system has to be powered, and the nozzle size (D, E).

- Press power outlet button (F) to set up the external power outlet (G) located in service compartment as follows:
  - OFF (default). Icon (C) is gray.
  - ON. Icon (C) is green and checked.
  - AUTO (using key switch). Select this mode if external dosing system must be started when crop flow is detected. Icon (C) changes from gray to green and checked when crop flow is detected.

NOTE: Icon (C) can also be displayed on Home Page.

- Press high volume nozzle size button (H) and select the desired high volume nozzle size (D) from the drop-down menu:

IMPORTANT: Make sure that nozzle size selected is the same as the nozzle installed on nozzle support. See Change Additive Dosing System Nozzle in Lubrication and Maintenance section.



ZX284055 —UN—18JUN16

Power Outlet—Service Compartment

A—Additive Dosing Nozzle Page Access Button
B—External Power Outlet Mode
C—External Power Outlet Status Icon
D—High Volume Nozzle Size
E—Low Volume Nozzle Size
F—Power Outlet Button
G—Power Outlet
H—High Volume Nozzle Size Button
I— Low Volume Nozzle Size Button
J— Return Button

Continued on next page

High Volume Nozzle Size		
Nozzle Type	**Color**	**Flow Rate Range (L/h)**
TK-VP1	Yellow	30—50
TK-VP2	Red	50—80
TK-VP3 (default)	**Gray**	**80—120**
TK-VP4	White	110—160
TK-VP5	Blue	130—190
TK-VP7.5	Green	190—290
TK-VP10	Black	250—382

- Press low volume nozzle size button (I) and select the desired low volume nozzle size (E) from the drop-down menu:

IMPORTANT: Make sure that nozzle size selected is the same as the nozzle installed on nozzle support. See Change Additive Dosing System Nozzle in Lubrication and Maintenance section.

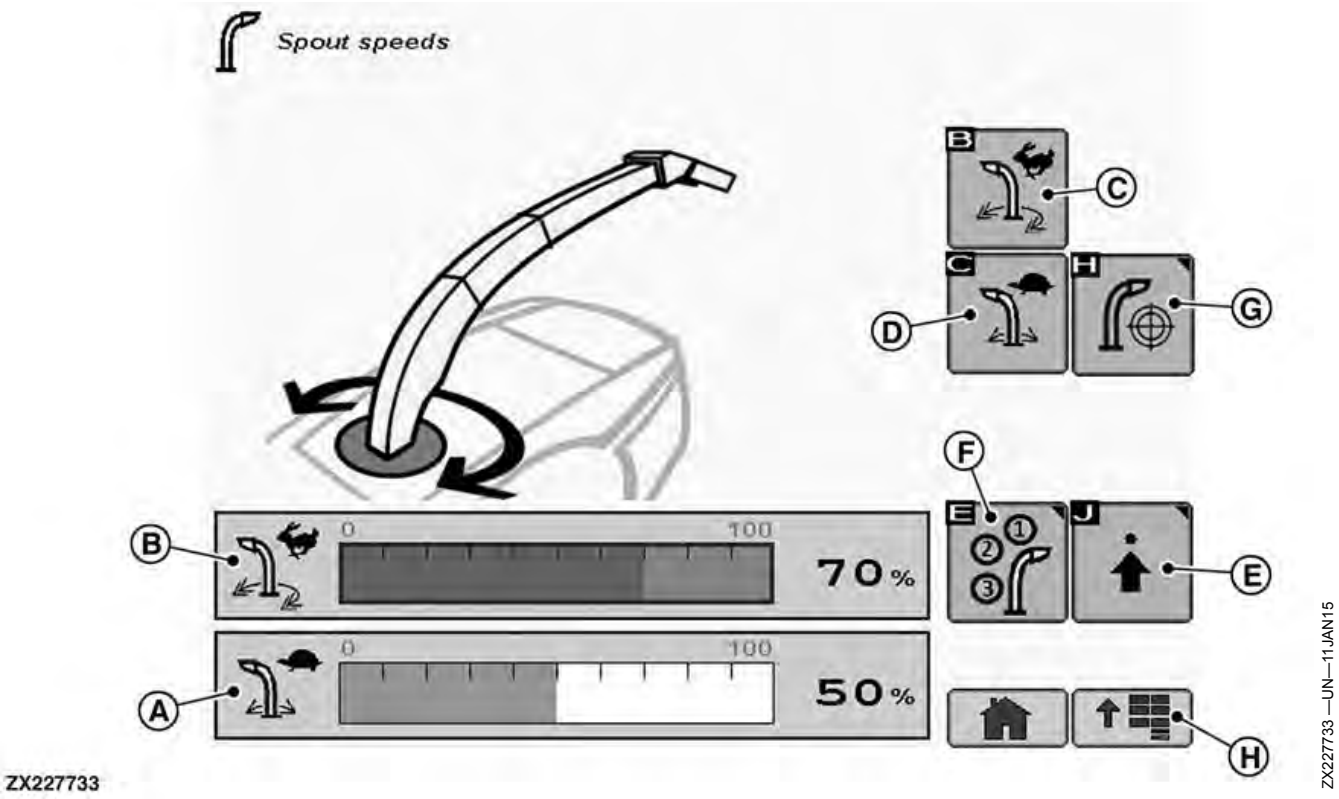
After changing the nozzle size (E), proceed to the low volume flow rate calibration (see **Interactive Calibration Procedures** in **Lubrication and Maintenance** section).

Low Volume Nozzle Size		
Nozzle Type	**Color**	**Flow Rate Range (L/h)**
TX-VS1	Blue	2—3.5
TX-VS2 (default)	**White**	**3—7**
TX-VK3	Yellow	5—10
TX-VK4	Green	6—13

- Press return button (J) to go back to Additive Dosing System Page.

OUCC002,0004CA0 -19-16JUN16-9/9

Spout Speeds Page



A—Spout Low Rotation Speed
B—Spout Fast Rotation Speed
C—Fast Rotation Speed Adjust Button
D—Low Rotation Speed Adjust Button
E—Spout Setup Page Access Button (If equipped)
F—Auto Spout Positioning Page Access Button (If equipped)
G—Active Fill Control Page Access Button (If equipped)
H—Menu Button

NOTE: To access the Spout Speeds Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

On machine without Automatic Spout Control option, the spout setup page access button (E), the auto spout positioning page access button (F), and the active fill control page access button (G) are not activated.

The Spout Speeds Page allows the operator to adjust spout low and fast rotation speeds, enable or disable spout positioning functions, and assign preset spout positions to activation buttons on multi-function lever (see **Multi-Function Lever** in this section). Proceed as follows:

- To adjust spout low rotation speed (A), press low rotation speed adjust button (D) and use the rotary switch on the CommandARM™ to modify the value from 0—100 % of the maximal low speed allowed by the hydraulic system.

  NOTE: Pushing part way in on multi-function lever spout turn switch causes spout to rotate at a slow rate.

- To adjust spout fast rotation speed (B), press fast rotation speed adjust button (C) and use the rotary switch on the CommandARM™ to modify the value from 0—100 % of the maximal fast speed allowed by the hydraulic system.

  NOTE: Pushing all the way in on multi-function lever spout turn switch causes spout to rotate at a faster rate.

- On machine with the Automatic Spout Control option only:
  - Press the spout setup page access button (E) to enable or disable auto spout positioning functionality. See **Spout Setup Page** and **Automatic Spout Control (Option)** in this section.
  - Press the auto spout positioning page access button (F) to assign preset spout positions to activation buttons of multi-function lever. See **Auto Spout Positioning Page** and **Automatic Spout Control (Option)** in this section.
- On machine with the Active Fill Control option only:
  - Press the Active Fill Control page access button (G) to set up, enable or disable Active Fill Control functionality. See **Active Fill Control (Option)** in this section.

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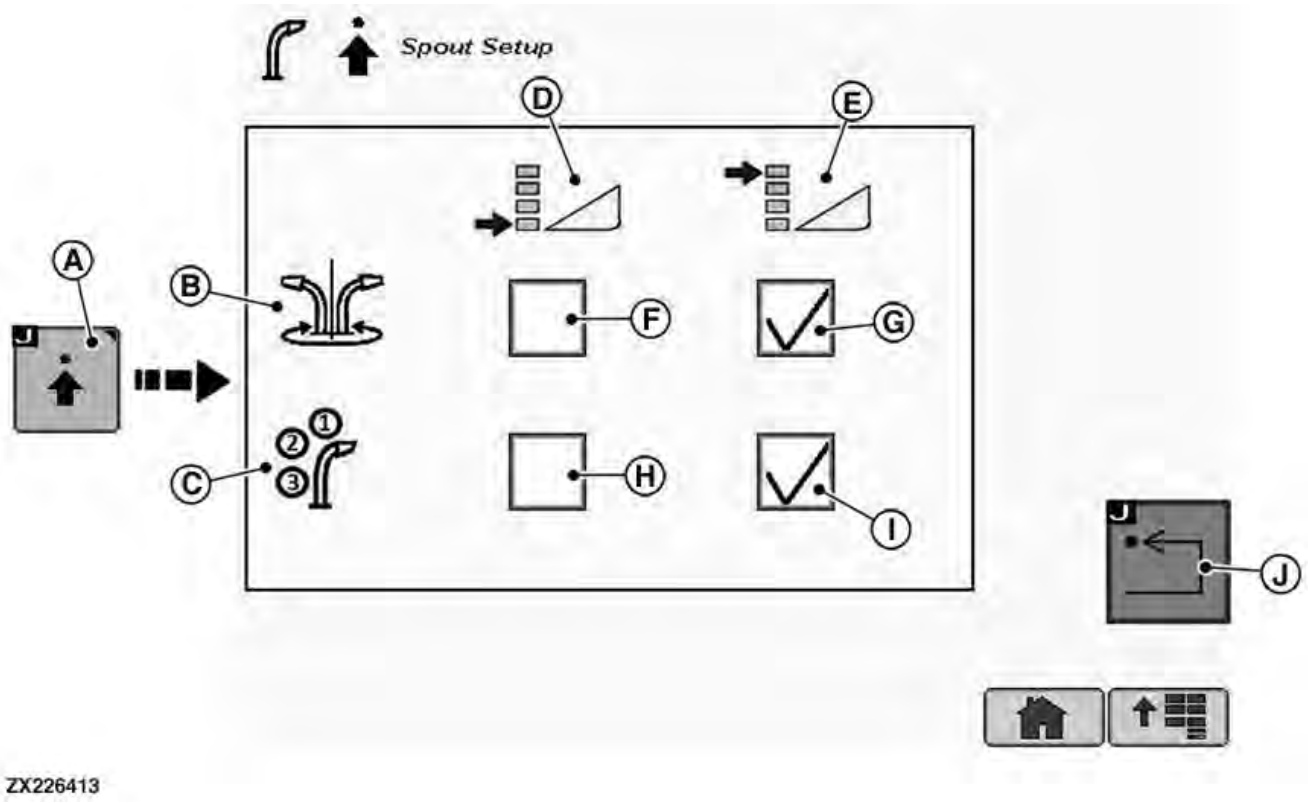
OUCC002,0003EB0 -19-04SEP15-1/3



A—Spout Setup Page Access Button
B—Run-To-End Spout Position Function
C—Spout Positioning Function
D—Harvesting Position
E—Headland Position
F—Check Box
G—Check Box
H—Check Box
I— Check Box
J—Return Button

Spout Setup Page

IMPORTANT: Also refer to Automatic Spout Control (Option) in this section.

On the Spout Speed Page press the spout setup page access button (A) to perform the following:

- To enable the run-to-end spout position function (B) when header is in harvesting position (D) or in headland position (E), check the relevant box (F) or (G).

  NOTE: Pressing the right or left part of multi-function lever spout turn switch all the way in twice activates the function.

- To enable the spout positioning function (C) when header is in harvesting position (D) or in headland position (E), check the relevant box (H) or (I). If the spout positioning function (C) is enabled, assign preset spout positions to activation buttons of multi-function lever. See **Auto Spout Positioning Page** and **Automatic Spout Control (Option)** in this section.
- Press return button (J) to go back to the Spout Speeds Page.

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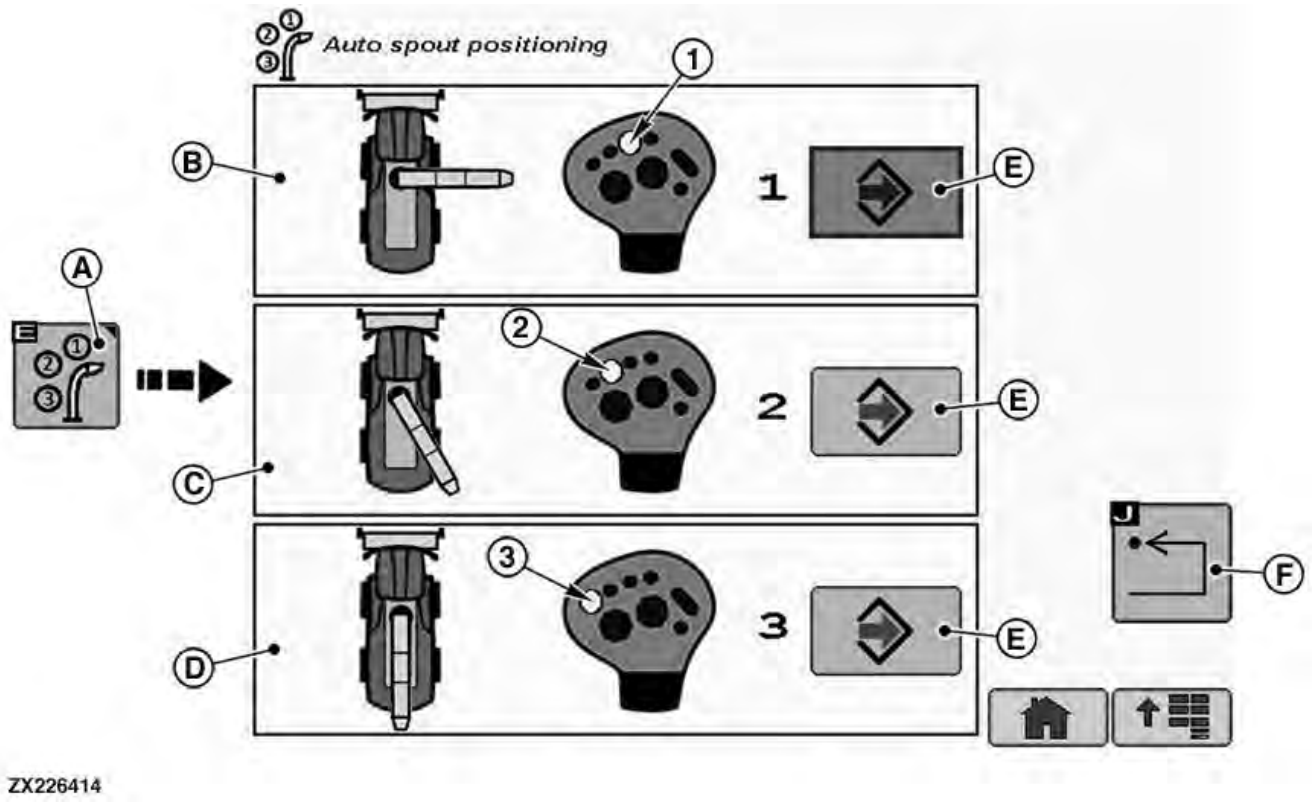
OUCC002,0003EB0 -19-04SEP15-2/3



A—Auto Spout Positioning Page Access Button
B—Spout Position Assigned to Activation Button 1
C—Spout Position Assigned to Activation Button 2
D—Spout Position Assigned to Activation Button 3
E—Enter Button
F—Return Button
1—Activation Button 1
2—Activation Button 2
3—Activation Button 3

Auto Spout Positioning Page

On the Spout Speeds Page, press the auto spout positioning page access button (A) to assign a specific spout position (B, C, or D) to the desired activation button (1, 2 or 3). Store the preset spout positions by pressing relevant enter button (E).

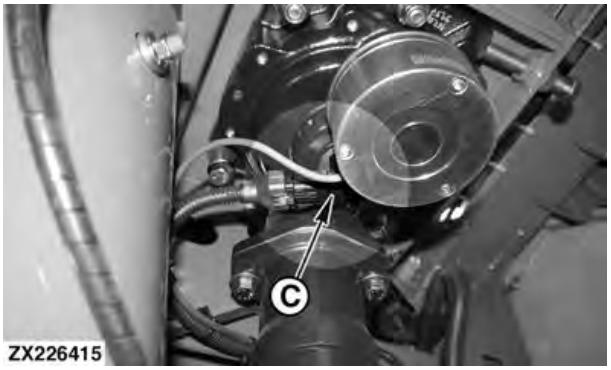
NOTE: The preset positions (A, B, or C) are applied in the same manner when header is in harvesting position or in headland position (see Spout Setup Page in this section).

IMPORTANT: Refer to Automatic Spout Control in this section for the spout position assignment procedure.

OUCC002,0003EB0 -19-04SEP15-3/3

Automatic Spout Control (Option)

ZX226418 —UN—23NOV14



ZX226415 —UN—22NOV14

The automatic spout control with integrated spout position sensing features the following functions:

- **Automatic Spout Positioning** which allows operator to:
  - Store and assign any spout rotation angle, tilt position, spout flap position to activation buttons (1, 2, or 3) on multi-function lever and use these data as a customized preset spout position (see **Multi-Function Lever** and **Auto Spout Positioning Page** in this section).
  - Recall a stored spout position when header is in harvesting position or in headland position by pressing activation buttons (1, 2, or 3) twice on multi-function lever.
  - Run-to-end position. The spout is controlled to reach the left/right stop of the rotation range when pressing the right or left part of multi-function lever spout turn switch (A) all the way in twice (see **Multi-Function Lever** in this section).

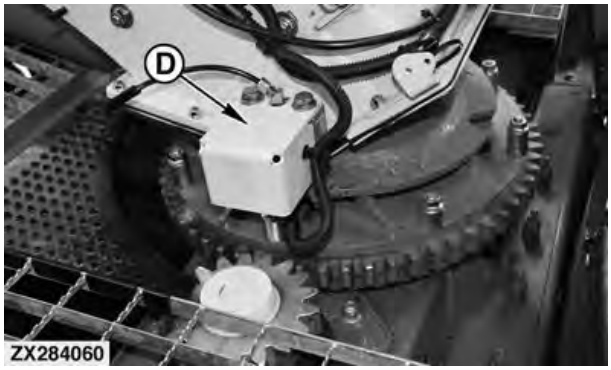
- **Automatic Spout Leveling** which allows operator to:
  - Control the spout so that it maintains its tilt level when turning to the left or to the right. This is a fully automatic function that does not require any operator input.

- **Electronically controlled end stop**
  - The discharge spout is stopped gently as soon as a rotation angle has been obtained; that is about 1.5° away from the mechanical stop (end position).

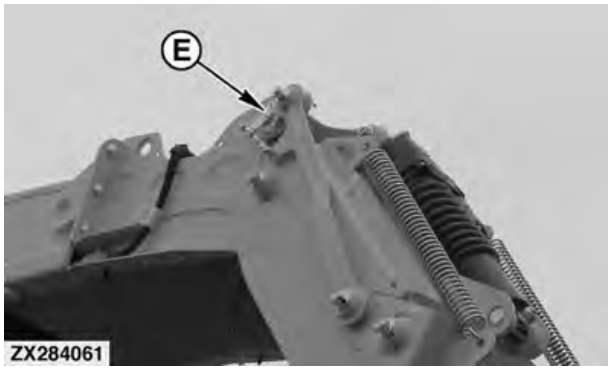
- **Spout Home Position**
  - The spout is controlled to reach its storage position when the spout return to home position switch (B) on multi-function lever is pressed and hold for 3 seconds (see **Multi-Function Lever** in this section).

The spout rotation angle sensor (C), the spout tilt position sensor (D), and the spout flap position sensor (E) determine the spout position.

IMPORTANT: Make sure that the three spout position sensors (C, D, E) are calibrated. To carry out spout rotate sensor and spout raise/lower and flap sensor calibration, see Vehicle Settings Page in this section.



ZX284060 —UN—18JUN16



ZX284061 —UN—18JUN16

A—Spout Turn Switch
B—Spout Return to Home Position Switch
C—Spout Rotation Angle Sensor
D—Spout Tilt Position Sensor
E—Spout Flap Position Sensor
1—Activation Button 1
2—Activation Button 2
3—Activation Button 3

The following conditions must be met for the automatic spout control to operate:

NOTE: To position the spout first before engaging the cutterhead, the Automatic Spout Positioning can be used with the main clutch switch in OFF position.

- Road safety mode button is in field mode.
- Engine is running.
- Quick stop button is not actuated.

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OUCC002,0004C9D -19-16JUN16-1/3

- Operator is on the seat.
- Air compressor is not activated (if equipped).

OUCC002,0004C9D -19-16JUN16-2/3

Store and Assign Spout Position

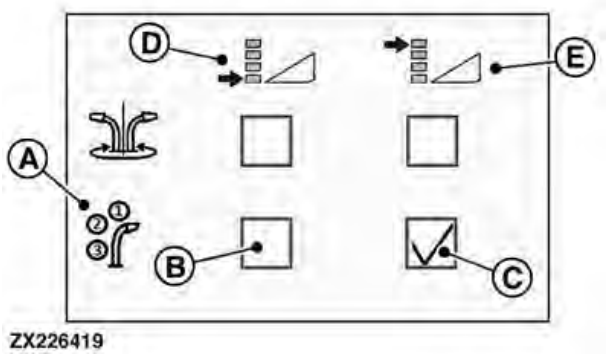
Store and assign a spout position as follows:

1. Access the Spout Setup Page and enable the spout positioning function (A). Check the relevant box (B) or (C) for header in harvesting position (D) or in headland position (E), as required (see **Spout Speeds Page** in this section).
2. Access the Auto Spout Positioning Page (see **Spout Speeds Page** in this section).
3. Press the activation button 1 on multi-function lever.
4. Manually move the spout to the desired position (spout rotation angle, tilt position and flap position).

NOTE: Indicator (F) indicates the position of the spout.

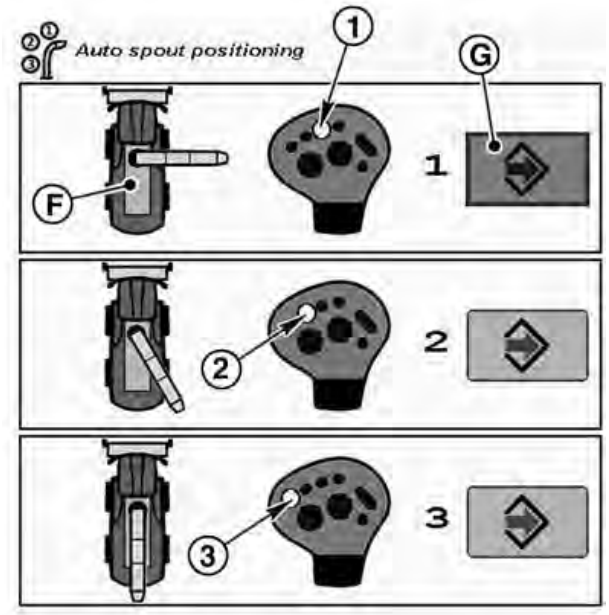
5. Press the enter button (G) to store the spout position for the relevant activation button.
6. Repeat steps 3 to 5 for activation buttons 2 and 3.

A—Spout Positioning Function
B—Check Box
C—Check Box
D—Harvesting Position
E—Headland Position
F—Spout Position Indicator
G—Enter Button
1—Activation Button 1
2—Activation Button 2
3—Activation Button 3



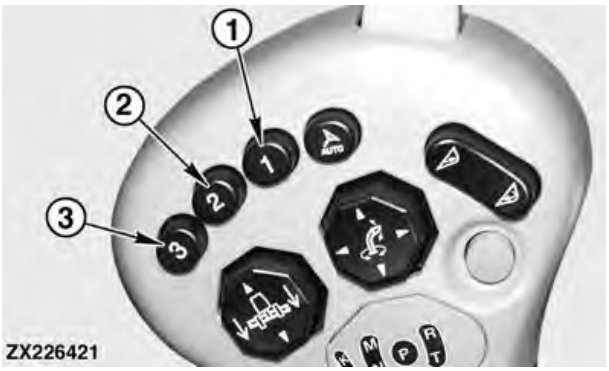
ZX226419

ZX226419 —UN—22NOV14



ZX226420

ZX226420 —UN—22NOV14



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OUCC002,0004C9D -19-16JUN16-3/3

Active Fill Control (Option)

A—Image-Processing Module (IPM)
B—Stereo Camera
C—Additional Worklights (LED)

The Active Fill Control system (AFC) is an automated unloading system which consists of:

- One image-processing module (IPM).
- One stereo camera.
- Additional LED type worklights.

NOTE: This product or portions thereof is manufactured under licenses from Carnegie Mellon University.

For the side unloading mode, these components are required to sense the relative position of the trailer to the machine, to sense the fill level of the material cart, and to execute an intelligent fill strategy (see **Operate Active Fill Control—Side Unloading** in this section).

For the rear unloading mode, these components and a StarFire™ 3000 or 6000 receiver are required to sense the relative position of the tractor to the machine (see **Operate Active Fill Control—Rear Unloading** in this section).

The following functions are available (see **Active Fill Control Page** in this section):

- Tractor detection and tracking.
- Trailer detection and tracking.
- Automated discharge spout rotation.
- Automated discharge spout flap movement.
- Automated side unloading control.
- Automated rear unloading control.
- Operator selectable fill height.
- Operator selectable edge distance.
- Operator selectable fill strategy.
- Operator selectable fill offset.
- Operator selectable spout rotation offset.
- Optional AFC video stream (with GreenStar™ 3 2630 Display or third-party display only). See **Video Stream—Side Unloading** or **Video Stream—Rear Unloading** in this section.

IMPORTANT: For best Active Fill Control system operation, ensure that latest version of software is loaded and periodically clean stereo camera lens and worklights (see Active Fill Control System (Option) in Lubrication and Maintenance section).

Frequency of cleaning varies depending on a number of factors including operating conditions, weather, and crop conditions. Clean camera window using a soft, moistened cloth.

- **Rear Unloading Theory of Operation:**
  Active Fill Control works differently in rear unloading than side unloading. In many cases, it is not possible for the camera to observe the trailer directly. Instead, Active Fill Control detects the tractor and observes its motion relative to the machine.
  In order to calculate the motion of the tractor, Active Fill Control uses the StarFire™ 3000 or 6000 receiver to analyze the motion of the machine. To determine the location of the trailer, Active Fill Control calculates the angle between the tractor and the trailer (except in the case of a straight truck). To help determine the initial angle between the tractor and the trailer, Active Fill Control assumes that the material is being directed to the center of the trailer. That angle is then modeled and updated using the speed and steering behavior of the tractor as detected by Active Fill Control.

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- **Transitioning Between Rear and Side Unloading Modes:**
  Active Fill Control automatically determines which unloading mode is most appropriate based on spout rotation and spout flap angles. Active Fill Control does not transition between unloading modes as long as the system is able to detect a trailer.
  For example, if a trailer that has been detected in rear unloading mode transitions to a side unloading position, Active Fill Control continues to attempt to maintain trailer detection. Because the method that Active Fill Control uses to detect trailers in rear unloading mode differs from the method it uses in side unloading mode, detection is lost during this transition. When detection is lost, Active Fill Control automatically determines its unloading mode based on spout rotation and flap angles (most likely side unloading), and attempts to detect the trailer again.

Interactive Calibration Procedure

It is necessary to calibrate the stereo camera the first time the Active Fill Control System is installed on a machine, then each time:

- The control unit (IPM) is replaced.
- The stereo camera is replaced.
- The stereo camera orientation or tilt is changed.
- The discharge spout is modified.

NOTE: To carry out the Active Fill Control system calibration, refer to Interactive Calibration Procedures in Lubrication and Maintenance section and Vehicle Settings Page in this section.

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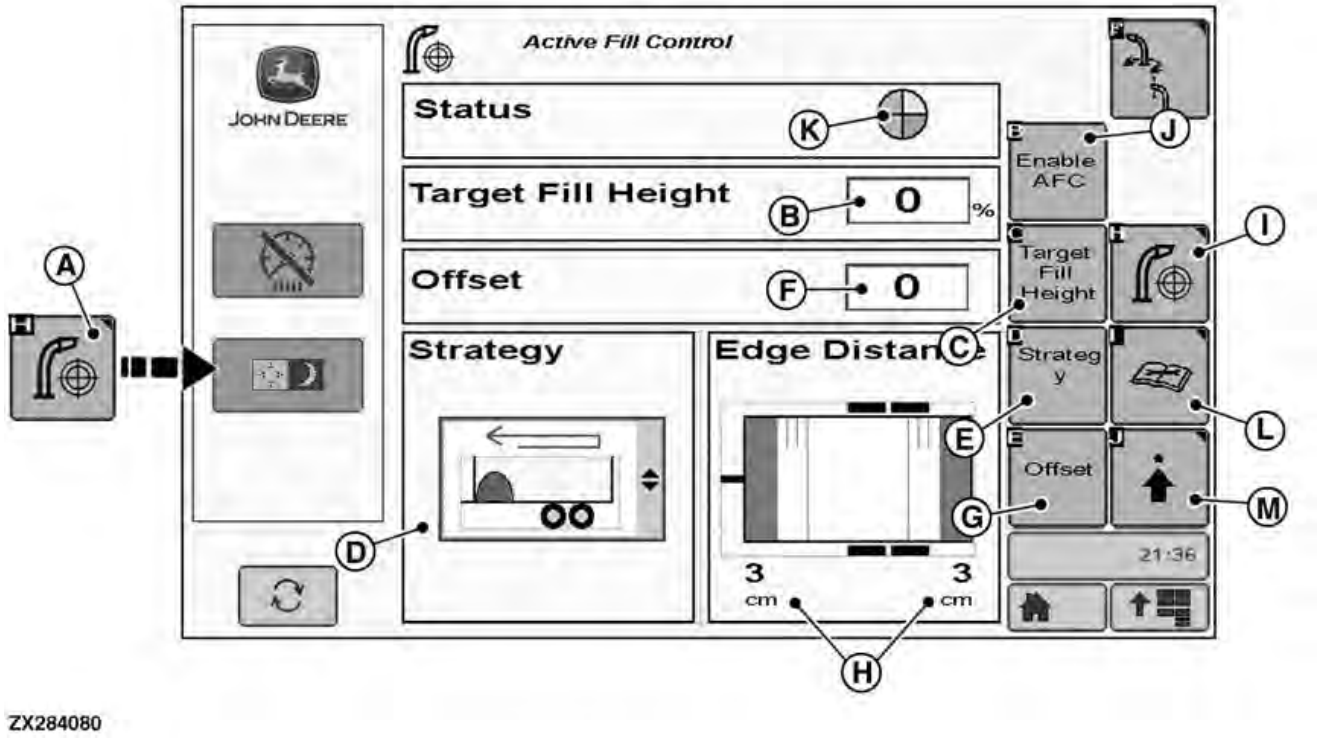

ZX284080

ZX284080 —UN—20JUN16

A—Active Fill Control Page Access Button
B—Desired Fill Height
C—Desired Fill Height Button
D—Trailer Fill Strategy
E—Fill Strategy Button
F—Offset
G—Offset Button
H—Distance to Edge
I— Active Fill Control-Rear Page Access Button
J— Enable AFC Button
K—Active Fill Control Status Pie
L—Diagnostic Button
M—Return Button

Active Fill Control Page

NOTE: To access the Spout Speeds Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

On the Spout Speeds Page, press the Active Fill Control page access button (A) to setup side and rear unloading functions, or to display diagnostics as follows (see also **Trailer Fill Strategy/Height/Offset (Side Unloading Only)** in this section):

- **For Side Unloading Only:** To set up the desired trailer fill level, use target fill height drop-down menu (B) or press desired fill height button (C) and select desired level.
  Range: 75—125 % in steps of 5 % (**default: 100 %**).

- **For Side Unloading Only:** To select the desired trailer fill strategy, use trailer fill strategy drop-down menu (D) or press fill strategy button (E) and select one of the following fill strategies:
  - Back to front
  - Front to back
  - Back to front to back
  - Front to back to front

NOTE: "Back to front to back" and "Front to back to front" fill strategies start in the first round with 15% filling height less than operator selected target filling height and both end filling the trailer up to 100% of operator selected target filling height.

- **For Side Unloading Only:** To select the desired trailer fill offset (that is to compensate trailer inclination), use trailer fill offset input number field (F) or press offset button (G) and select desired fill offset to the trailer center line.
  Range: -10—+10 in steps of 1 (**default: 0 offset**).

- **For Side Unloading Only:** To select the desired trailer fill distance to edge, press desired trailer distance to edge field (H) and select desired distance from fill edge and trailer back or front.

  NOTE: To adjust the desired front or rear distance to edge, press the relevant grayed zone (H) .

  Range: 0—150 cm (4 ft 11 in) in steps of 1 cm (0.4 in) **default: 50 cm (19.7 in)**.

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OUCC002,0004CF4 -19-29JUN16-3/13

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- **For Rear Unloading Only:** To set up rear unloading function, press Active Fill Control-Rear page access button (I). See **Active Fill Control-Rear Page** in this section.
- To enable the Active Fill Control function, press enable AFC button (J). If the system is calibrated and the road safety mode button is in field mode, then the Active Fill Control can be activated (see **Operate Active Fill Control—Side Unloading** or **Operate Active Fill Control—Rear Unloading** in this section).
- Active Fill Control status pie (K) indicates the stage that Active Fill Control is in. Press diagnostic button (L) to display status pie (K) description (see **Diagnostic Page** in this section).

Press return button (M) to go back to **Spout Speeds Page**.

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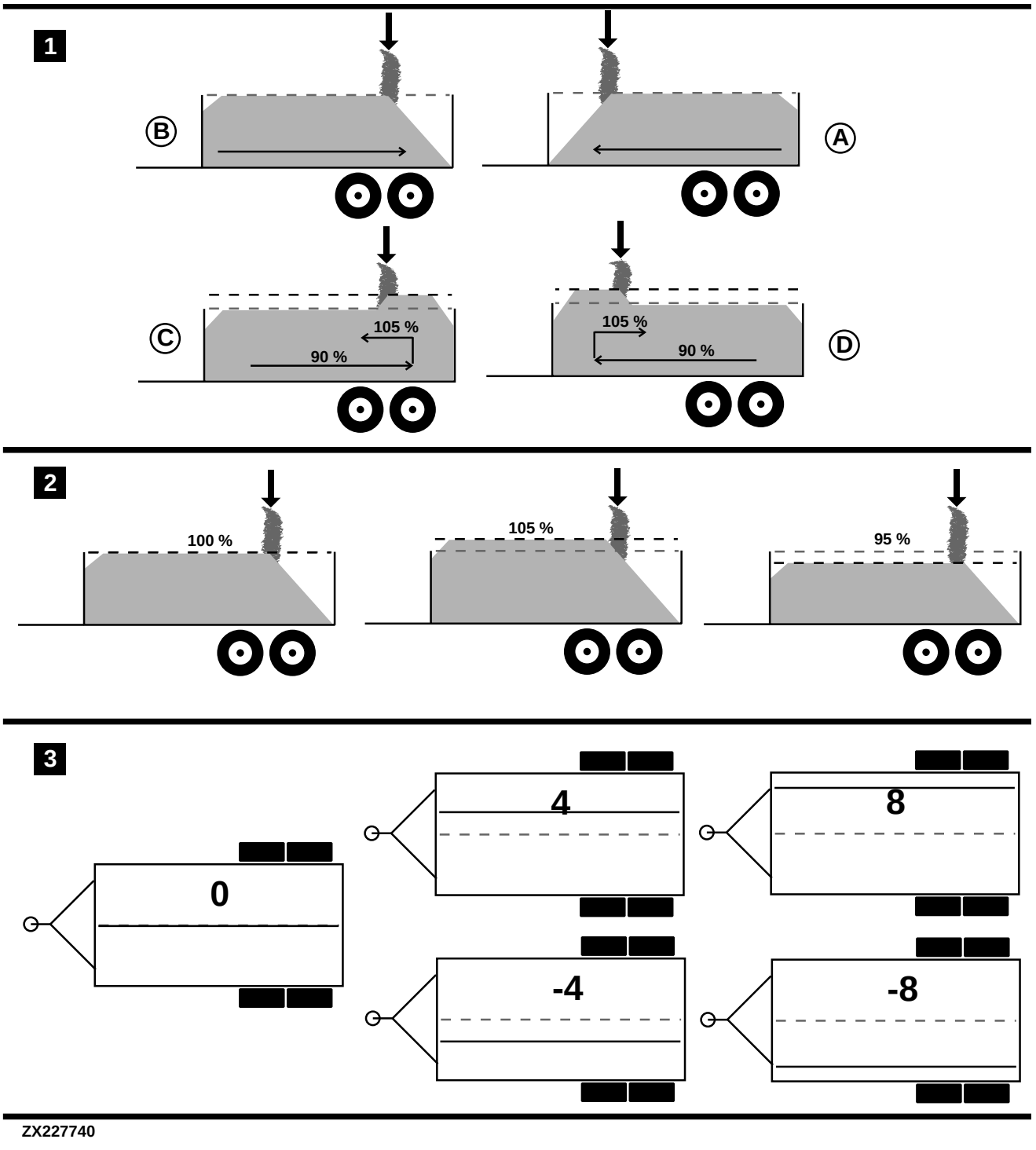

ZX227740

1— Trailer Fill Strategy 2— Trailer Fill Height 3— Trailer Fill Offset

Trailer Fill Strategy/Height/Offset (Side Unloading Only)

1. Trailer fill strategies:
   a. Back to front.
   b. Front to back.
   c. Front-to-back-to-front.
   d. Back-to-front-to-back.
2. Trailer fill height examples.
3. Trailer fill offset examples.

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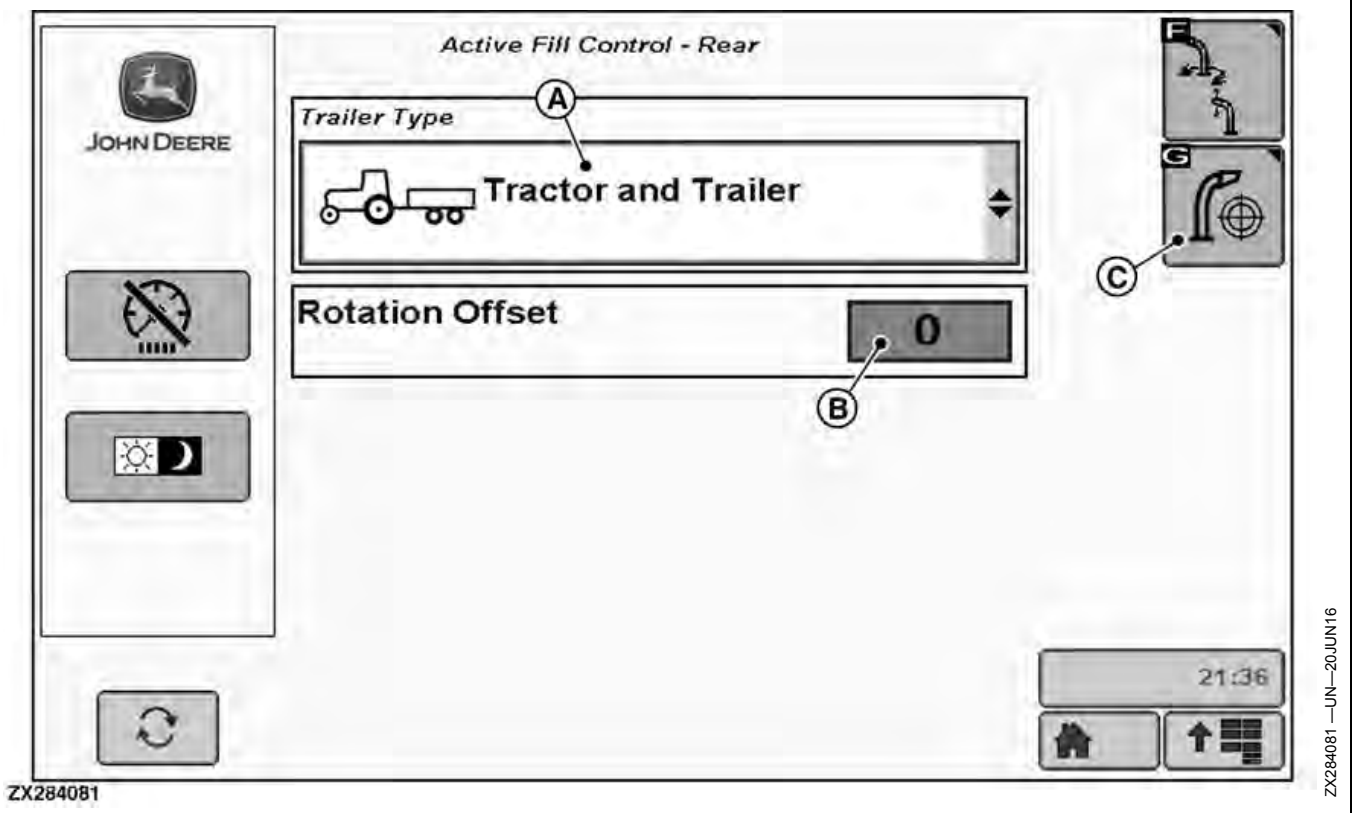
OUCC002,0004CF4 -19-29JUN16-5/13



A—Trailer Type
B—Rotation Offset
C—Active Fill Control Page Access Button

Active Fill Control-Rear Page

From this page:

- Use trailer type drop-down menu (A) to select the trailer type that is used. Following trailer types can be selected:
  - Tractor and Trailer
  - Straight Truck (non-articulated)
  - Semi-Truck
- Press spout rotation offset (B) to define desired spout offset (that is, in the event of cross wind).
- Press Active Fill Control page access button (C) to go back to **Active Fill Control Page**.

Continued on next page
OUCC002,0004CF4 -19-29JUN16-6/13

Operate Active Fill Control—Side Unloading

⚠ CAUTION: Always turn off (disable) Active Fill Control system before entering a roadway. Do not attempt to turn on (activate) Active Fill Control system while transporting on a roadway.

Before enabling and activating the Active Fill Control, ensure the desired fill height, the fill strategy, and the fill offset have been set up (see **Active Fill Control Page** in this section).

To enable system, the following conditions must be met:

- AFC control unit (IPM) ready.
- AFC system calibrated.
- Stereo camera ready.
- Spout sensors calibrated.
- Road safety mode button in field mode.

Press the enable AFC button (A) to toggle between enable/disable Active Fill Control.

Turn discharge spout (B) at an angle of about 90 degrees to the desired side of the machine then drive the tractor and place the trailer (C) into the detection/tracking zone (D), as shown (Position 1).

After system has been ENABLED, operator must manually change system to ACTIVE status when trailer fill control is desired.

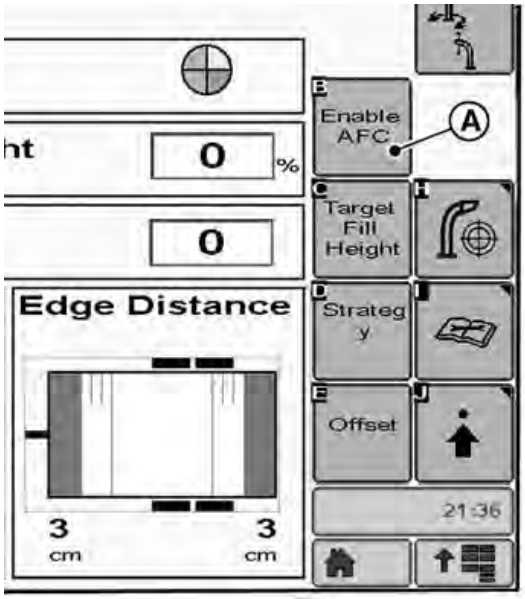
To activate system, the following conditions must be met:

- Operator seated.
- Main clutch engaged.
- Feed rolls engaged.
- Spout tilt more than 15 degrees.
- Spout rotation more than 35 degrees.

Press Active Fill Control button (E) on multi-function lever to activate system. This initiates the trailer detection process.

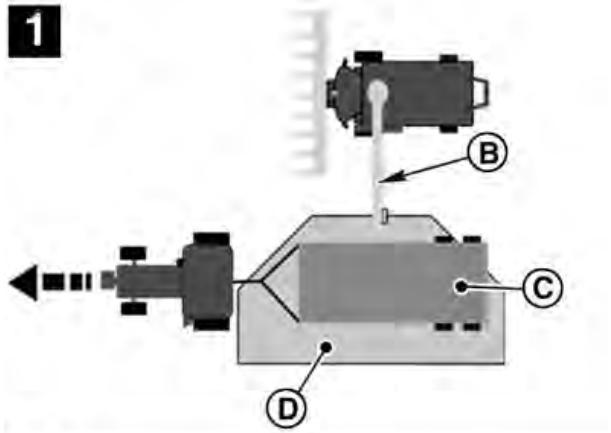
NOTE: The position (2) shows the best position of trailer and discharge spout before activating the Active Fill Control system.

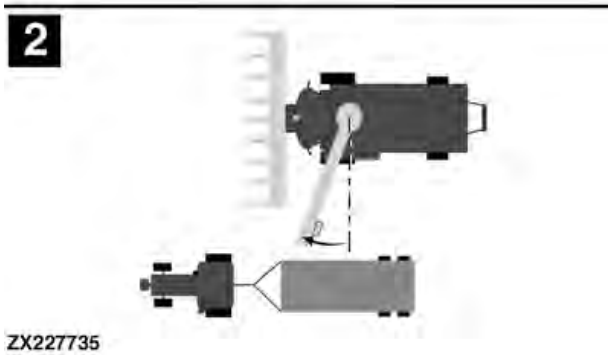
A—Enable AFC Button
B—Spout
C—Trailer
D—Detection/Tracking Zone
E—Active Fill Control Button
1— Trailer Detection
2— Best Trailer/Spout Engage Position



ZX265287

ZX265287 —UN—29JUN16





ZX227735

ZX227735 —UN—11JAN15

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OUCC002,0004CF4 -19-29JUN16-7/13

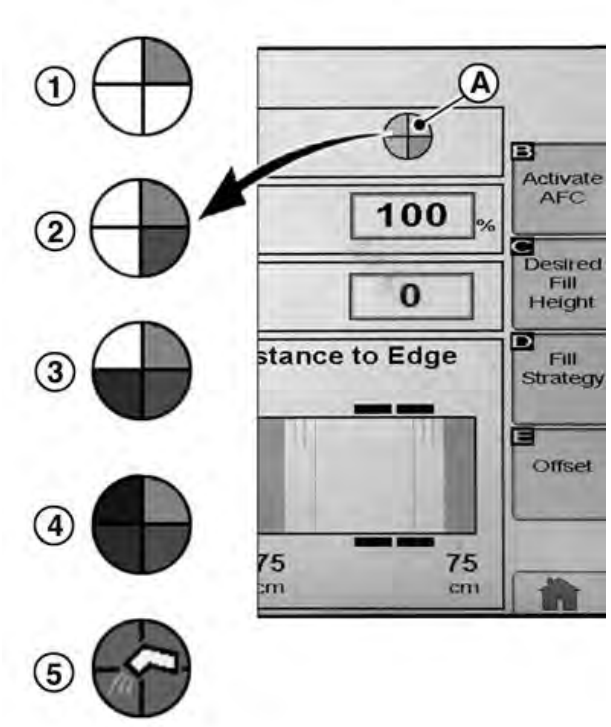
Side Unloading Status Pie Description: Check Active Fill Control status pie (A). Status pie (A) indicates the stage that Active Fill Control is in.

- Stage 1—**(1/4 of pie)**—Active Fill Control control unit (IPM) and all other hardware necessary for use are ready.
- Stage 2—**(2/4 of pie)**—System calibrated.
- Stage 3—**(3/4 of pie)**—Enable AFC button has been pressed. System is enabled.
- Stage 4—**(4/4 of pie)**—Active Fill Control button on multi-function lever has been pressed. System is engaged and Active Fill Control system is starting trailer detection.
- Stage 5—**(4/4 of pie with discharge spout)**—Trailer is detected.

  NOTE: A black frame indicates that the trailer is detected.

Active Fill Control emits different tones showing system changes as follows:

- When system enters the stage 5—An activation tone is emitted when a trailer is detected.
- When system exits stage 4 or stage 5—A deactivation tone is emitted.
- When the trailer is full—A tone is emitted.
- When the trailer is at maximum discharge spout rotation angle for control—A tone is emitted.



ZX265288

ZX265288 —UN—07DEC15

A—Active Fill Control Status Pie

Continued on next page

OUCC002,0004CF4 -19-29JUN16-8/13

ZX256140 —UN—22JUN16

ZX256140

A—Video Stream
B—Active Fill Control Status Pie
C—Trailer Fill Strategy
D—Offset
E—Detection Box
F—Desired Unloading Location
G—Fill Height Bar Graph
H—Camera Performance Icon

Video Stream—Side Unloading

A video stream (A) is generated by the Image-Processing Module (IPM) and can be displayed on a GreenStar™ 3 2630 Display or a third-party display only.

IMPORTANT: Video stream on a GreenStar™ 3 2630 Display or a third-party display is for viewing purpose only. No touch functionality and no changing of the settings are possible.

If your machine is equipped with video stream, following information are displayed (see **Active Fill Control Page** in this section):

- Status pie (B) indicates the stage that Active Fill Control is in.
- Trailer fill strategy (C).
- Trailer fill offset (D).
- Green box (E) around trailer indicates the detected box used for trailer filling.
- Orange arrow (F) indicates where the system is filling the material according to fill strategy and offset.
- Fill height bar graph (G) indicates the fill height status:
  - **Green** quarters: Far from full area.
  - **Yellow** quarters: Almost full area.
  - **Red** quarters: Fill height reached.
  - **Gray** quarters: Edge distance area.
- Camera performance icon (H) indicates performance status of the camera:
  - (1) Camera blinded by sunlight—Awareness—Check performance.
  - (2) Excessive airborne dust or dirt on lenses—Awareness—Check the lens cleanness.
  - (3) Getting dark—Turn on lights.

Continued on next page

OUCC002,0004CF4 -19-29JUN16-9/13

Operate Active Fill Control—Rear Unloading

⚠ CAUTION: Always turn off (disable) Active Fill Control system before entering a roadway. Do not attempt to turn on (activate) Active Fill Control system while transporting on a roadway.

Before enabling and activating the Active Fill Control, ensure that the desired trailer type has been selected (see **Active Fill Control-Rear Page** in this section).

To enable system, the following conditions must be met:

- AFC control unit (IPM) ready.
- AFC system calibrated.
- Stereo camera ready.
- Spout sensors calibrated.
- Road safety mode button in field mode.

Press the enable AFC button (A) to toggle between enable/disable Active Fill Control.

After system has been ENABLED, operator must manually change system to ACTIVE status when trailer fill control is desired. Proceed as follows:

To activate system, the following conditions must be met:

- Operator seated.
- Main clutch engaged.
- Feed rolls engaged.
- Spout tilt more than 15 degrees.

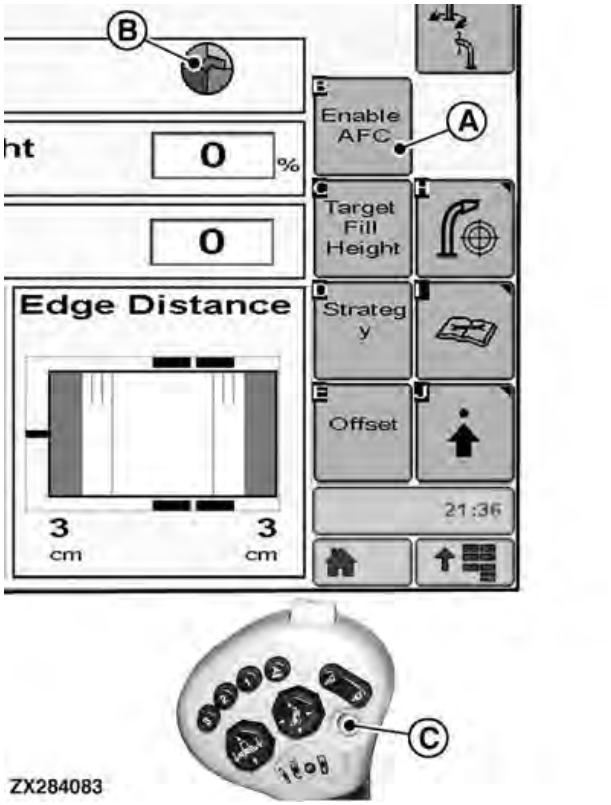
With the system status pie in stage 3 (B), begin unloading to the rear as normal. Active Fill Control system begins to detect the trailer as soon as crop flow is detected. Ensure that the material is landing in the desired location in the trailer.

IMPORTANT: To allow tractor heading detection, the machine and tractor must move at least 5 m (16 ft 5 in).

Press Active Fill Control button (C) on multi-function lever to activate system. If Active Fill Control has detected the trailer, the system becomes active immediately.

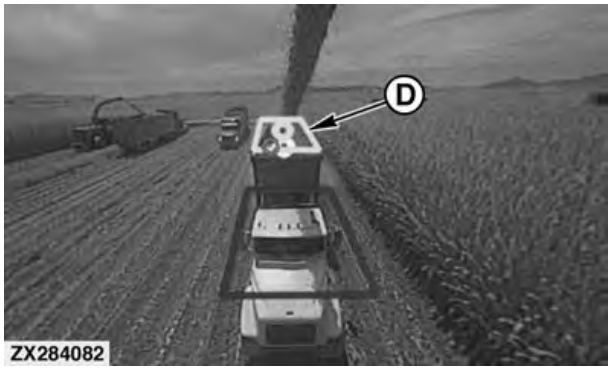
NOTE: Active Fill Control has detected the trailer if a box (D) is drawn over the trailer in the video feed.

Active Fill Control continues to direct material into the center of the trailer. Use the spout rotation and flap switch on multi-function lever to direct material toward the sides, front, or rear of the trailer.



ZX284083

ZX284083 —UN—29JUN16



ZX284082

ZX284082 —UN—22JUN16

A—Enable AFC Button
B—Status Pie—Stage 3
C—Active Fill Control Button
D—Bounding Box

Continued on next page

Rear Unloading Status Pie Description: Check Active Fill Control status pie (A). Status pie (A) indicates the stage that Active Fill Control is in.

- Stage 1—**(1/4 of pie)**—Active Fill Control control unit (IPM) and all other hardware necessary for use are ready.
- Stage 2—**(2/4 of pie)**—System calibrated.
- Stage 3—**(3/4 of pie)**—Enable AFC button has been pressed. System is enabled. Active Fill Control system is starting crop flow and trailer detection.

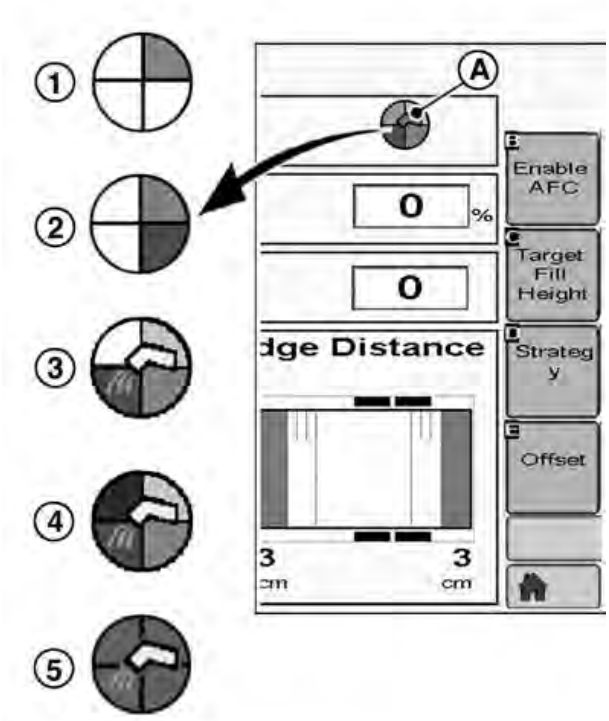
  NOTE: Stage 3 with crop flow detected shown.
- Stage 4—**(4/4 of pie)**—Active Fill Control button on multi-function lever has been pressed. System is engaged.

  NOTE: Stage 4 with crop flow detected shown.
- Stage 5—**(4/4 of pie with discharge spout)**—Trailer is detected.

  NOTE: A black frame indicates that the trailer is detected.

Active Fill Control emits different tones showing system changes as follows:

- When system enters the stage 3—An activation tone is emitted when a trailer is detected.
- When system exits stage 4 or stage 5—A deactivation tone is emitted.
- When the trailer is at maximum discharge spout rotation angle for control—A tone is emitted.



ZX284085

A—Active Fill Control Status Pie

ZX284085 —UN—20JUN16

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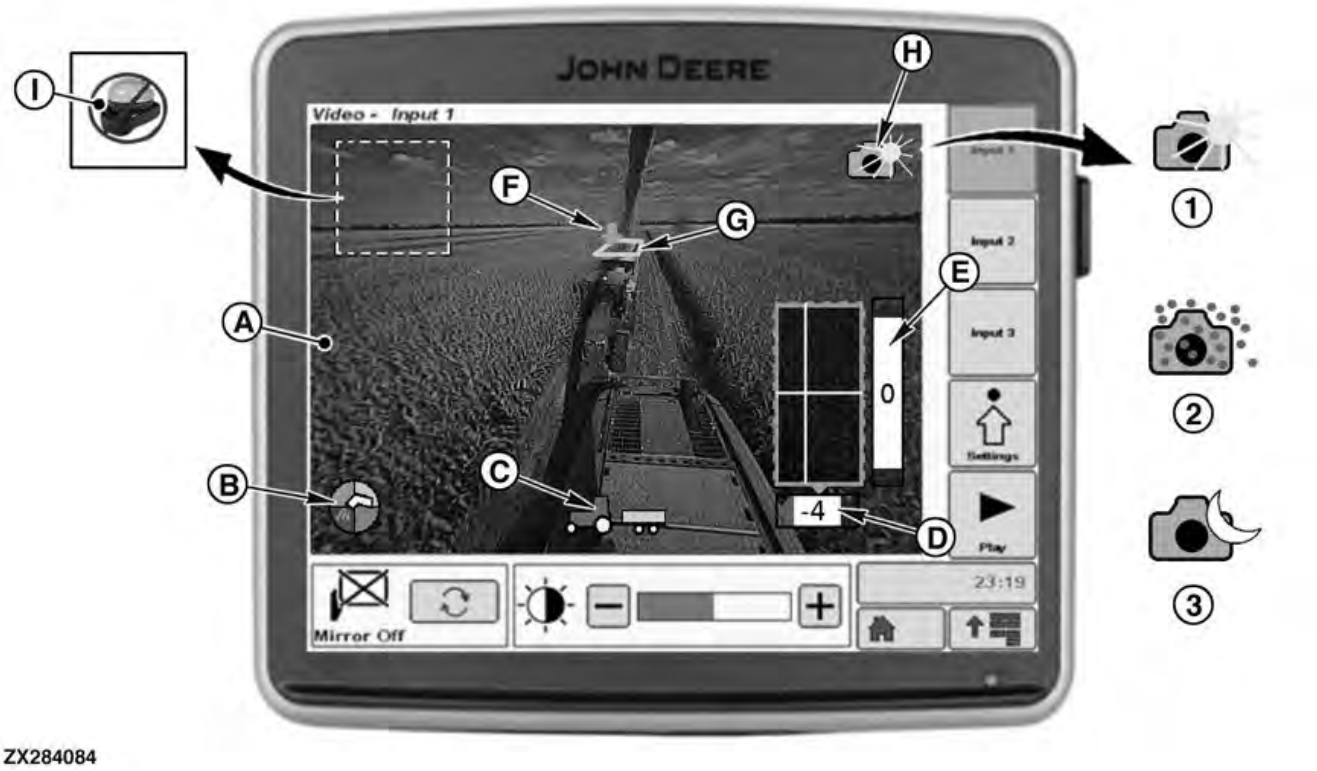
OUCC002,0004CF4 -19-29JUN16-11/13



ZX284084

ZX284084 —UN—29JUN16

A—Video Stream
B—Active Fill Control Status Pie
C—Trailer Type
D—Spout Offset
E—Spout Flap Offset
F—Desired Unloading Location
G—Detection Box
H—Camera Performance Icon
I— GPS Icon

Video Stream—Rear Unloading

A video stream (A) is generated by the Image-Processing Module (IPM) and can be displayed on a GreenStar™ 3 2630 Display or a third-party display only.

IMPORTANT: Video stream on a GreenStar™ 3 2630 Display or a third-party display is for viewing purpose only. No touch functionality and no changing of the settings are possible.

If your machine is equipped with video stream, following information are displayed (see **Active Fill Control-Rear Page** in this section):

- Status pie (B) indicates the stage that Active Fill Control is in.
- Trailer type (C).
- Spout rotation offset (D).
- Spout flap offset (E).
- Orange arrow (F) indicates where the system is filling the material according to offsets.
- Green box (G) around trailer indicates the detected box used for trailer filling.
- Camera performance icon (H) indicates performance status of the camera:
  - (1) Camera blinded by sunlight—Awareness—Check performance.
  - (2) Excessive airborne dust or dirt on lenses—Awareness—Check the lens cleanness.
  - (3) Getting dark—Turn on lights.
- GPS icon (I) indicates that GPS receiver is not present or that GPS signal is lost.

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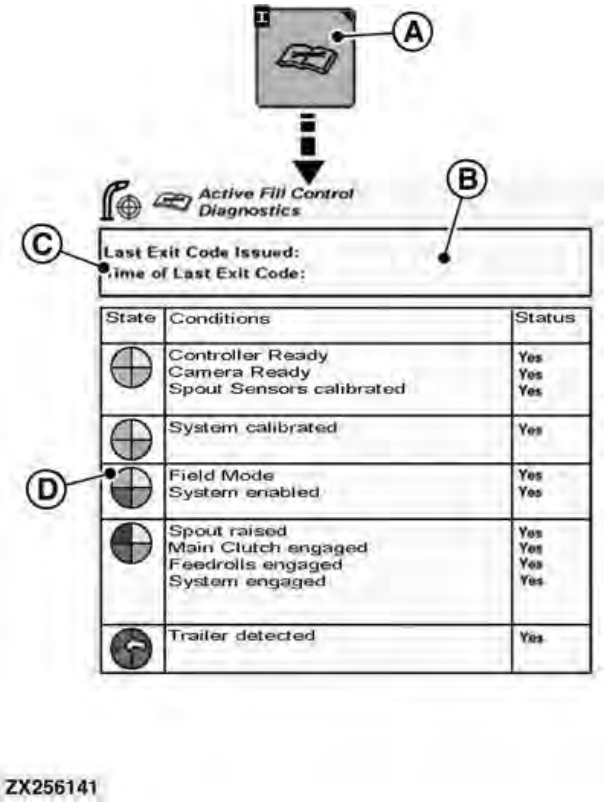
OUCC002,0004CF4 -19-29JUN16-12/13

Diagnostic Page

From the Active Fill Control Page, press diagnostic button (A). The Active Fill Control Diagnostic page (B) is then displayed. Use this page to get last exit code issued (DTC) or time of last exit code (C) and status pie (D) description (see **Active Fill Control Page**, **Operate Active Fill Control—Side Unloading** or **Operate Active Fill Control—Rear Unloading** in this section).

In case a Diagnostic Trouble Code (DTC) is listed, refer to the following chart and follow instructions:

Last Exit Code List	
Diagnostic Trouble Code (DTC)	Description
33.516379.2	Cycle power to attempt recovery. Replace spout camera cable if problem persists.
33.516379.7	Spout camera installed upside down.
33.516379.11	Spout camera not communicating. Cycle power to attempt recovery. Contact your dealer if problem persists.
33.516379.12	Spout camera error. Cycle power to attempt recovery. Contact your dealer if problem persists.
33.516379.13	Replace spout camera cable if AFC system performance is poor.
33.516380.2	Internal processor not communicating. Reprogram control unit.
33.516380.12	Controller reprogramming failed. Turn ignition off, wait one minute, turn ignition on, and reprogram again.
33.516380.13	Calibrate the Active Fill Control system.



ZX256141

ZX256141 —UN—09SEP15

A—Diagnostic Button
B—Active Fill Control Diagnostic Page
C—Last Exit Code
D—Active Fill Control Status Pie Description

OUCC002,0004CF4 -19-29JUN16-13/13

Aftertreatment Indicators Overview

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.

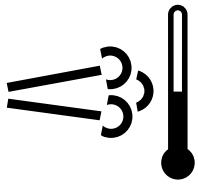
When the exhaust filter indicator is combined with the engine stop indicator engine performance is further reduced by the ECU because there is an aftertreatment system fault or the soot level of the exhaust filter is extremely high. If this combination is present, see your authorized servicing dealer.

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.

RG22487 —UN—21AUG13

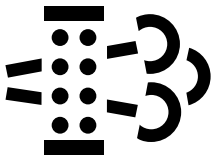
Diesel Exhaust Fluid Indicator

RG22488 —UN—21AUG13



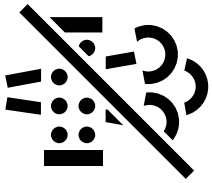
Engine Emissions Temperature Indicator

RG22489 —UN—21AUG13



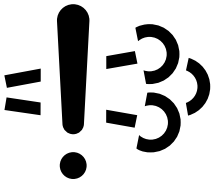
Exhaust Filter Indicator

RG22490 —UN—21AUG13



Auto Cleaning Disabled Indicator

RG22491 —UN—21AUG13



Engine Emissions System Malfunction Indicator

RG22492 —UN—21AUG13

Warning Indicator

RG22493 —UN—21AUG13

Engine Stop Indicator

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 -19-02OCT15-1/1

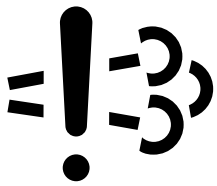
Required Machine Stop Warning

Machine Stop Mandate Occurs

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.

RG22491 —UN—21AUG13



DX,MACHSTOPWARN,AG -19-02OCT15-1/6

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

RG22492 —UN—21AUG13

DX,MACHSTOPWARN,AG -19-02OCT15-2/6

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

RG22493 —UN—21AUG13

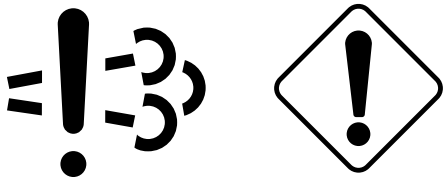
DX,MACHSTOPWARN,AG -19-02OCT15-3/6

Emission System Fault Has Occurred

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.

RG26361 —UN—04SEP14



- Contact service provider.

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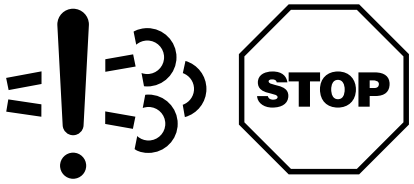
DX,MACHSTOPWARN,AG -19-02OCT15-4/6

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

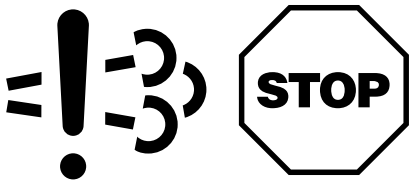


DX,MACHSTOPWARN,AG -19-02OCT15-5/6

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.

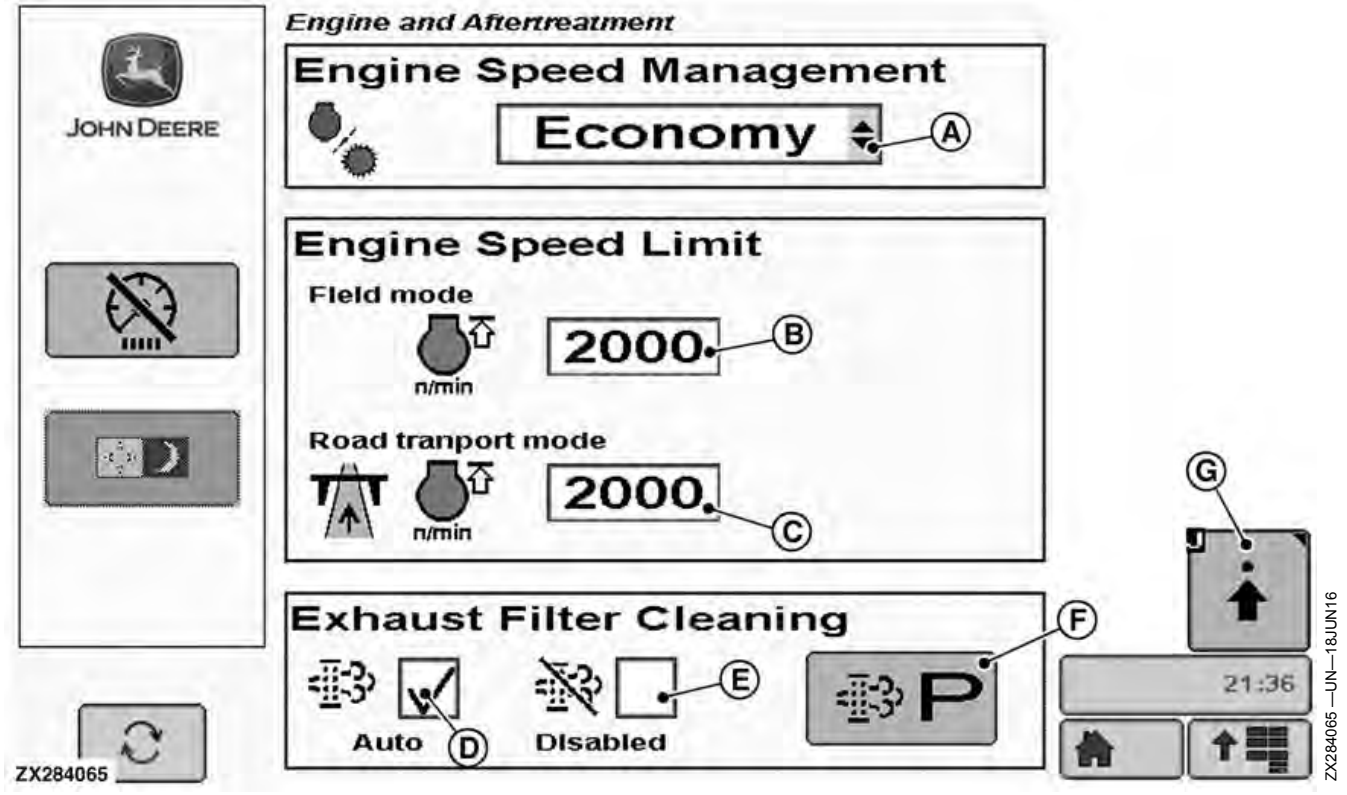
- Engine power is idle only.
- Place machine in a safe state.
- Contact service provider.

RG26972 —UN—26MAR15



DX,MACHSTOPWARN,AG -19-02OCT15-6/6

Engine And Aftertreatment Page



A—Engine Speed Management Mode
B—Engine Speed Limit—Field Mode
C—Engine Speed Limit—Road Mode
D—Exhaust Filter Cleaning—Auto Mode
E—Exhaust Filter Cleaning—Disabled Mode
F—Exhaust Filter Cleaning—Park Mode
G—Engine Settings Page Access Button

The Engine And Aftertreatment Page displays information related to the following engine setups:

- Engine speed management (A): To reduce fuel consumption and to increase efficiency during field operations, the engine speed management allows the operator to toggle between three different field modes. See **Engine Speed Management—Field Mode (ProDrive™ Machines Only)** or **Engine Speed Management—Field Mode (PBST Machines Only)** in this section.

  IMPORTANT: Engine speed management can be activated only when road safety mode button is in field mode (see CommandTouch™ Armrest Console in this section).

- User-defined engine speed limits (B) and (C) for field mode and road mode. See **Engine Speed Limit** in this section.

- On machines equipped with Final Tier 4/Stage IV engine, initiate an exhaust filter cleaning process (D), (E) or (F). See **Exhaust Filter Cleaning—Final Tier 4/Stage IV Engines Only** in this section.

- Engine settings page access button (G). See **Engine Settings Page** in this section.

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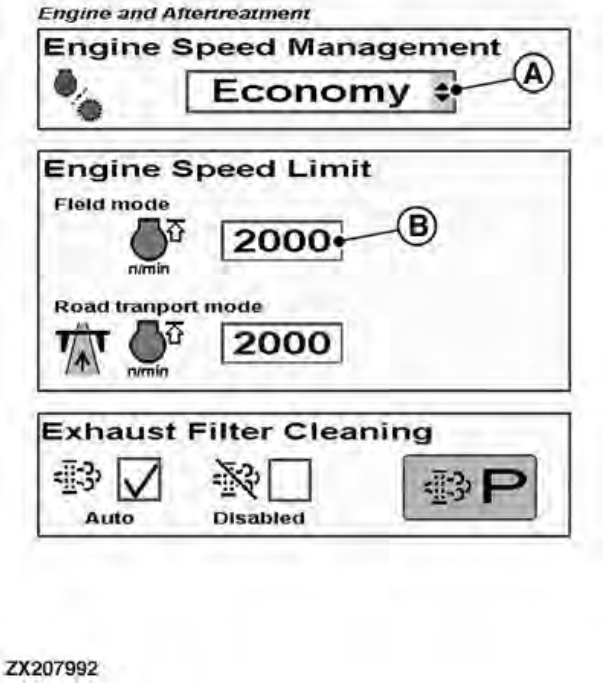
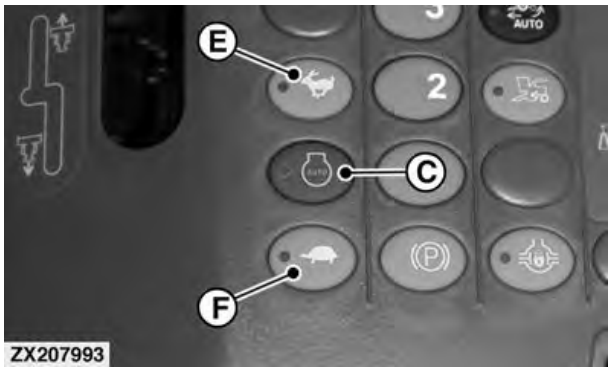
OUCC002,0004CA4 -19-17JUN16-1/8



ZX207992

ZX207992 —UN—21NOV14



ZX207993 —UN—20DEC13

Engine Speed Management—Field Mode (ProDrive™ Machines Only):

Select and activate the desired field mode as follows:

1. Use engine speed management menu (A) to select the desired field mode:

   • **Manual** mode—Manual control of engine speed.

NOTE: Manual mode is default mode each time the machine is operated in field mode.

   In this mode the engine speed and the machine ground speed are manually controlled by using engine speed button (high) (E) and low idle button (F). See **Engine Speed Buttons** in this section.

   • **Headland mode** (ProDrive™ machines only)—Engine speed is automatically controlled depending on the machine field situation (engine speed reduction in headland, engine speed reduction when machine is standing still, engine speed increase when feed rolls are engaged). The harvesting speed is user defined.
   In this mode, the system automatically toggles between preselected engine speeds corresponding to different field operating conditions:
   - **Low idle** (about 900 rpm) when the machine is standing still
   - **Middle speed** (about 1250 rpm) when machine is traveling but feed rolls are disengaged or header is not in harvesting position (engine speed road management is then active).
   - **Harvesting speed** (user defined or pre-selected) when machine is traveling, feed rolls are engaged and header is in harvesting position.
   - **High idle** (about 2100 rpm) when conditions for harvesting speed are met and the spout stands in rear position.

NOTE: High idle operating mode is active on machines equipped with Auto Spout Position control option only.

ZX207994 —UN—20DEC13

A—Engine Speed Management Menu
B—Engine Speed Limit—Field Mode
C—Engine Set Speed Button
D—Engine Speed Management Icon
E—Engine Speed Button (High)
F—Low Idle Button

Continued on next page

IMPORTANT: Low idle speed has the highest priority. For example if the conditions for middle speed are not met, low idle is automatically selected.

- **Economy** mode (ProDrive™ machines only)—Engine speed and ground speed are automatically controlled depending on engine load. In this mode, the system automatically adapts the engine load efficiency by controlling the ground speed as well as the engine speed (described under Headland (ProDrive™ machines only)). The machine ground speed is based on engine load which results in a throughput control to optimize the fuel efficiency.

IMPORTANT: The machine never accelerates above the speed set by the multi-function lever. The operator can stop the machine any time by pulling the multi-function lever back to neutral.

NOTE: As soon as the engine load decreases or disappears (e.g. end of the field) the machine accelerates up to the commanded machine ground speed.

2. Enter the value for desired field mode engine speed limit (B). Range: 1200 to 2200 rpm.
3. Press engine set speed button (C) to activate the selected field mode (A) at the desired engine speed limit (B). If Headland or Economy field mode is selected, the engine speed management icon (D) illuminates.

Continued on next page

Engine Speed Management—Field Mode (PBST Machines Only):

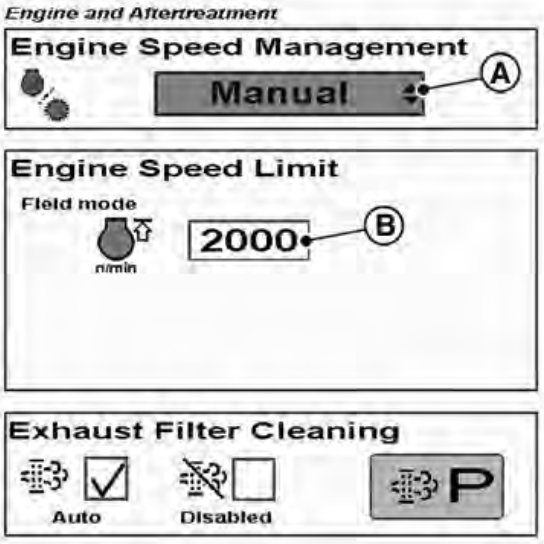
1. Only the **Manual** mode (manual control of engine speed) can be selected.

   In this mode the engine speed and the machine ground speed are manually controlled by using engine speed button (high) (C) and low idle button (E). See **Engine Speed Buttons** in this section.

2. Enter the value for desired field mode engine speed limit (B). Range: 1200 to 2200 rpm.

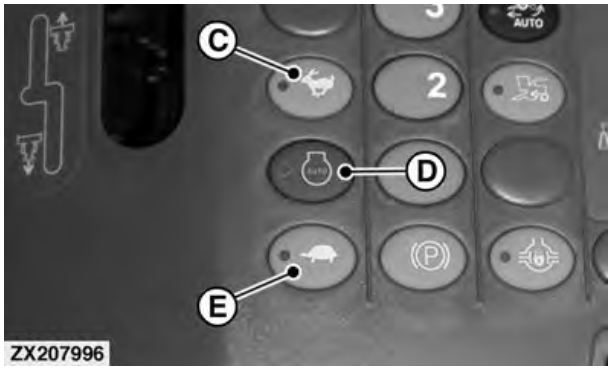
3. Press engine set speed button (D) to activate the selected field mode (A) at the desired engine speed limit (B).

A—Engine Speed Management Menu
B—Engine Speed Limit—Field Mode
C—Engine Speed Button (High)
D—Engine Set Speed Button
E—Low Idle Button



ZX207995

ZX207995 —UN—21NOV14



ZX207996 —UN—20DEC13

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OUCC002,0004CA4 -19-17JUN16-4/8

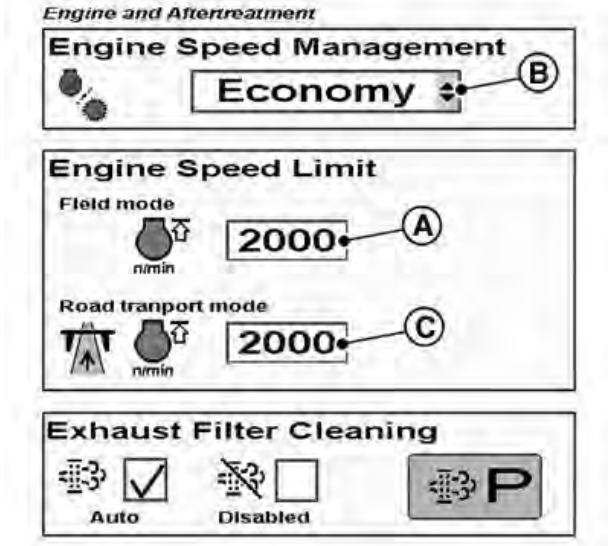
Engine Speed Limit:

Use safety road mode button (D) to switch between road mode and field mode. The engine speed limits for road mode and for field mode can be adjusted independently (see **CommandTouch™ Armrest Console** in this section).

- Engine speed limit in field mode (A) can be adjusted in relation to the selected engine speed management field mode (B). Range: 1200 to 2200 rpm. See **Engine Speed Management—Field Mode (ProDrive™ Machines Only)** or **Engine Speed Management—Field Mode (PBST Machines Only)** in this section.

- **ProDrive™ Machines Only:** Engine speed limit (C) in road mode can be adjusted manually. Range: 1200 to 2200 rpm.
- **PBST Machines Only:** Engine speed limit in road mode (C) cannot be adjusted manually and is automatically set to 1650 rpm.

A—Engine Speed Limit—Field Mode
B—Engine Speed Management
C—Engine Speed Limit—Road Mode
D—Road Safety Mode Button



ZX207997 —UN—21NOV14

ZX207997

ZX207998

ZX207998 —UN—20DEC13

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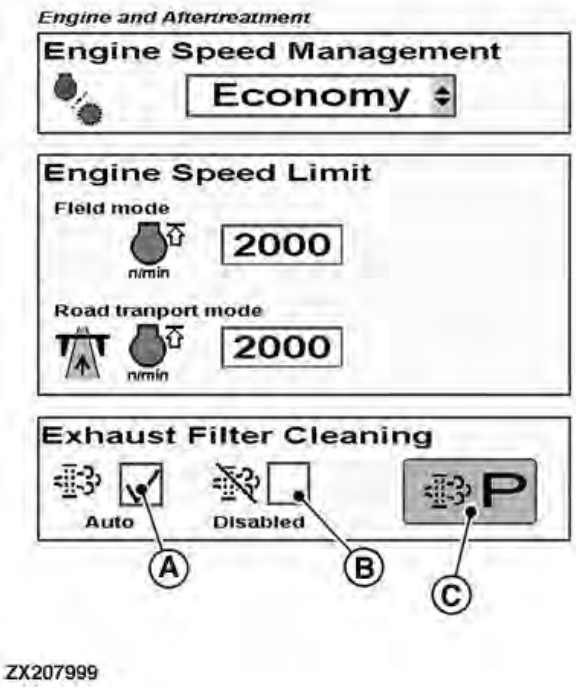
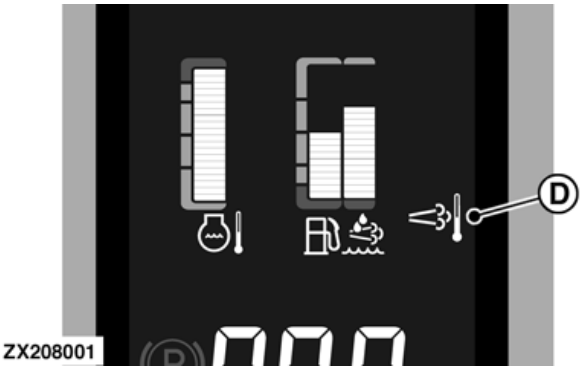
OUCC002,0004CA4 -19-17JUN16-5/8

ZX208000 —UN—20DEC13



ZX207999

ZX207999 —UN—21NOV14



ZX208001 —UN—20DEC13

A—AUTO Exhaust Filter Cleaning Mode
B—Disabled Exhaust Filter Cleaning Mode
C—Parked Exhaust Filter Cleaning Button
D—Exhaust Filter Cleaning Indicator

Exhaust Filter Cleaning—Final Tier 4/Stage IV Engines Only

Machines with Final Tier 4/Stage IV engines are equipped with an efficient exhaust filter cleaning system (see arrow). Sensors monitor the condition of the exhaust system and initiate the cleaning process when load on exhaust filter becomes excessive in the following order:

1. **Passive exhaust filter cleaning** always occurs when the engine is at moderate or high loads.
2. **Automatic exhaust filter cleaning** is started when soot in the exhaust filter reaches a certain level.
3. **Service cleaning** requires you to contact your John Deere dealer.

IMPORTANT: Service cleaning is required when Diagnostic Trouble Code ECU 003719.13 is generated. Contact your John Deere dealer.

NOTE: System defaults to AUTO mode every time key switch is cycled. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See Operate the Exhaust Cleaning System (Final Tier 4/Stage IV Engines Only) in Field Operation section.

Continued on next page

OUCC002,0004CA4 -19-17JUN16-6/8

- **AUTO Exhaust Filter Cleaning Mode** (A) - allows exhaust filter cleaning system to intelligently perform a filter cleaning as required. Cornerpost display indicator and armrest display provide operator information related to exhaust filter system activity.

  NOTE: Exhaust filter cleaning indicator (D) illuminates when exhaust filter system is actively performing exhaust filter cleaning.

- **Disable Exhaust Filter Cleaning Mode** (B) - allows exhaust filter cleaning system to be disabled. Disabling the system is not recommended. Only to be used in certain conditions or emergency situations. See **When to Disable Exhaust Cleaning System** in Field Operation section for more detailed information.

  IMPORTANT: Do not disable automatic exhaust filter cleaning unless it is absolutely necessary.

- **Parked Exhaust Filter Cleaning Button** (C) - is an automated process which allows the system 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 this procedure. Time required for the parked exhaust filter cleaning is dependent upon the level of exhaust filter restriction, ambient temperatures, and current exhaust gas temperature.

  IMPORTANT: A manual cleaning cannot be initiated during an automatic cleaning process.

  Several conditions must be met to initiate a manual cleaning process. Always refer to Parked Exhaust Filter Cleaning in Field Operation section when initiating a manual filter cleaning.

  NOTE: Parked exhaust filter cleaning button may be active or inactive (grayed out) depending on exhaust filter restriction level. See Parked Exhaust Filter Cleaning in Field Operation section.

  System defaults to AUTO mode when parked exhaust filter cleaning is complete. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See Operate the Exhaust Cleaning System (Final Tier 4/Stage IV Engines Only) in Field Operation section.

  IMPORTANT: Recommended practice is to keep automatic exhaust filter cleaning activated.

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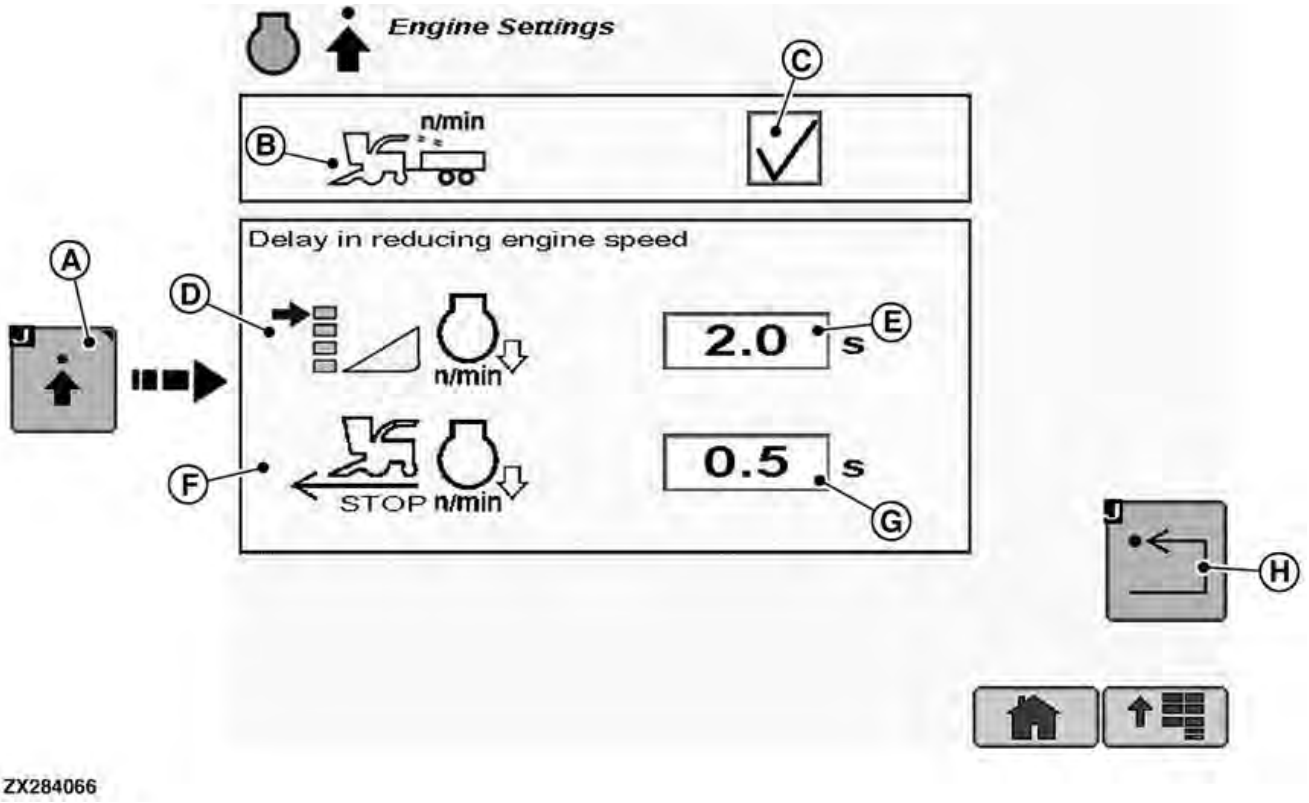


A—Engine Settings Page Access Button
B—Trailer Presence Function
C—Check Box
D—Headland Position
E—Trigger Duration
F—Machine Stop Function
G—Trigger Duration
H—Return Button

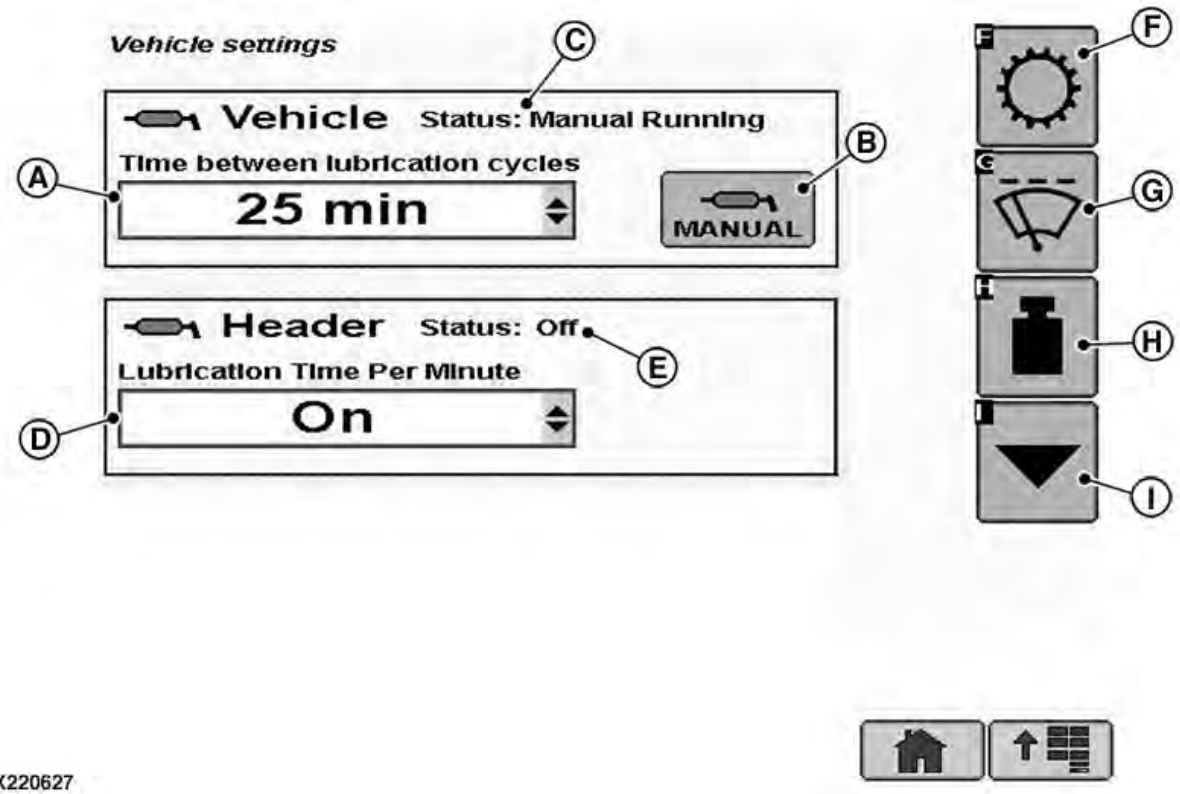
Engine Settings Page

On the Engine And Aftertreatment Page, press the engine settings page access button (A) to perform the following:

- To indicate the engine speed management system that a trailer is attached to the machine (B), check box (C). The system controls the engine speed depending on the spout position.
- To activate the delay in reducing engine speed when header is in headland position (D), input the desired duration (E).
- To activate the delay in reducing engine speed when the machine as stopped moving (F), input the desired duration (G).
- Press return button (H) to go back to the Engine And Aftertreatment Page.

OUCC002,0004CA4 -19-17JUN16-8/8

Vehicle Settings Page



ZX220627

ZX220627 —UN—21NOV14

A—Vehicle Lubrication Interval Setting
B—Vehicle Lubrication Mode Button
C—Vehicle Lubrication Status Indicator
D—Header Lubrication Setting
E—Header Lubrication Status Indicator
F—Tow Mode Page Access Button
G—Wiper Interval Page Access Button
H—Mass Flow Calibration Page Access Button
I— Diagnostics Information Page Access Button

NOTE: To access the Vehicle Settings Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

The Vehicle Settings Page displays information related to the machine lubrication, header lubrication, and allows operator to adjust wiper intervals, select machine tow mode or carry out calibrations. Proceed as follows:

- Vehicle lubrication setting and operating mode (A, B, C). To set up vehicle lubrication see **Vehicle Lubrication** in this section.
- Header lubrication setting (D) appears only if the header equipped with a central lubrication system is attached to the machine. To set up header central lubrication system see **Header Lubrication** in this section.

NOTE: If another type of header is attached to the machine, the header lubrication setting (D) is grayed out and cannot be adjusted.

- Press tow mode page access button (F) to set up tow mode. See **Tow Mode Page** in this section.
- Press wiper interval page access button (G) to set up wiper intervals. See **Wiper Interval Page** in this section.
- Press mass flow calibration page access button (H) to calibrate mass flow sensor (if equipped). See **Mass Flow Calibration** in this section.
- Press diagnostics information page access button (I) to perform interactive component calibrations. See **Diagnostics Information** in this section.

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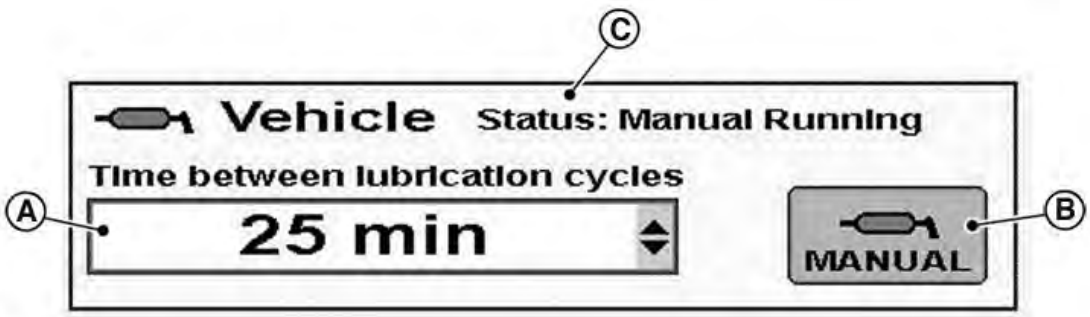
OUCC002,0004C9E -19-21JUN16-1/8



ZX220628 —UN—21NOV14

A—Vehicle Lubrication Interval Setting

B—Vehicle Lubrication Mode Button

C—Vehicle Lubrication Status Indicator

Vehicle Lubrication

Press lubrication mode button (B) to select the desired lubrication mode:

- **Manual Lubrication**. Once activated, the lubrication starts for a predefined period.

  NOTE: Press lubrication button (B) while manual lubrication is running to abort lubrication.

  NOTE: Manual lubrication predefined period: 20 min on machine up to SN 515999 and 16 min on machine from SN 516000.

- **Automatic Lubrication**. Once activated, the lubrication starts for a predefined period as soon as the cutterhead is engaged. After that, lubrication stops running according to the selected interval setting (A).

  NOTE: Automatic lubrication predefined period: 20 min on machine up to SN 515999 and 16 min on machine from SN 516000.

  Use the drop-down menu of the interval setting (A) to select the desired time between each lubrication cycle. Adjusting range: “ON”, 15, 17, 19, 21, 23, 25. **Default: 25 min.**

  NOTE: ON means that vehicle is lubricated continuously (no interval between cycles).

Depending on the selected lubrication mode, indicator (C) indicates actual lubrication status (ON, OFF, Manual Running, Manual OFF, AUTO Running, AUTO OFF).

When key switch is turned ON, the lubrication system practices a self test of 100 seconds to check the grease level. If low level is detected, the Diagnostic Trouble Code **FH1 005526.1** - Central Lubrication Fault (Lubricant level low) is generated. Refill reservoir before starting field operation (see **Refill/Bleed Central Lubrication System Reservoir** in Lubrication and Maintenance section).

IMPORTANT: Manual OFF and AUTO OFF status appear when lubrication system has encountered an error during lubrication cycle. Check first central lubrication system grease level. If grease level is not too low, check for Diagnostic Trouble Code display.

When blockage is detected by the lubrication system pressure sensor, the Diagnostic Trouble Code FH1 005526.0 - Central Lubrication Fault (No lubricant flow) is generated.

If Diagnostic Trouble Code FH1 005526.0 appears, see Central Lubrication System in Lubrication and Maintenance section to find a blockage in divider blocks.

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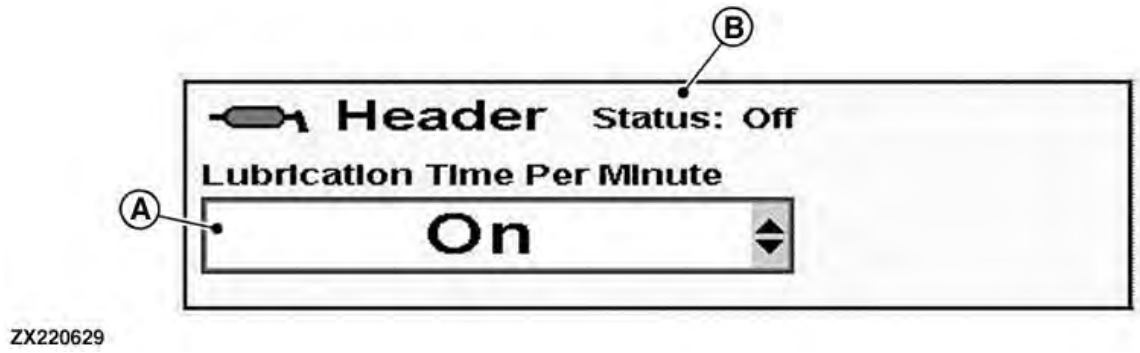
OUCC002,0004C9E -19-21JUN16-2/8



ZX220629 —UN—21NOV14

A—Header Lubrication Setting **B—Header Lubrication Status Indicator**

Header Lubrication

IMPORTANT: Header central lubrication system pump is activated only when header is running forward.

The header central lubrication system is automatically activated every 60 sec. for a period of time that is adjustable. Use the drop-down menu of the lubrication time per minute setting (A) to select the desired lubrication period.

Adjusting range: “ON”, 0 to 60 sec. in 5 sec. step, “OFF”. **Default: 30 sec.**

- To stop header lubrication, set lubrication time per minute (A) to 0 sec. **OFF** is displayed and the header is not lubricated.
- To lubricate the header at desired interval, set lubrication time (A) between 0 and 60 sec. The header central lubrication system is activated every minute for the desired period of time (A).
- To continuously lubricate the header, set lubrication time per minute (A) to 60 sec. **ON** is displayed and the header is lubricated as long as the adjustment remains unchanged.

IMPORTANT: In case of header central lubrication pump error detection, the pump is automatically deactivated and lubrication time per minute (A) set to OFF. Contact your John Deere dealer before starting pump again.

Depending on the selected lubrication time per minute (A), indicator (B) indicates the actual lubrication status (ON, OFF, AUTO ON, AUTO OFF) as follows:

- **ON** appears if lubrication time per minute (A) is set to ON (60 sec.) and header is engaged forward.
- **OFF** appears if lubrication time per minute (A) is set to OFF (0 sec.), or if lubrication time per minute (A) is set to ON (60 sec.) and header is engaged in reverse.
- **OFF** appears if lubrication time per minute (A) is set between 0 and 60 sec. and an error occurs.
- **AUTO ON** appears if lubrication time per minute (A) is set between 0 and 60 sec. and header is engaged forward.
- **AUTO OFF** appears if lubrication time per minute (A) is set between 0 and 60 sec. and header is engaged in reverse.

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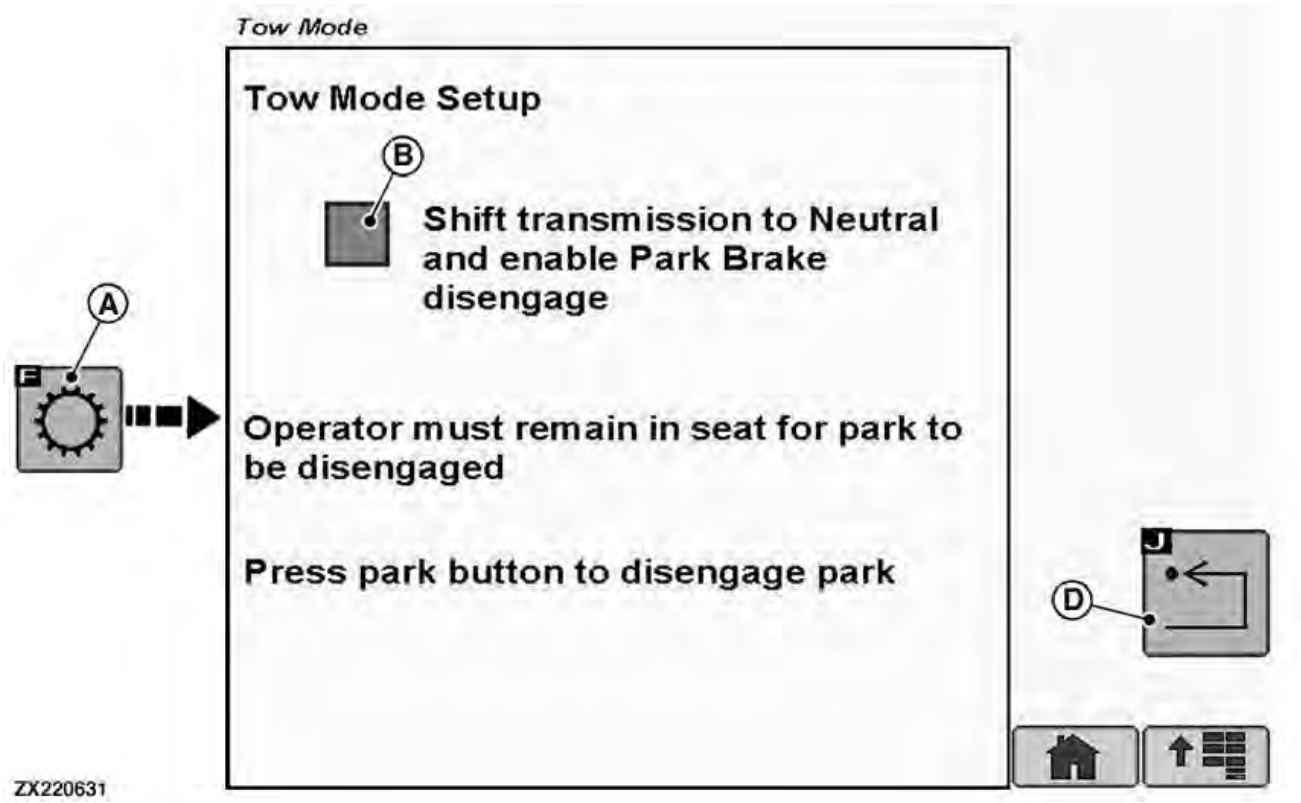
OUCC002,0004C9E -19-21JUN16-3/8



ZX220631 —UN—15NOV14

Tow Mode Page

⚠ CAUTION: Avoid crushing injuries from runaway machine. If machine is on a slope, do not disengage park brake until wheels are blocked.

⚠ CAUTION: Releasing the park brake lock must be carried out ONLY for towing purposes! NEVER operate machine with the park brake lock released! ALWAYS set park brake lock back to its initial status when towing is no longer required.

Never tow machine with a wire rope. Always use a suitable tow bar. To ensure proper braking capability, do not remove drive shafts or push back couplers.

IMPORTANT: Do not tow machine except in an emergency for a short distance at 8 km/h (5 mph).

On the Vehicle Settings Page press the tow mode page access button (A) to activate the machine tow mode as follows:

1. Check the Tow mode box (B) to shift the transmission to neutral and enable park brake disengage.
2. Follow the instructions displayed on screen. Remain in seat to disengage park brake.

ZX201248 —UN—21JUN13

A—Tow Mode Page Access Button
B—Tow Mode Box
C—Park Brake Button
D—Return Button

3. Press park brake button (C) once to disengage park brake.
4. Tow the machine as described in **Tow the Machine** in Field Operation section.
5. Uncheck tow mode box (B) after towing process has ended.

Press return button (D) to go back to Vehicle Settings Page.

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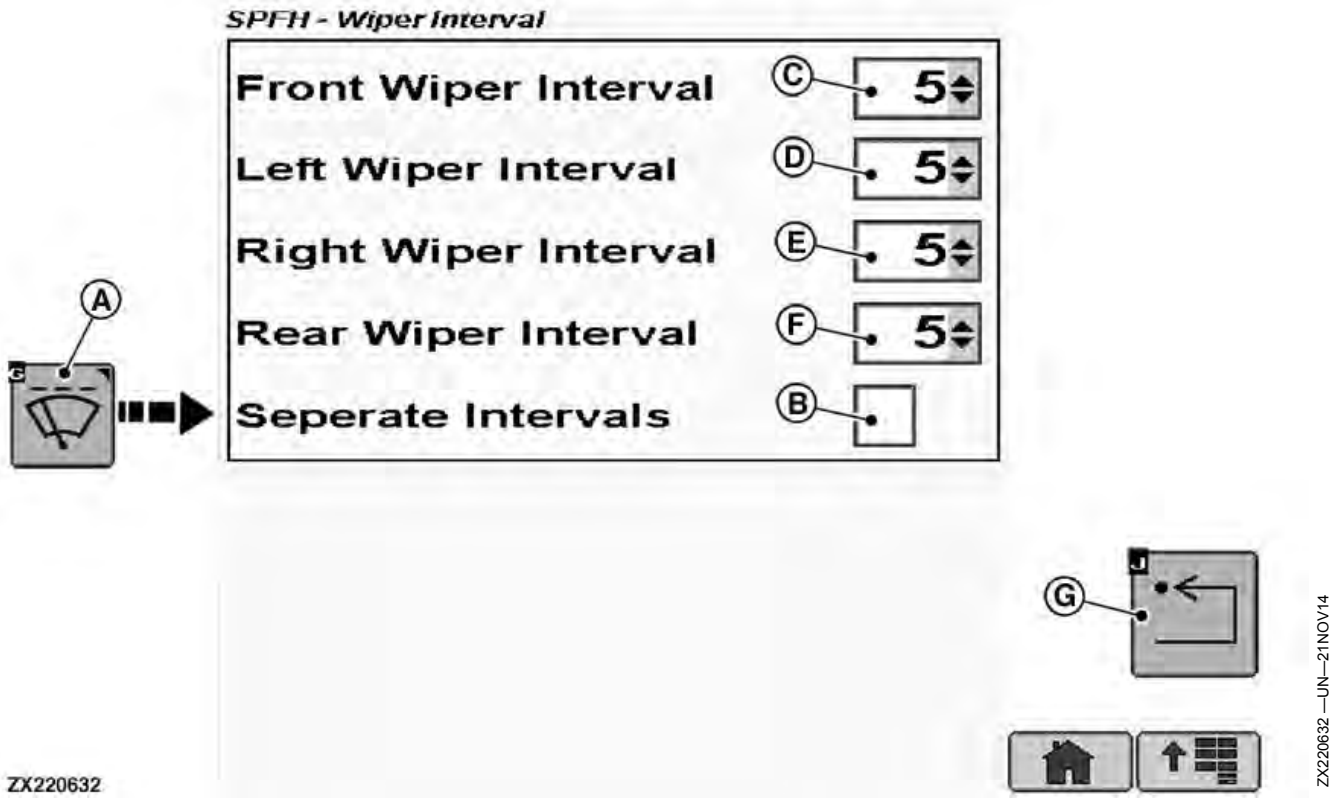
OUCC002,0004C9E -19-21JUN16-4/8



A—Wiper Interval Page Access Button
B—Separate Intervals Box
C—Front Wiper Interval
D—Left Wiper Interval
E—Right Wiper Interval
F—Rear Wiper Interval
G—Return Button

Wiper Interval Page

On the Vehicle Settings Page press the wiper interval page access button (A) to set up the wiper intervals (pause time between two wiping cycles) as follows:

NOTE: Separate intervals box (B), left, right, and rear wiper interval (D, E, and F) appear if the machine is equipped with the relevant option only.

Use the relevant box (B, C, D, E, F) to select one interval time for all wipers or four separate interval times, which can be set up individually for front, left, right, and rear wiper.

- To set up the interval times for front, left, right, and rear wipers individually check separate intervals box (B). Uncheck box (B) to input the same interval times for all wipers at front wiper interval (C).
- Input each desired interval time (C, D, E, F) for front, left, right, and rear wipers.
  Adjusting range: 2, 5, 10, 20, or 0 sec. Default: 5 sec.

Press return button (G) to go back to Vehicle Settings Page.

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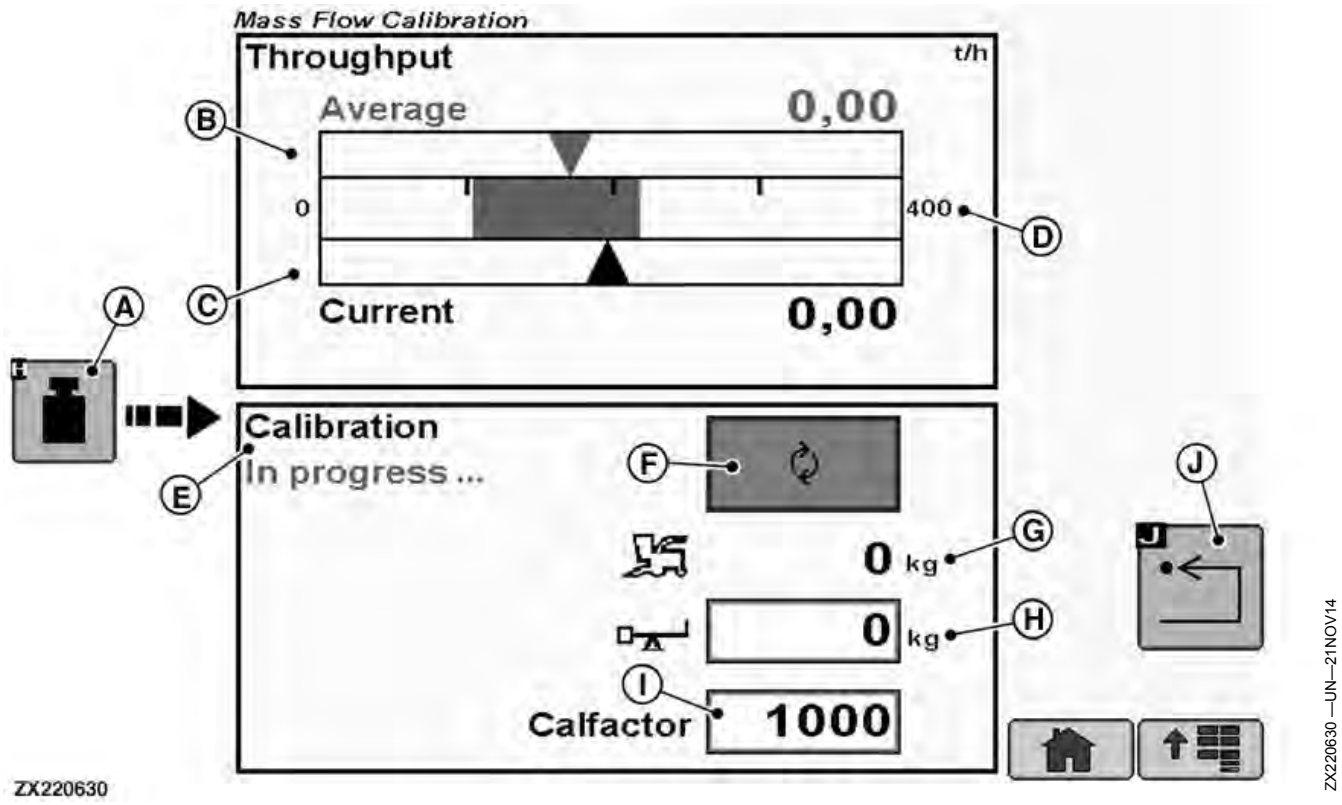
OUCC002,0004C9E -19-21JUN16-5/8



A—Mass Flow Calibration Page Access Button
B—Throughput Display—Average
C—Throughput Display—Current
D—Throughput Current Value
E—Calibration Status
F—Calibration Button
G—Displayed Weight
H—Net Weight Platform Scale
I—Calibration Factor
J—Return Button

Mass Flow Calibration

On the Vehicle Settings Page press the mass flow calibration page access button (A) to perform a yield calibration as follows:

Many factors affect yield, for best results:

- Perform a yield calibration for every crop and when crop conditions change.
- When calibrating, harvest uniform windrows/standing crop at the speed the operator expects to run.
- When harvesting crops in windrows, make sure the crop is evenly fed into the machine and not off to one side of the header.
- Avoid harvesting areas with low yield/flow while calibrating.

IMPORTANT: Be sure that the wagon or truck hauling crop away from the machine is empty when starting filling.

1. Press calibration button (F). Display changes to: Calibration **In progress** (E).
2. Begin harvesting. Weight displayed at (G) should increase while harvesting.
3. Harvest known amount of material (i.e., truck load, wagon load, etc.).
4. When known load is completed, press calibration button (F) again to stop calibration.

IMPORTANT: Be sure that all material is on one vehicle (wagon or truck).

5. Have known amount of material in truck or wagon weighed. While waiting for scale ticket to return, you may continue harvesting.
6. When scale ticket returns to machine, press net weight platform scale (H) to change weight value.
7. Input net weight of material from scale ticket.

IMPORTANT: Changing the calibration factor does NOT change data already saved. After changes are made, all harvest information collected from that point will reflect the changes.

8. Confirm new value. Calibration factor (I) changes automatically when material weight is entered.

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OUCC002,0004C9E -19-21JUN16-6/8

NOTE: If scale ticket weight is more than 50% higher or lower than displayed weight, the system will NOT allow entry of scale ticket weight. It is recommended that you review the harvesting procedures and verify that the vehicle hauling material away from the machine is also following the correct procedures. At that time, attempt another calibration load.

- **Calibration Factor (I)**

  NOTE: Calibration Factor—1000 is set as factory default.

  The calibration factor (I) is automatically changed when a new calibration weight is entered.
  A new calibration factor can also be entered manually. To calculate calibration factor, divide weight (t) shown on display (G) by new weight (t) on scale ticket (H).

  Multiply result by displayed calibration factor (see example below). This is new calibration factor.

  To manually enter a calibration factor:

  1. Press calibration factor (I) to manually enter calibration factor.
  2. Using numeric keypad, input calibration factor.
  3. Confirm new value.

  Example:

  Displayed calibration factor (I) = 1000

  Weight shown on display (G) = 5640 kg

  Net weight from scale ticket (H) = 5710 kg

  Result: 1000 x (5640 ÷ 5710) = 987

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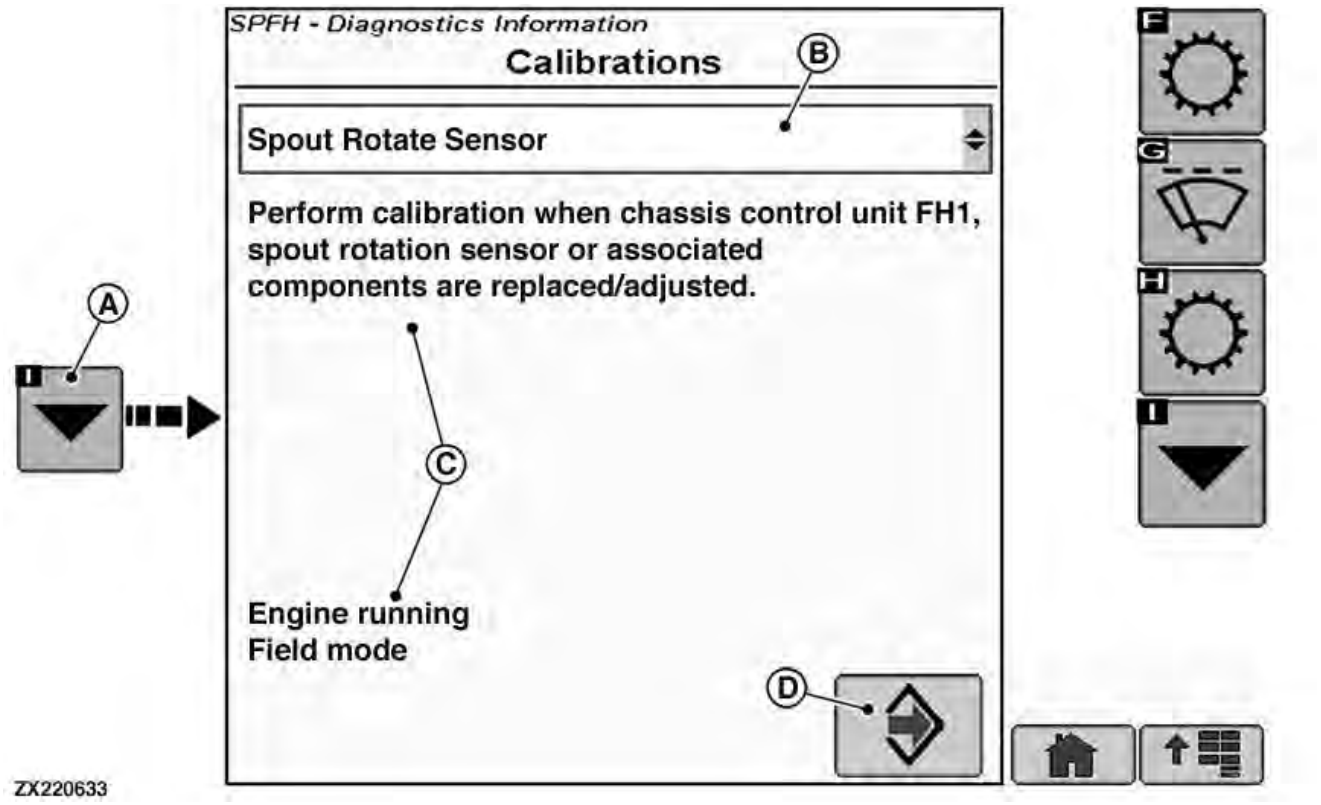


A—Diagnostics Information Page Access Button
B—Calibration Drop-Down List
C—Instructions
D—Enter Button

Diagnostics Information

IMPORTANT: Calibration procedure must be performed only if a component is replaced or adjusted. Contact your John Deere dealer before performing any interactive calibration.

NOTE: The content of the calibration drop-down list depends on the options installed.

Press Menu button to exit the Diagnostics Information Page.

On the Vehicle Settings Page press the diagnostics information page access button (A) to perform desired interactive component calibration as follows:

1. Select the desired component from the calibration drop-down menu (B):

NOTE: Refer to Interactive Calibration Procedures in Lubrication and Maintenance section.

- Header Lift Range
- Header Tilt Range
- Header Tilt Speed
- Header Lift Speed
- Header
- SCV Sensor
- Mass Flow Sensor Zero Distance
- Sharpen Stone Position Sensor
- Sharpen Door Position Sensor
- Kernel Processor Gap
- Spout Rotate Sensor
- Spout Tilt And Flap Sensor
- Active Fill Control System
- ProDrive™ Multi-Function Lever
- ProDrive™ Solenoid
- ProDrive™ Hydrostatic Pump
- ProDrive™ Front Hydrostatic Motor
- ProDrive™ Transmission
- Rear Motor
- ProDrive™ Steering Angle and Ratio
- Push-Button Shift Transmission
- Chassis Turn Lights
- AutoTrac™ Valve
- AutoTrac™ Rear Wheel Angle Sensor
- Deck Plate Sensor
- Additive Dosing Low Volume Sensor

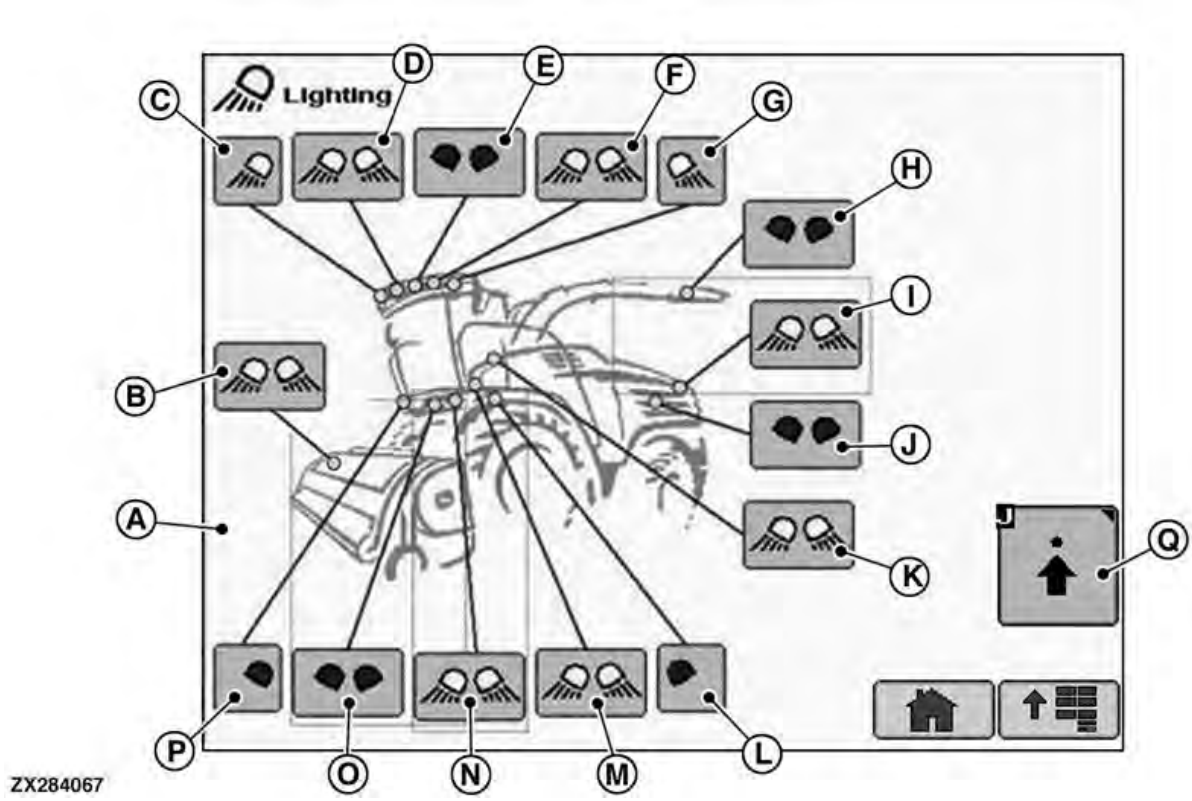
2. Follow the instructions (C) provided for each calibration step.

IMPORTANT: Make sure each condition is met so the calibration steps are carried out.

3. Press enter button (D) to start calibration procedure.

OUCC002,0004C9E -19-21JUN16-8/8

Lighting Setup Page



ZX284067 —UN—18JUN16

A—Lighting Setup Page
B—Header Lights
C—Cab Headlights Right
D—Cab Headlights—Low Beam
E—Cab Headlights—High Beam
F—Cab Headlights
G—Cab Headlights Left
H—Spout Work Lights
I— Rear Work Lights
J— Side Work Lights
K—Rail Upper Work Lights
L—Exit Light
M—Rail Lower Work Lights
N—Row Finder Lights
O—Fascia Lights
P—Driving Lights/Lower Work Lights
Q—Exit Lights Page Access Button

Depending on the lighting package installed on the machine, the Lighting Setup Page (A) allows the operator to activate or deactivate lights, and adjust the exit lights on time.

System Requirements:

Accessing the lighting setup page is only possible with:

- Light selector switch in field light position (see **Machine Lighting** in this section).
- Road safety mode button in field mode.

NOTE: To access the Lighting Setup Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

To activate or deactivate the installed lights, press the desired light button (B—Q) to toggle ON or OFF.

A grayed light activation button (B—Q) means that relevant light is not installed on the machine.

To adjust the exit lights on time, press exit lights page access button (Q). See **Exit Lights Page** in this section.

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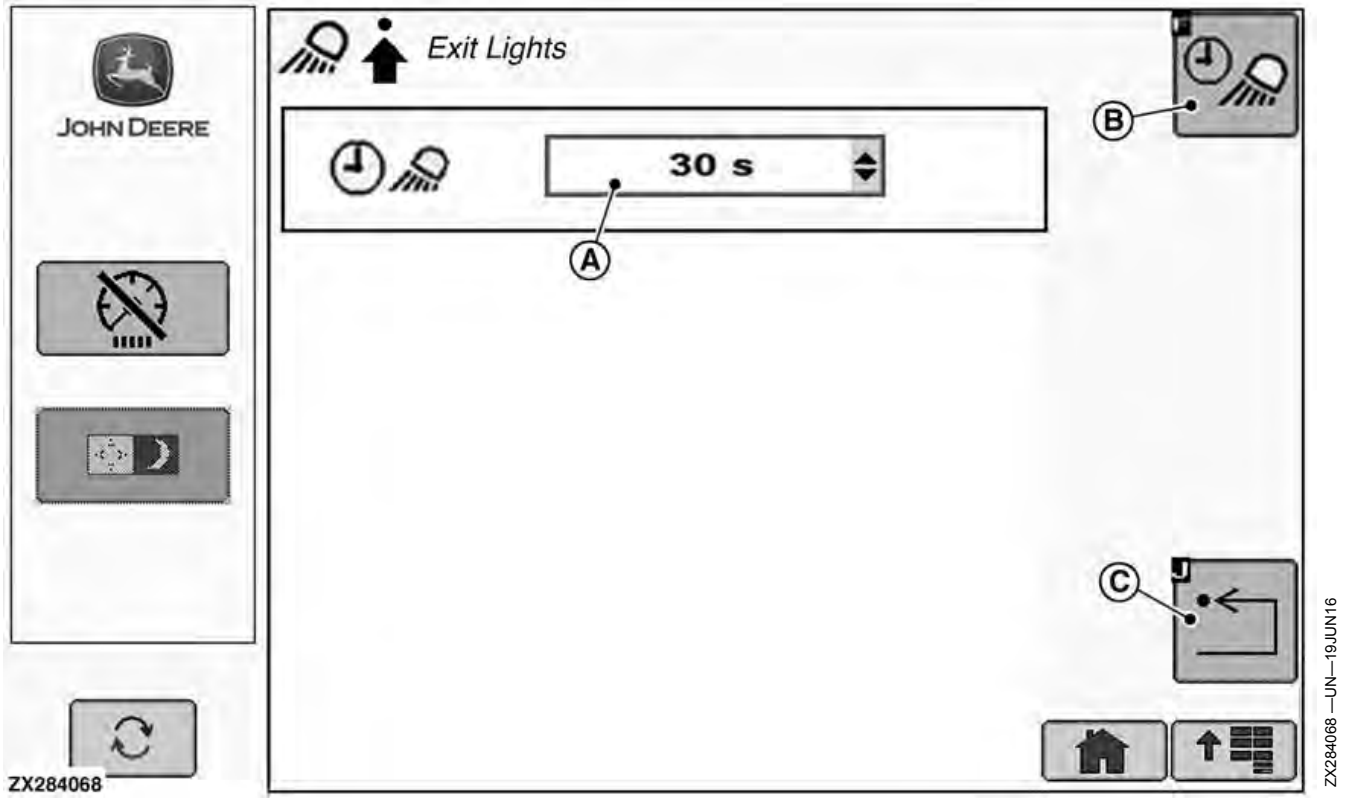
OUCC002,0004C8D -19-17JUN16-1/2



A—Exit Lights On Time

B—Exit Lights On Time Adjust Button

C—Return Button

Exit Lights Page

To adjust the exit lights on time (A), press exit lights on time adjust button (B) and use the rotary switch on the CommandARM™ to select the desired duration.

NOTE: Adjusting exit lights on time (A) also sets the entrance lights on time to the same value.

Adjusting range: 0-10-**30**-60-90-120-180-210-240-270-300 seconds. **Default:** 30 s.

Press return button (C) to go back to **Lighting Setup Page**.

OUCC002,0004C8D -19-17JUN16-2/2

Machine Lighting

CAUTION: Lights must be turned ON when transporting.

CAUTION: To avoid motorist confusion, do not operate worklights or service lights when transporting on public roadways.

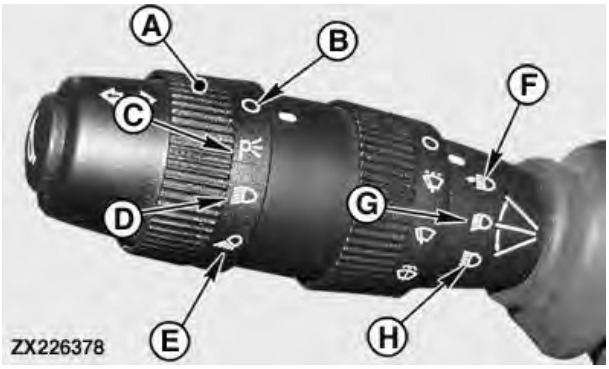
NOTE: When road lights are ON and no header is attached, lower driving lights turn ON and cab headlights turn OFF. When a header is attached, lower driving lights turn OFF and cab headlights turn ON.

Hazard lights turn ON if turn signals are OFF. If turn signals are ON, hazard lights function as turn signal lights.

Light Selector Switch:

Light selector switch (A) on steering column is used to control the following:

- OFF Position (B).
- Park light position (C) controls:
  - Clearance lights
- Road light position (D) controls:
  - Hazard (flashing) lights
  - Driving lights
  - Beacon lights
  - Lower driving lights
- Field light position (E) controls:
  - Front, side, roof, and rear work lights



ZX226378 —UN—25FEB16

A—Light Selector Switch
B—OFF Position
C—Park Light Position
D—Road Light Position
E—Field Light Position
F—Momentary High Beam
G—Low Beam Position
H—High Beam Position

  - Row finder lights with turn signal lever
  - Exit lighting
  - Positioning lights and hazard lights
- Pull lever to upper position (F) momentarily activates high beams.
- Pull lever to middle position (G) operates low beams.
- Push lever to lower position (H) activates high beam headlights.

NOTE: High beam indicator illuminates on Primary Display Unit (PDU) when lever is in the momentary high beam and high beam positions.

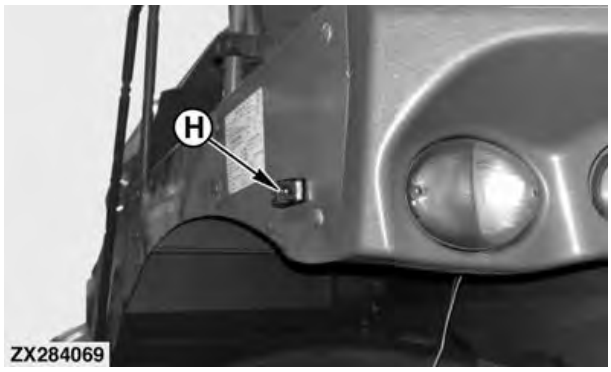
Continued on next page

ZX226379 —UN—18NOV14

Machine Lighting—Lower Front Location

A—Rail Upper Work Lights
B—Rail Lower Work Lights
C—Position Lights Front
D—Turn Lights Front
E—Fascia Lights
F—Driving Lights/Lower Work Lights
G—Row Finder Lights
H—Side Turn Ligths (Germany Only)

ZX226381 —UN—18NOV14



ZX284069 —UN—18JUN16

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OUCC002,0004CA7 -19-17JUN16-2/4

A—Cab Headlights **C—Cab Headlights—High Beam** **D—Beacon Lights**
B—Cab Headlights—Low Beam

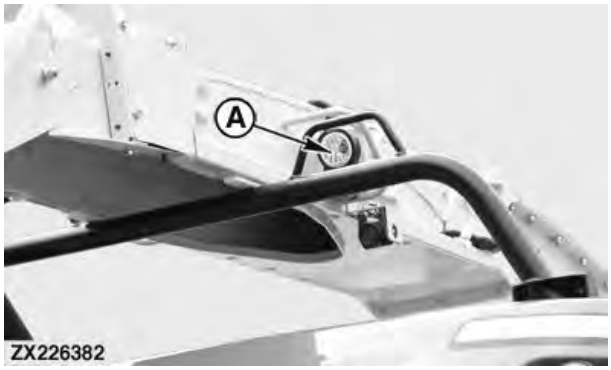
Machine Lighting—Upper Front Location

Continued on next page

OUCC002,0004CA7 -19-17JUN16-3/4

Machine Lighting—Rear and Side Location

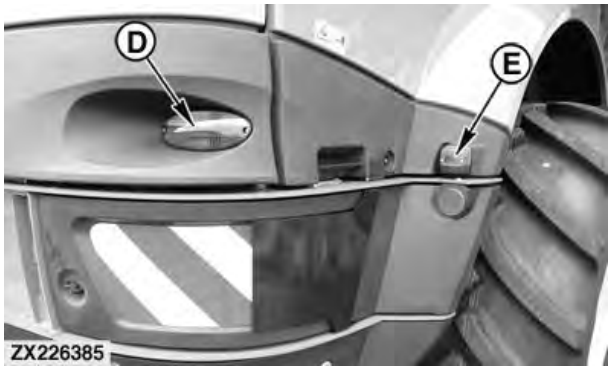
A—Spout Work Ligths
B—Rear Work Lights
C—Side Work Lights
D—Tail, Stop, Turn Lights
E—Additional Lights



ZX226382 —UN—18NOV14

ZX226383 —UN—18NOV14

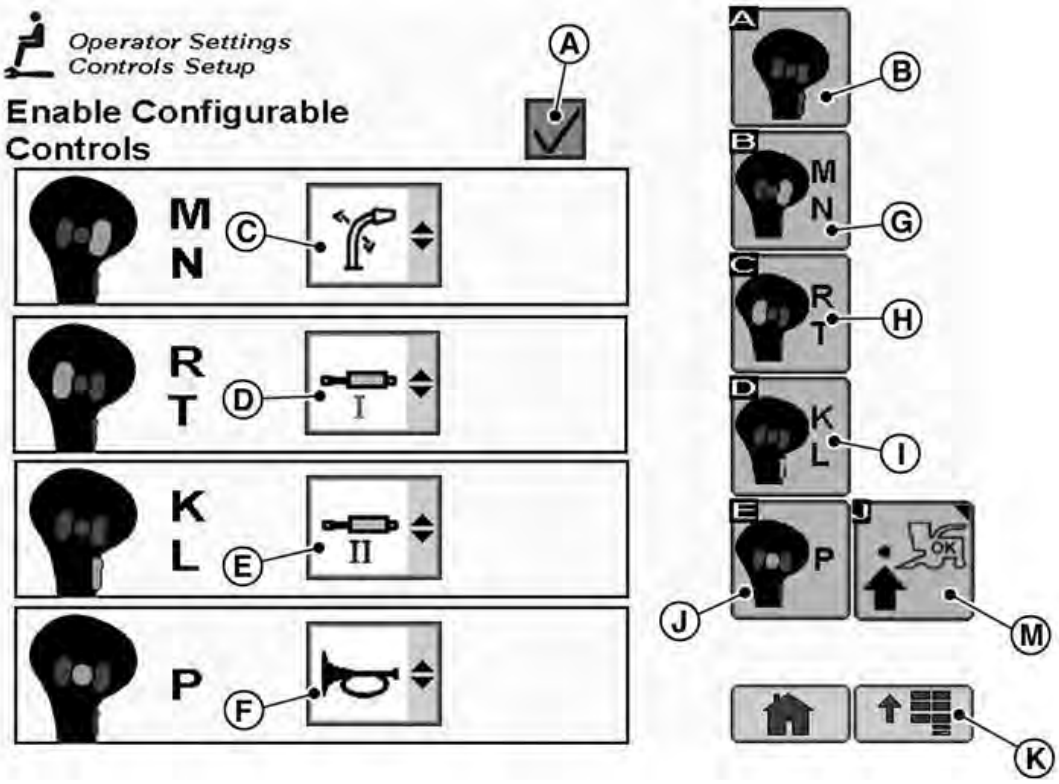
ZX226384 —UN—19NOV14



ZX226385 —UN—19NOV14

OUCC002,0004CA7 -19-17JUN16-4/4

Operator Settings Page



ZX256143 —UN—09SEP15

Operator Settings Controls Setup Page

Use this page to map the programmable switches on back of multi-function lever, as follows:

NOTE: To access the Operator Settings Page refer to CommandCenter™ Display or CommandARM™ Controls in this section.

NOTE: Programmable switches are referenced K-L, M-N, R-T, and P on sticker (L) to avoid confusion with shortcut buttons (A-J) of CommandARM™ Controls or CommandCenter™ Display.

- To enable configurable controls, check box (A) or press enable configurable controls button (B).
  - If check box (A) is left unchecked, none of the switches M-N, K-L, R-T, or P can be programmed.
  - If check box (A) is checked, then ALL switches M-N, K-L, R-T, or P must be programmed. See **Programmable Switch Function Assignment** in this section.
  - ProTouch button (M) assigns to any of the switches M-N, K-L, or R-T pre-selected machine functions to be automatically actuated when the machine is running under field mode and road modes. See **Programmable Switch Function Assignment** and **ProTouch Page** in this section.

ZX226403 —UN—22NOV14

A—Enable Configurable Controls Check Box
B—Enable Configurable Controls Button
C—M-N Switch Function List Box
D—R-T Switch Function List Box
E—K-L Switch Function List Box
F—P Switch Function List Box
G—M-N Switch Function List Box Selection Button
H—R-T Switch Function List Box Selection Button
I— K-L Switch Function List Box Selection Button
J— P Switch Function List Box Selection Button
K—Menu Button
L— Sticker
M—ProTouch Button (Option)

Continued on next page

OUCC002,0004CA2 -19-16JUN16-1/7

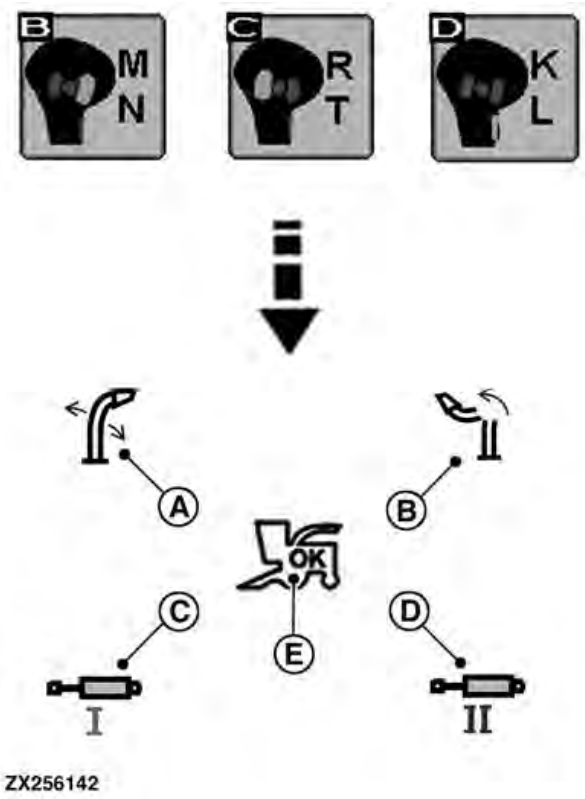
Programmable Switch Function Assignment: Assign one desired function (A-E) to each programmable switch K-L, M-N, R-T as follows:

NOTE: Depending on option installed, some functions may not be programmable.

- Spout tilt function (A)—Press and hold function (default function for M-N switch).
- 10 and 12-row spout fold function (B)—Press and hold function (option).
- SCV I function (C)—Press and hold function (default function for R-T switch).
- SCV II function (D)—Press and hold or press function twice (default function for K-L switch).
- ProTouch function (E)—To display field or road mode machine function assignment status page (see **ProTouch Page** in this section).

  NOTE: Switches K, M, or R display field mode function assignment status page.

  Switches L, N, or T display road mode function assignment status page.



ZX256142

ZX256142 —UN—09SEP15

A—Spout Tilt Function
B—Spout Fold Function
C—SCV I Function
D—SCV II Function
E—ProTouch Function

Continued on next page

OUCC002,0004CA2 -19-16JUN16-2/7

Assign one desired function (A-F) to programmable switch P as follows:

- Horn function (A)—Press and hold function (default function for P switch).

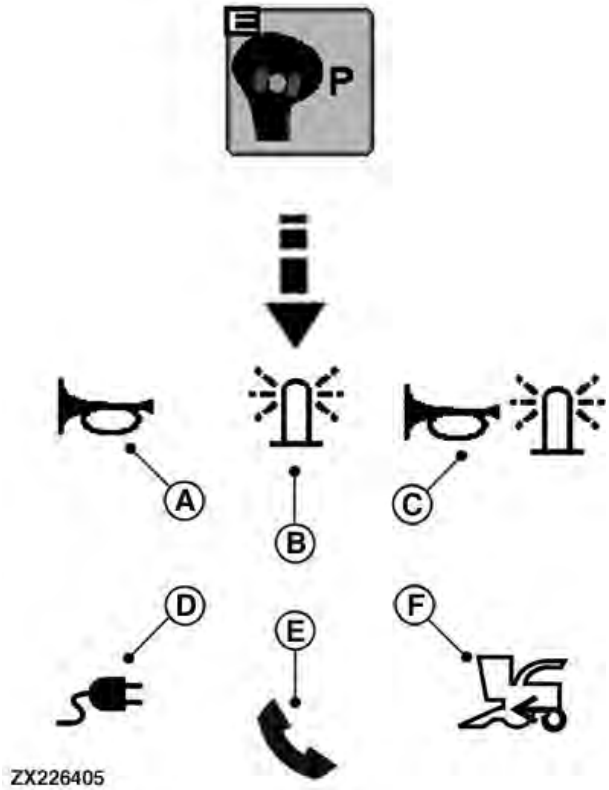
- Beacon lights toggle function (B)—Toggle function working in relation with the beacon lights button (G) on CommandARM™ Controls, as follows:
  a. **Scenario:** Beacon Lights OFF.
  b. Beacon lights switch P pressed **—>** Beacon turns ON.
  c. Beacon lights button (G) pressed **—>** Beacon turns OFF.
  d. Beacon lights button (G) pressed **—>** Beacon turns ON.
  e. Beacon lights switch P pressed —> Beacon turns OFF.

- Power outlet function (D)—Press and hold function (option).

- Bluetooth phone function (E)—Press and hold function (option).

- Four-wheel drive toggle function (F)—Toggle function working in relation with the four-wheel drive button (H) on CommandARM™ Controls, as follows:
  a. **Scenario:** Four-wheel drive ON (engaged).
  b. Four-wheel drive switch P pressed **—>** Four-wheel drive disengages.
  c. Four-wheel drive button (H) pressed **—>** Four-wheel drive engages.
  d. Four-wheel drive switch P pressed **—>** Four-wheel drive disengages.

A—Horn Function
B—Beacon Lights Toggle Function
C—Horn+Beacon Light Function
D—Power Outlet Function
E—Bluetooth Phone Function
F—Four-Wheel Drive Toggle Function
G—Beacon Lights Button
H—Four-Wheel Drive Button

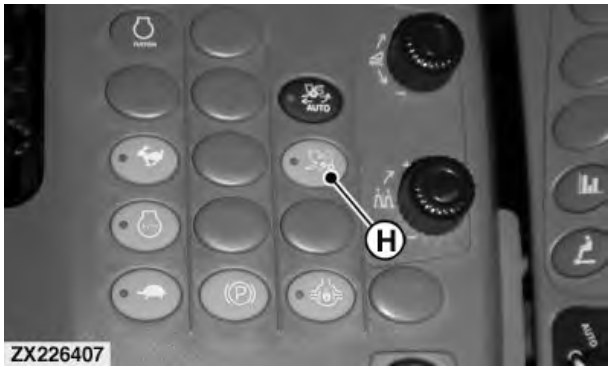


ZX226405

ZX226405 —UN—22NOV14

ZX226406

ZX226406 —UN—22NOV14



ZX226407

ZX226407 —UN—22NOV14

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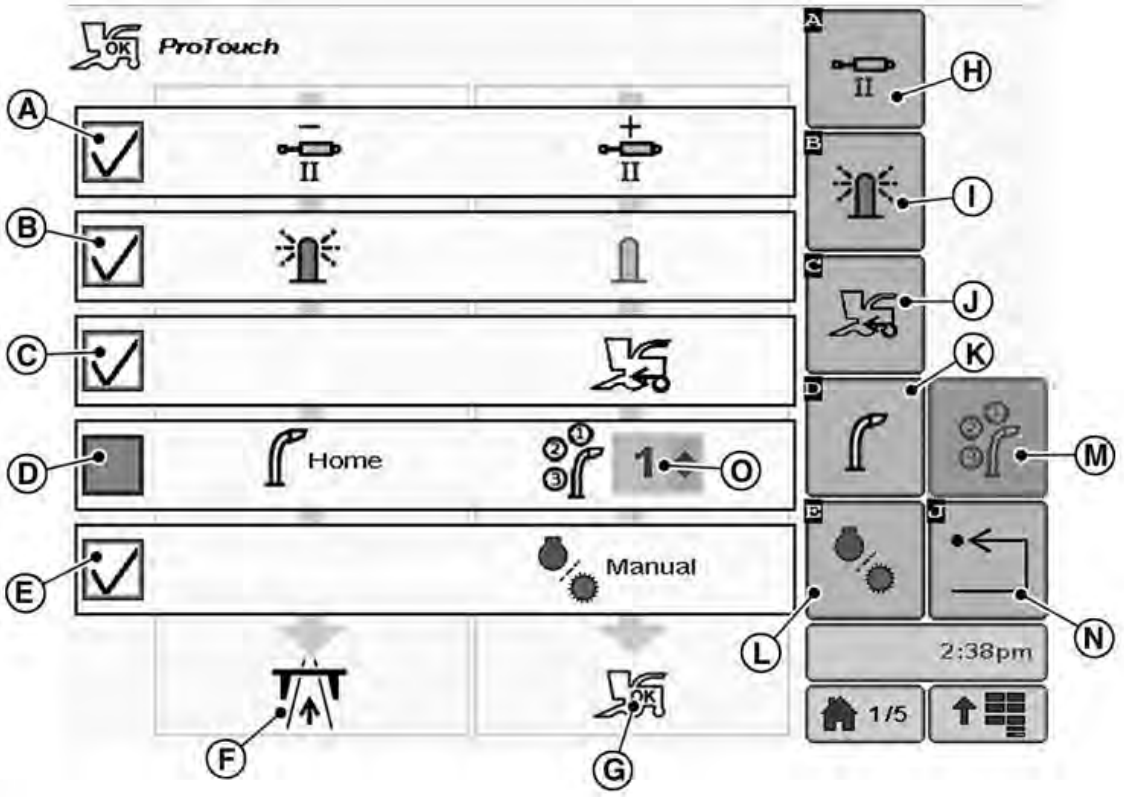
OUCC002,0004CA2 -19-16JUN16-3/7



ZX256144

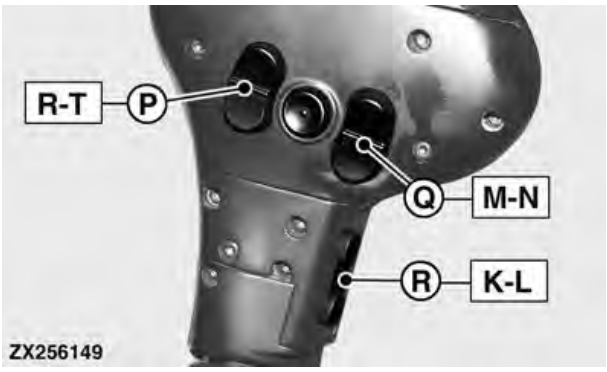
ZX256144 —UN—09SEP15

ProTouch Page

From this page, it is possible to assign to any of the switches M-N, K-L, or R-T pre-selected machine functions to be automatically actuated when the machine is running under field mode and road modes (see **Road Safety Mode Button** in Operating the Controls and Displays section). Proceed as follows:

NOTE: Functions displayed above road mode function window (F) can be selected for the road mode only. Functions displayed above field mode function window (G) can be selected for the field mode only.

- Check SCV II function check box (A) or press SCV II function button (H) to select this function in both road mode (F) and field mode (G).
- Check beacon lights function check box (B) or press beacon lights button (I) to select this function for road mode (F) and field mode (G).
- Check four-wheel drive function check box (C) or press four-wheel function button (J) to select this function for field mode (G) only.
- Check spout home function check box (D) or press spout home function button (K) to select this function for road mode (F) only.
  If equipped with, press spout positioning function button (M) to select this function for field mode (G) only. Select the desired activation button defined under **Auto Spout Positioning Page** using spout positioning list box (O).



ZX256149

ZX256149 —UN—09SEP15

A—SCV II Function Check Box
B—Beacon Lights Function Check Box
C—Four-Wheel Drive Function Check Box (if equipped)
D—Spout Home Function Check Box
— Spout Positioning Function Check Box (if equipped)
E—Engine Speed Management Function Check Box
F—Road Mode Functions
G—Field Mode Functions
H—SCV II Function Button
I— Beacon Lights Button
J— Four-Wheel Drive Function Button
K—Spout Home Function Button
L—Engine Speed Management Function Button
M—Spout Positioning Function Button (if equipped)
N—Return Button
O—Spout Positioning List Box
P—R-T Switch
Q—M-N Switch
R—K-L Switch

Refer to **Spout Speed Page** and **Automatic Spout Control (Option)** in this section.

Continued on next page

OUCC002,0004CA2 -19-16JUN16-4/7

- Check engine speed management function box (E) or press engine speed management function button (L) to select this function in field mode (G) only (refer to **Engine And Aftertreatment Page** in this section).

  IMPORTANT: Only the engine speed management manual mode can be selected.

  NOTE: The engine speed management function box (E) can be checked with the cutterhead engaged or disengaged.

Once ProTouch functions have been selected, press return button (N) to go back to Operator Settings Page.

Now, each time the machine is operated under road or field mode, the relevant ProTouch functions are automatically actuated. With machine running and cutterhead engaged, the ProTouch function assignment status can be checked as follows:

- Press switch K, M, or R on multi-function lever to display field mode function assignment status page (see **Field Mode Status Page** in this section).
- Press switch L, N, or T on multi-function lever to display road mode function assignment status page (see **Road Mode Status Page** in this section).

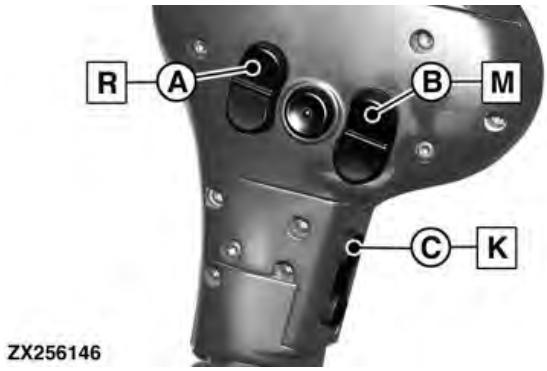
OUCC002,0004CA2 -19-16JUN16-5/7

Field Mode Status Page

Press switch K, M, or R to display ProTouch page (D). This page displays the status of each function selected for the machine running under field mode, as follows:

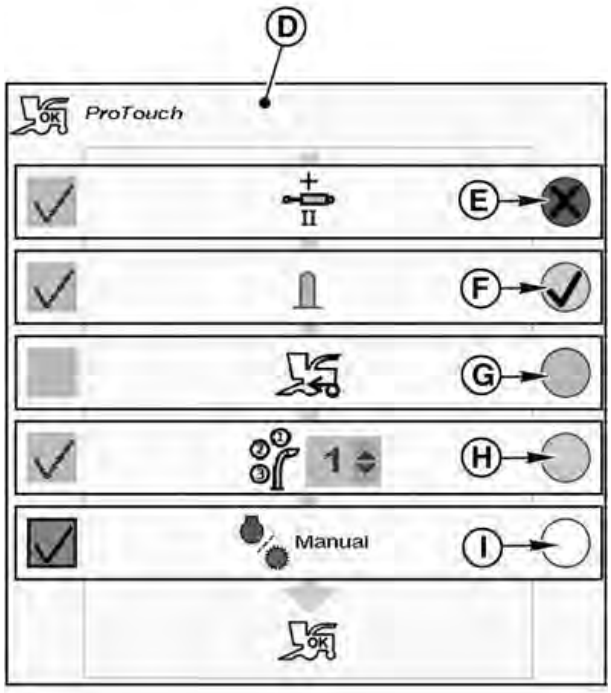
- Red crossed icon (E) indicates that an error occurs while implementing the relevant function.
- Green checked icon (F) indicates that relevant function implementation has completed.
- Gray icon (G) indicates that relevant function is not applicable.
- Flashing green icon (H) indicates that relevant function implementation is in progress.
- Transparent icon (I) indicates that relevant function implementation has not started yet.

A—R Switch
B—M Switch
C—K Switch
D—ProTouch Page
E—Red Icon—Crossed
F—Green Icon—Checked
G—Gray Icon
H—Green Icon—Flashing
I— Transparent Icon



ZX256146

ZX256146 —UN—09SEP15



ZX256147

ZX256147 —UN—09SEP15

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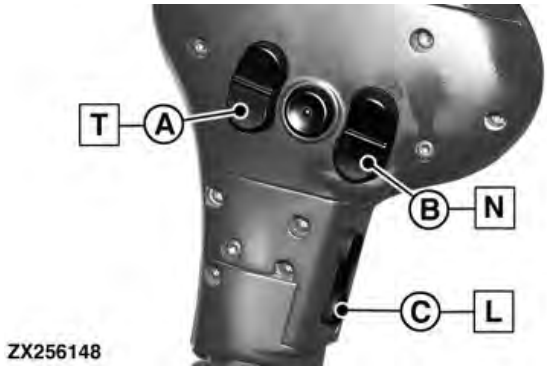
OUCC002,0004CA2 -19-16JUN16-6/7

Road Mode Status Page

Press switch L, N, or T to display ProTouch page (D). This page displays the status of each function selected for the machine running under road mode, as follows:

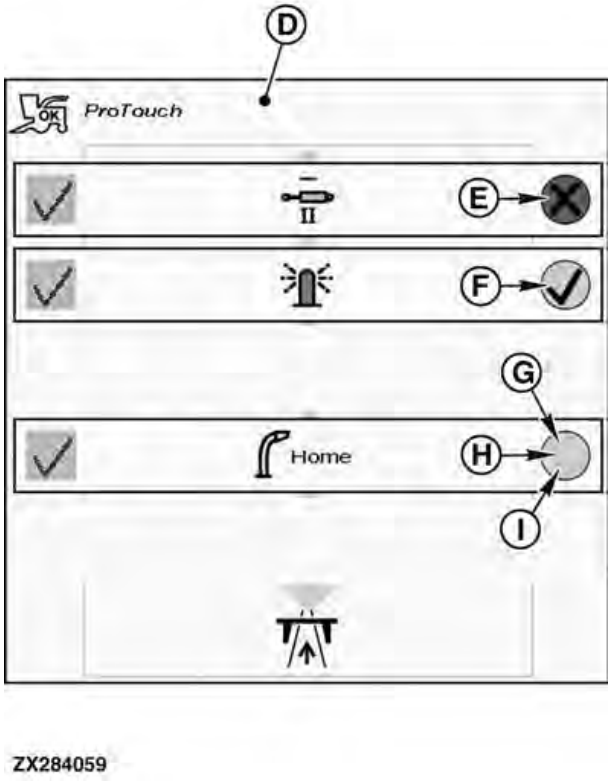
- Red crossed icon (E) indicates that an error occurs while implementing the relevant function.
- Green checked icon (F) indicates that relevant function implementation has completed.
- Gray icon (G) indicates that relevant function is not applicable.
- Flashing green icon (H) indicates that relevant function implementation is in progress.
- Transparent icon (I) indicates that relevant function implementation has not started yet.

A—T Switch
B—N Switch
C—L Switch
D—ProTouch Page
E—Red Icon—Crossed
F—Green Icon—Checked
G—Gray Icon
H—Green Icon—Flashing
I— Transparent Icon



ZX256148

ZX256148 —UN—09SEP15

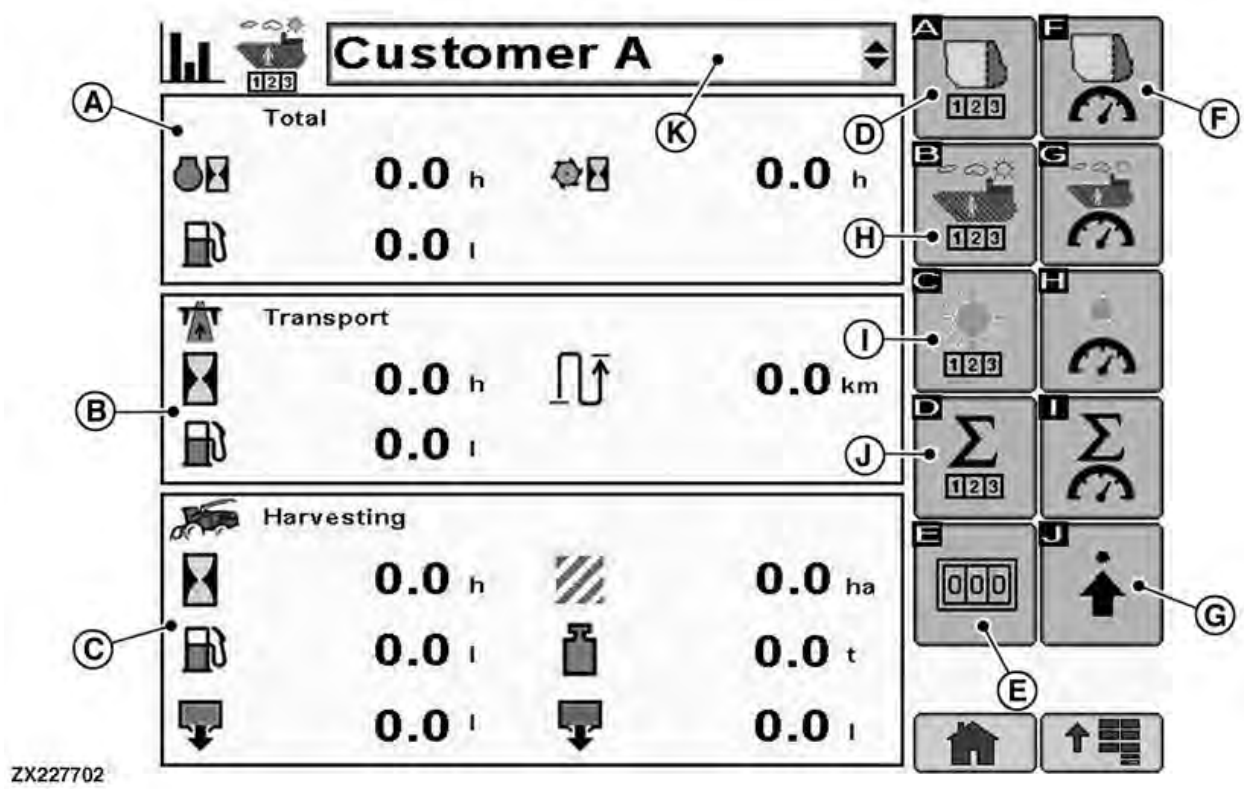


ZX284059

ZX284059 —UN—18JUN16

OUCC002,0004CA2 -19-16JUN16-7/7

Harvest Statistics Page



ZX227702 —UN—23NOV14

A—Total
B—Transport
C—Harvesting
D—Field Totals Button
E—Total Reset Button
F—Machine Performance Page Access Button
G—Statistics Settings Page Access Button
H—Field Total Per Customer Selection Button
I—Field Total Per Day Selection Button
J—Field Totals Selection Button
K—Customer Selection Drop Down Menu

Harvest Statistics Page displays machine performances and machine field totals per day, per customer, and total.

- To display machine total (A), transport (B), and harvesting (C) statistics press field totals button (D). Following statistics are displayed:
  - Engine hours
  - Cutterhead hours
  - Fuel consumption
  - Travel distance
  - Harvested mass
  - Additive dosing consumption (if equipped)

  NOTE: Up to five customer harvest statistics can be displayed.

- To reset machine field totals, press total reset button (E). The transport (B) and harvesting (C) statistics are reset to 0.

  NOTE: Total (A) cannot be reset. Total (A) data are used for machine performance calculation.

- To display machine performances page, press machine performance page access button (F). See **Machine Performances Page** in this section.
- To select the statistic recording mode, press statistic settings page access button (G). See **Statistics Settings Page** in this section.

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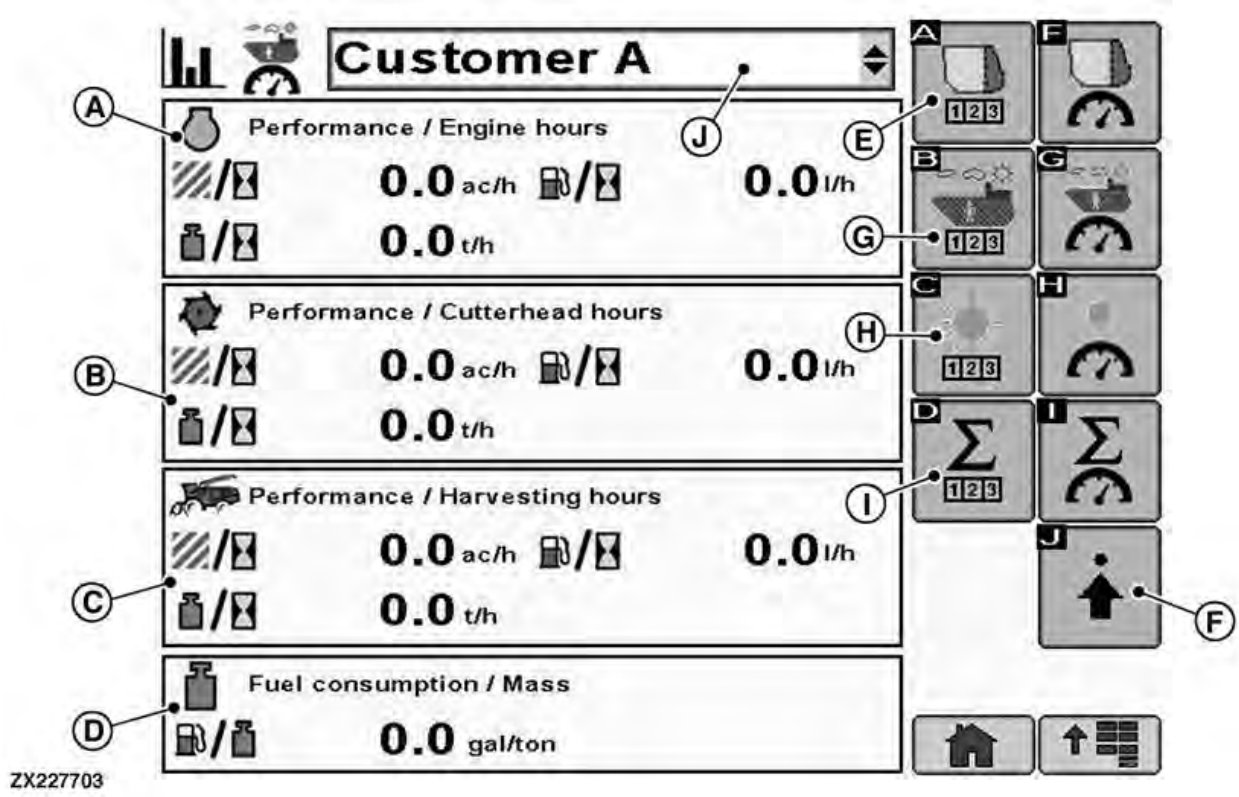
OUCC002,000421C -19-24NOV14-1/3



ZX227703 —UN—23NOV14

A—Performance /Engine Hours
B—Performance /Cutterhead Hours
C—Performance /Harvesting Hours
D—Fuel Consumption/Mass
E—Machine Field Totals Page Access Button
F—Statistics Settings Page Access Button
G—Machine Performance Per Customer Selection Button
H—Machine Performance Per Day Selection Button
I— Machine Performance Totals Selection Button
J— Customer Selection Drop Down Menu

Machine Performances Page

Machine performances page displays machine performances:

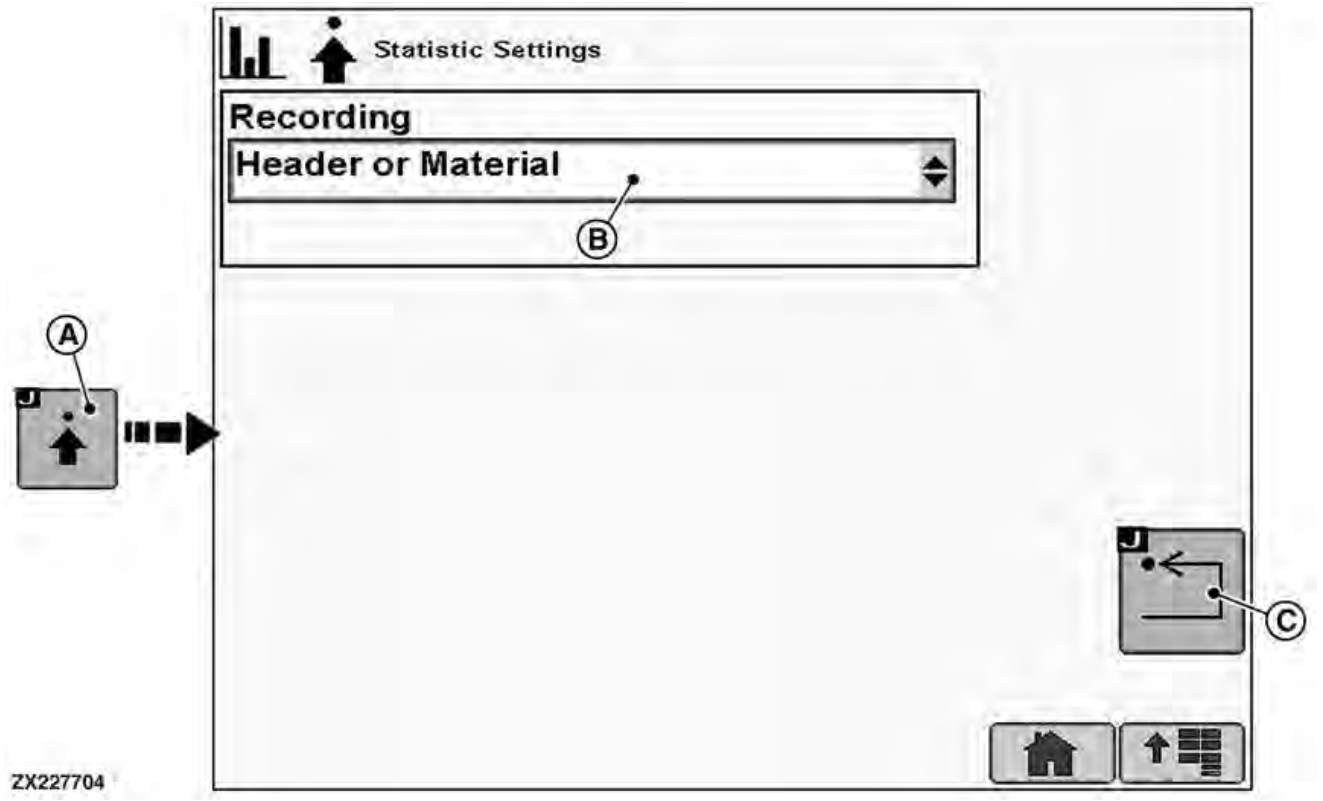
- Per engine hours (A).
- Per cutterhead hours (B).
- Per harvesting hours (C).
- Fuel consumption per mass (D).

To display machine field totals, press machine field totals page access button (E). See **Machine Field Totals Page** in this section.

To select the statistic recording mode, press statistic settings page access button (F). See **Statistics Settings Page** in this section.

Continued on next page

OUCC002,000421C -19-24NOV14-2/3



A—Statistics Settings Page Access Button

B—Recording Selection Drop Down Menu

C—Return Button

Statistics Settings Page

From Machine Field Totals Page or Machine Performances Page, press statistics settings page access button (A) to select which recording method must be used for totals/performances calculation. Use recording selection drop down menu (B) and select one of the following recording methods:

- **Header**—Select this method if calculation must start each time header is in operating position.
- **Header or Material**—Select this method if the machine is equipped with mass flow sensor option and calculation must start even if the header is not in operating position.
- **Material**—Select this method if the machine is equipped with mass flow sensor option and calculation must start whatever the position of the header.

Press return button (C) to go back to Machine Field Totals Page or Machine Performances Page.

OUCC002,000421C -19-24NOV14-3/3

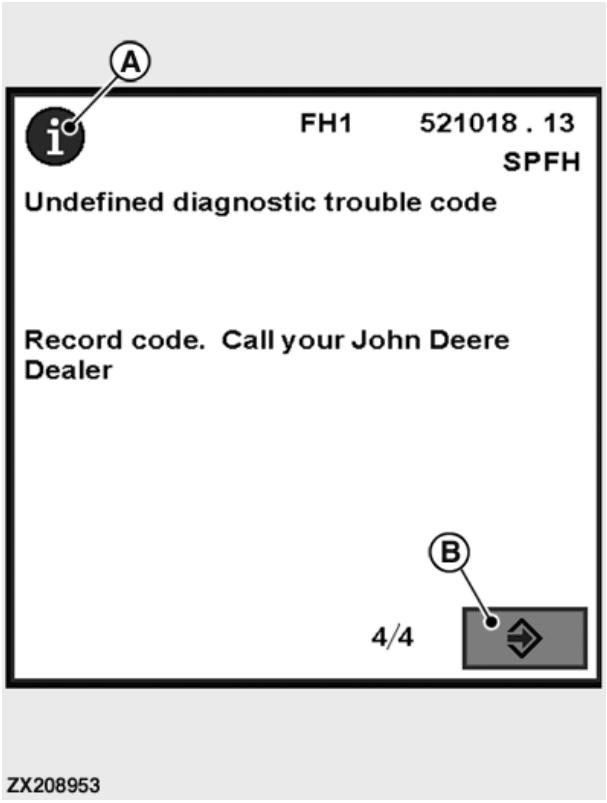
Access Diagnostic Trouble Codes Menu

Diagnostic Trouble Code Priorities

Each diagnostic trouble code (DTC) displayed on CommandCenter™ display has a priority (A). The priority of the DTC is indicated in the way the DTC is displayed to the operator:

- **Stop Engine Warning Indicator (Red)** illuminates and requires machine be stopped at once and problem corrected. Diagnostic trouble code is shown on CommandCenter™ display until problem is resolved.
- **Service Warning Indicator (Yellow)** illuminates and flashes when a problem exists with machine. Requires machine be stopped at the earliest convenience. Diagnostic trouble code is shown on CommandCenter™ display.
- **Information Warning Indicator (Blue)** illuminates and flashes when diagnostic trouble code is active. Alerts operator to be aware of a condition. When warning is acknowledged, screen message disappears and warning indicator turns OFF.

NOTE: The diagnostic trouble codes are displayed at each start of the machine. If a diagnostic trouble code is displayed, record the diagnostic trouble code and press enter button (B) to access the next diagnostic trouble code or the Main Menu Page (see **CommandCenter™ Display** *in this section).*



ZX208953 —UN—02JAN14

A—Priority Indicator **B—Enter Button**

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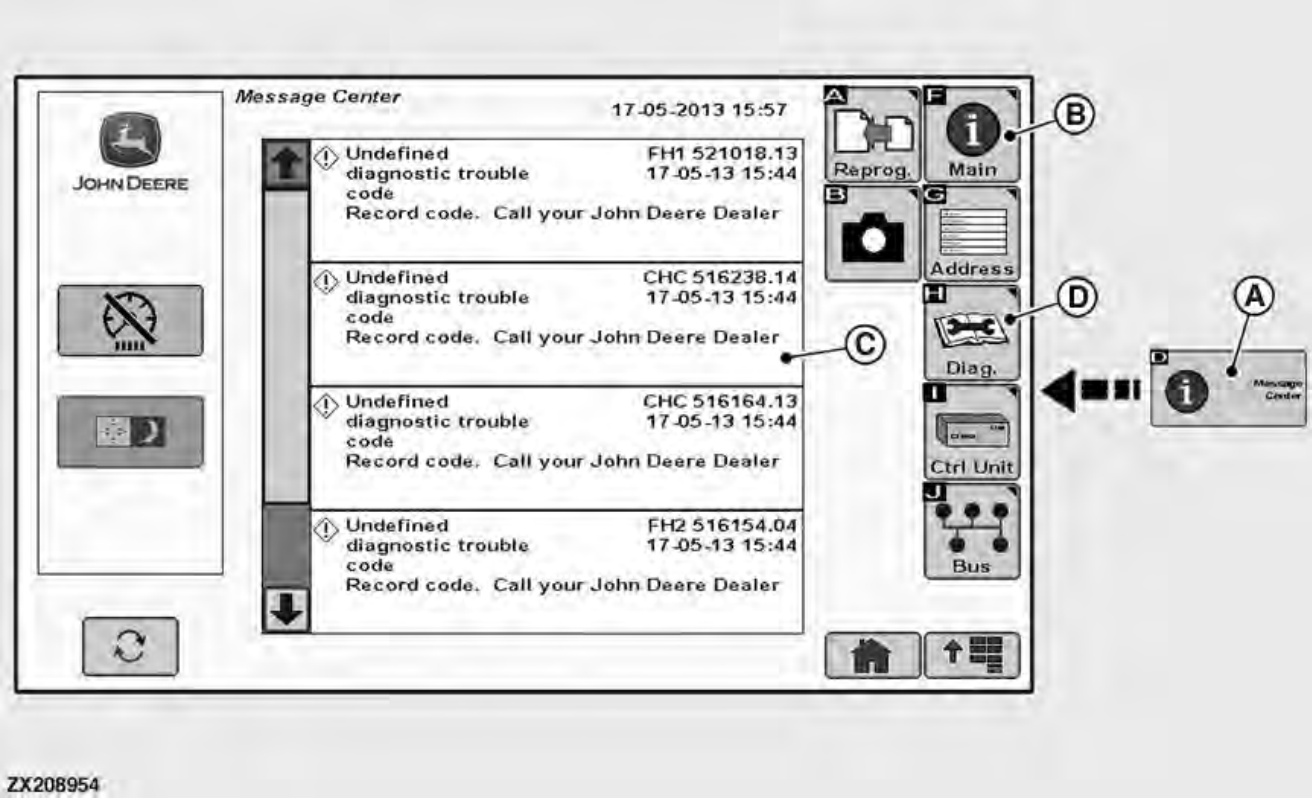
OUCC002,0003F20 -19-02JAN14-1/3



A—Message Center Button
B—Message Main Button
C—Diagnostic Trouble Codes List
D—Diagnostic Trouble Codes Button

Access Diagnostic Trouble Codes Menu

To access a diagnostic trouble codes, touch or press confirm button when message center button (A) or message main button (B) is highlighted. Message center page appears with the list of the latest diagnostic trouble codes (C).

To display active and stored diagnostic trouble codes (history) for all machine control units, touch or press confirm button when diagnostic trouble codes button (D) is highlighted.

Continued on next page
OUCC002,0003F20 -19-02JAN14-2/3

Message Center - Diagnostic Trouble Codes page with Show All button (A) appears.

NOTE: The complete control unit list (B) may take some time to built up.

Scroll through control unit list an select the desired control unit (B) to display all relevant diagnostic trouble codes.

Screen displays the following:

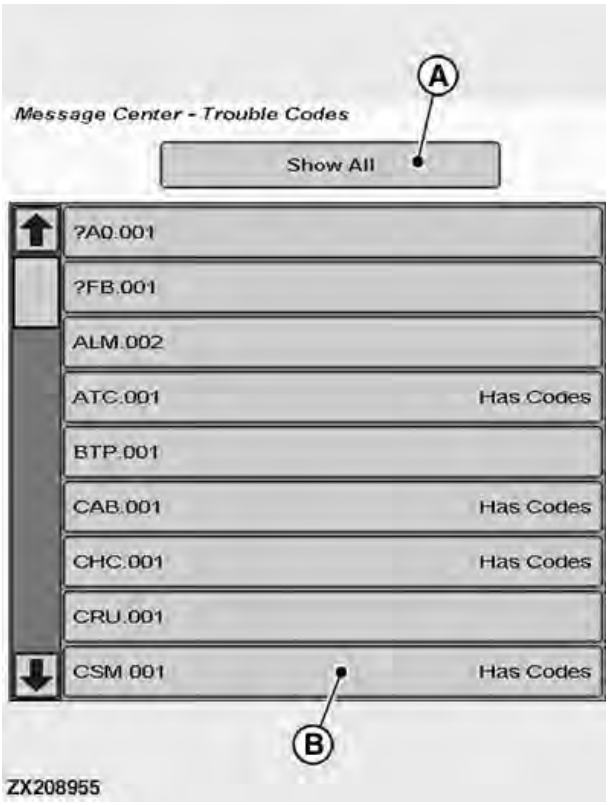
- Control Unit (C)
- Diagnostic Trouble Code (D)
- Active (Yes/No) (E)
- Count (F)

Touch or press confirm switch when desired diagnostic trouble code is highlighted. Diagnostic trouble code description appears and gives more detail of diagnostic trouble code.

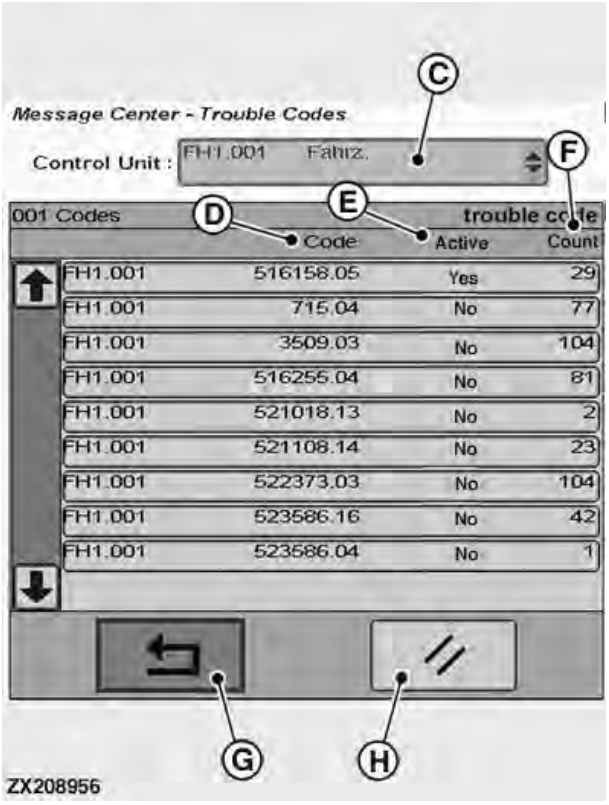
NOTE: When diagnostic trouble code description screen appears, touch or press confirm switch when enter/accept button is highlighted to return to previous screen (not illustrated).

Touch or press confirm switch when return button (G) is highlighted to return to previous screen or until clear button (H) is highlighted.

A—Show All Button
B—Control Unit List
C—Control Unit
D—Diagnostic Trouble Code
E—Active (Yes/No)
F—Count
G—Return Button
H—Clear Button



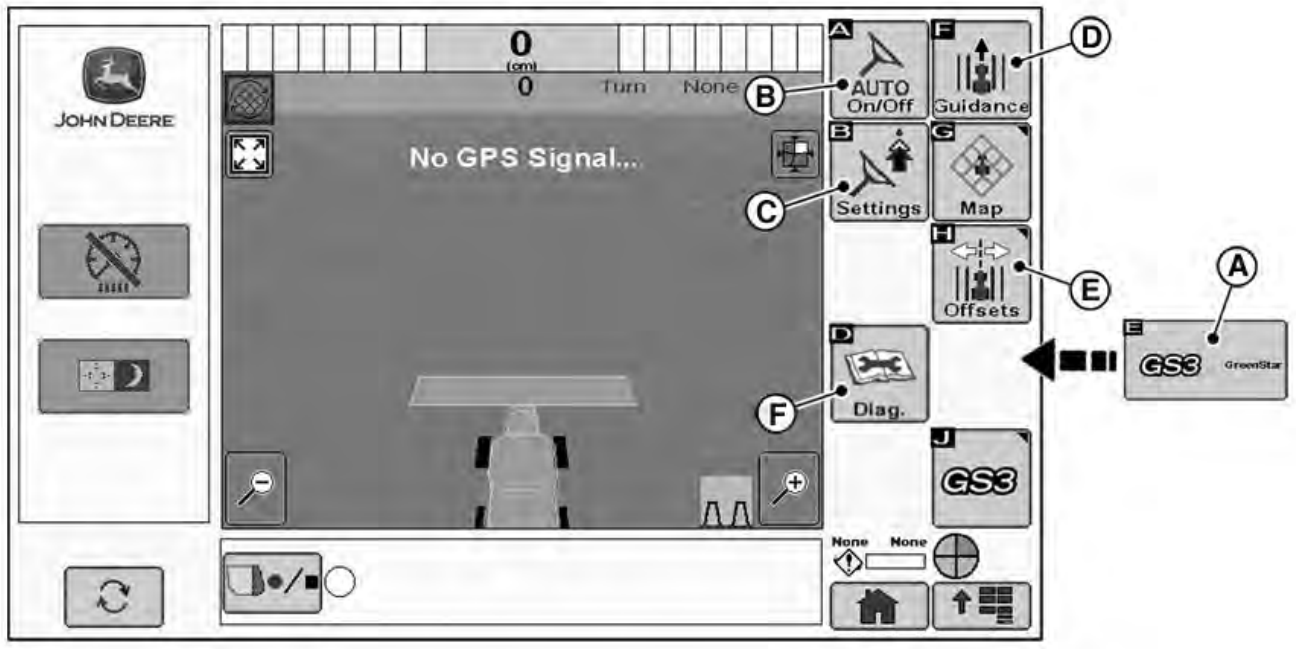
ZX208955 —UN—02JAN14



ZX208956 —UN—02JAN14

OUCC002,0003F20 -19-02JAN14-3/3

AutoTrac™ RowSense™ Guidance (Option)



ZX227708

ZX227708 —UN—17DEC14

Touch or press confirm button when GS3 button (A) is highlighted. AutoTrac™ RowSense™ page appears.

Overview:

⚠ CAUTION: Do not use AutoTrac™ RowSense™ system on roadways. Always turn off (disable) AutoTrac™ RowSense™ system before entering a roadway. Do not attempt to turn on (activate) AutoTrac™ RowSense™ system while transporting on a roadway.

When system is activated, stay alert and pay attention to surrounding environment. Take control of steering when necessary to avoid field hazards, bystanders, equipment, or other obstacles. To operate and steer machine safely, stop operation if poor visibility conditions impair your ability.

IMPORTANT: The AutoTrac™ RowSense™ system is intended to aid operator in performing field operations more efficiently. Operator is always responsible for machine path and must continue to pay attention to surrounding environment while operating machine. To identify people or obstacles in machine path, stop operation if poor visibility conditions impair your ability.

Always operate machine from operator's seat. Always use seat belt.

ZX1043902 —UN—30APR10

AutoTrac™ RowSense™ Sensor

A—GS3 Button
B—Auto On/Off Button
C—Settings Button
D—Guidance Button
E—Offset Button
F—Diagnostic Button

AutoTrac™ RowSense™ is comprised of the following components

- Integrated AutoTrac™ installed and activated on machine, with upgraded AutoTrac™ RowSense™ software programmed into Steering System Unit (SSU).
- AutoTrac™ RowSense™ SF1 or SF2 activation
- Row Sensor mounted to approved Rotary Harvesting Unit (contact your John Deere dealer)
- StarFire™ receiver with SF1, SF2, or RTK activation

Continued on next page

OUCC002,0003E7D -19-17DEC14-1/11

AutoTrac™ RowSense™ works with all existing tracking patterns and most standard harvesting patterns.

AutoTrac™ works in the following modes:

- Adaptive Curves
- AB Curves
- Circle Track
- and Straight Track

AutoTrac™ RowSense™ is an enhancement to integrated AutoTrac™ on the GreenStar™ 3 2630 Display. The row sensor mounted to the middle row point detects cornstalks to know where row is. Signals provided by the row sensor are integrated with existing AutoTrac™ signals to help keep machine on rows. When there is no signal coming from row sensor (for example, driving through a waterway), normal GPS guidance applies.

IMPORTANT: Most other characteristics of AutoTrac™ remain unchanged. Row sensor is simply another position input for steering the machine. All tracking modes are set up the same way as they are with GPS based AutoTrac™. Read and understand GreenStar™ 3 2630 Display—Guidance Operator's Manual.

Prior to operate the AutoTrac™ RowSense™, the system must be configured. Proceed as follows:

1. Press settings button (C) to enable row sensor and select the desired guidance mode (see **GreenStar Settings Page** in this section).
2. Press guidance button (D) to setup desired tracking mode (see **GreenStar Guidance Page** in this section).
3. Press offsets button (E) to setup machine and header (see **GreenStar Machine/Implement Pages** in this section).

Once configured, the AutoTrac™ RowSense™ can be operated. See **Enable/Activate/Operate AutoTrac™ RowSense™** in this section.

To initiate a row sensor calibration and view some diagnostic readings, press Diagnostic button (F) and access the GreenStar-Diagnostic Readings Page. See **Calibrate The Row Sensor** in this section.

NOTE: Auto On/Off button (B) enables or disables the AutoTrac™ RowSense™ system. See Enable/Activate/Operate AutoTrac™ RowSense™ in this section.

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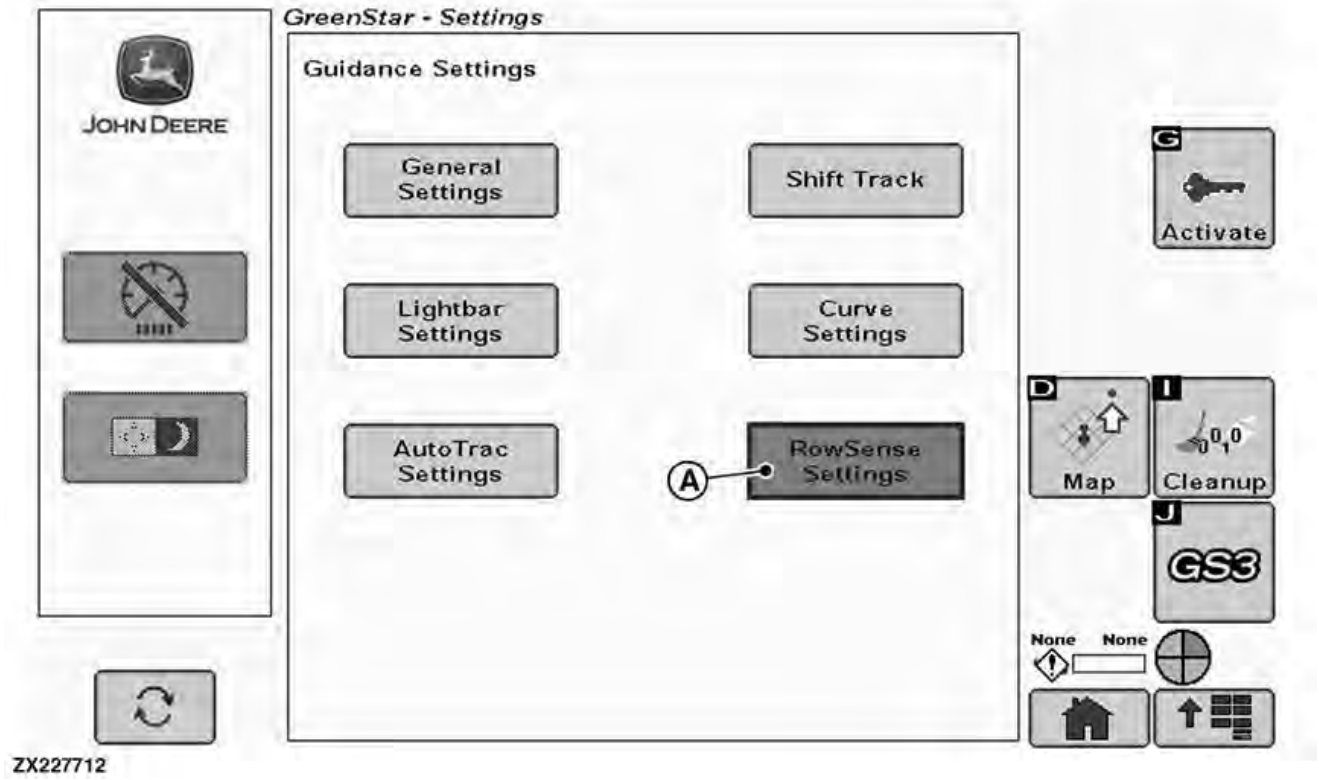


GreenStar Settings Page

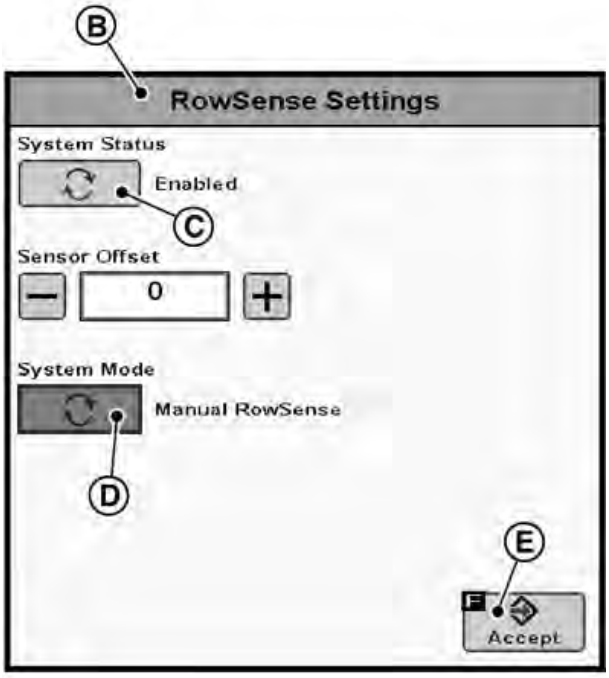
From this page press RowSense settings button (A) to enable row sensor and select the guidance mode. RowSense Settings page (B) appears.

- To enable or disable row sensor, press System status toggle button (C).

  IMPORTANT: Do not toggle sensor status to disabled.

- Press system mode button (D) to select which guidance mode must be used when AutoTrac™ RowSense™ is activated (see **Enable/Activate/Operate AutoTrac™ RowSense™** in this section).
  - Select **Manual RowSense** mode if only the guidance using the row sensor on header is required (No AutoTrac™ guidance).
  - Select **AutoTrac RowSense** mode if the guidance must use the row sensor in priority and the GPS signal (AutoTrac™ guidance) if the row sensor is not detecting the crop.
- Press accept button (E).

A—RowSense Settings Button
B—RowSense Settings Page
C—System Status Toggle Button
D—System Mode Button
E—Accept Button



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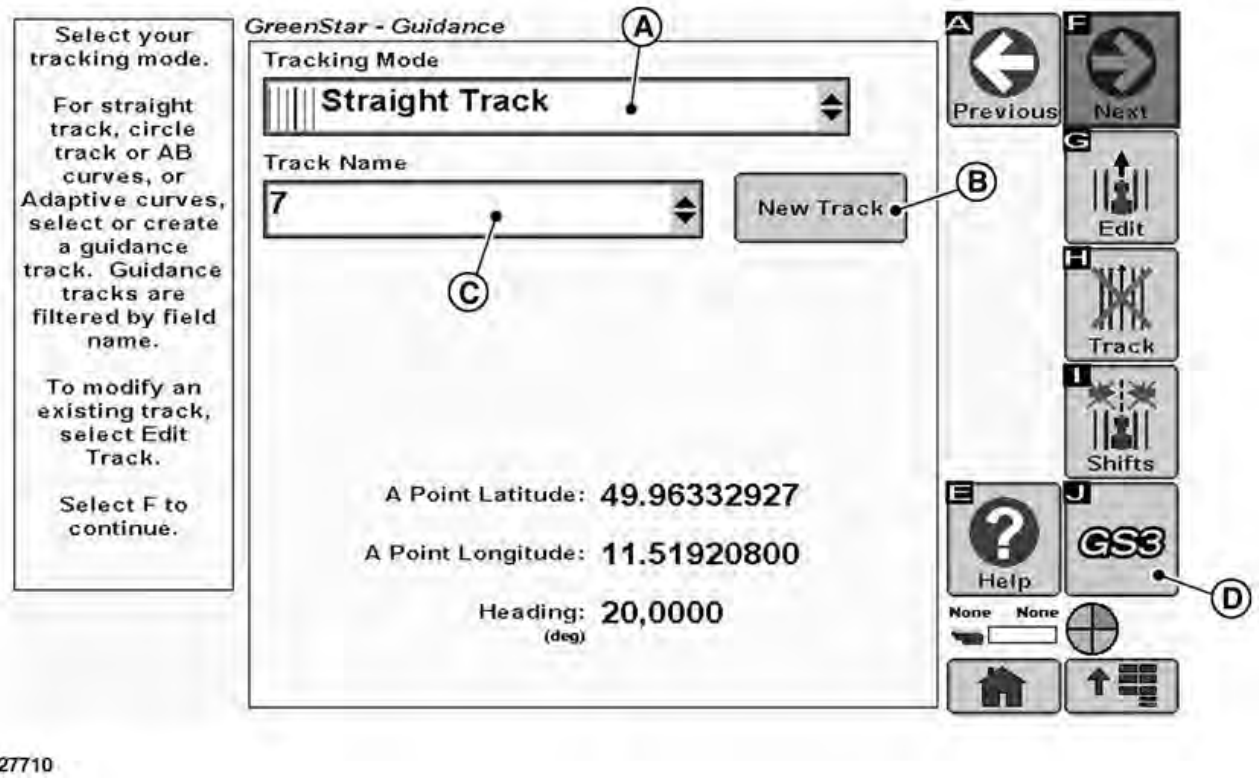

A—Tracking Mode **B—New Track Button** **C—Track Name** **D—GS3 Button**

GreenStar Guidance Page

To define a track pattern, select tracking mode (A) then add new track (B) or select an already defined track name (C). Follow the instructions displayed.

- **Straight Track** should be used when rows are straight and do not vary by more than approximately 1 m (3-1/4 ft). Straight Track projects all lines off of first path.
  If field is relatively straight and heading does not change, using straight track is recommended as this allows row entry on adjacent paths. Performance with row entry is improved when field is planted with AutoTrac. Performance also is improved during periods of row dropout in waterways.
  When in Straight Track, GPS line automatically re-centers. This ensures GPS path is properly aligned with corn rows. **This feature is not available in adaptive curves.**

- **Adaptive Curves** can be used in all fields, but is highly recommended when path changes while going through field, heading changes significantly, or curve is U-shaped. Curve Track Recording must be ON. This establishes first pass, and allow straight-line extensions to occur.
  Adaptive Curves only get projected to adjacent pass, but have the advantage of handling different curve shapes, and potential guess row errors do not get accumulated throughout field.
  Use of adaptive curves is recommended when path frequently changes throughout field. Adaptive Curves only projects next path over.

- **AB Curves** is recommended when there is a continuous curve throughout field. This allows for row entry on adjacent paths. Performance is improved if field is planted with AutoTrac™. AB Curves also have improved performance through periods of row dropout. AB Curves have the advantage of projecting a curved track across a field as parallel lines, but shape of the curve is same on each pass.
  When in AB Curves, the GPS curve is automatically recentered. This ensures GPS path is properly aligned with corn rows. **This feature is not available in adaptive curves.**

- **Circle Track** is recommended when crop is planted in a center pivot field.
  If rows to be harvested are in circles, Circle Track should be used. This allows input from GPS curvature to be applied to row sensor.

Press GS3 button (D) to go back to AutoTrac™ RowSense™ page.

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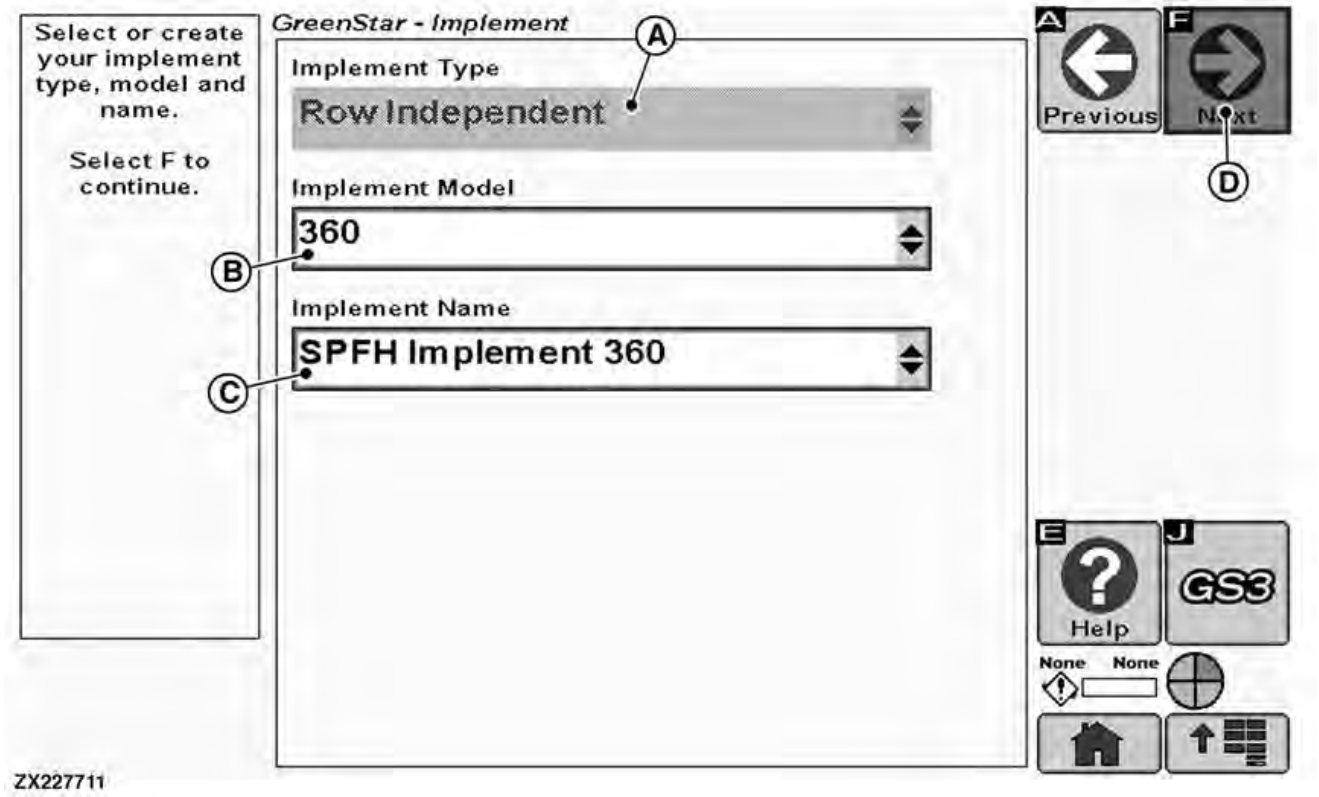

A—Implement Type **B—Implement Model** **C—Implement Name** **D—Next Button**

GreenStar Machine/Implement Pages

1. Input the implement type (A), model (B), and name (C) (header) that is attached to the machine.

   NOTE: Implement type is automatically set to Row Independent.

Press next button (D) to input implement offsets.

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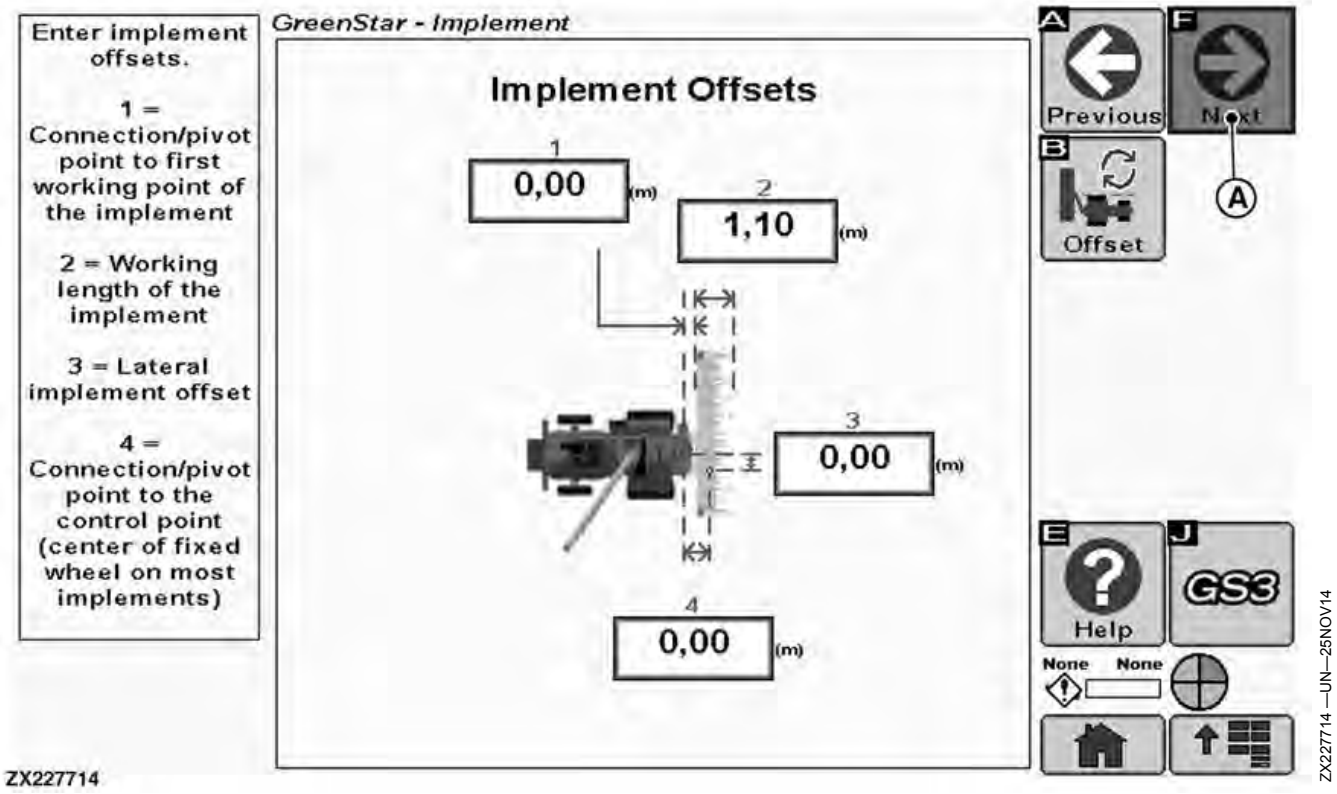

A—Next Button

2. Input the implement offsets as described on screen:
   - 1—Connection/pivot point to first working point of the implement.
   - 2—Working length of the implement.
   - 3—Lateral implement offset.
   - 4—Connection/pivot point to the control point (center of fixed wheels of most implements).

   Press next button (A) to input machine offsets.

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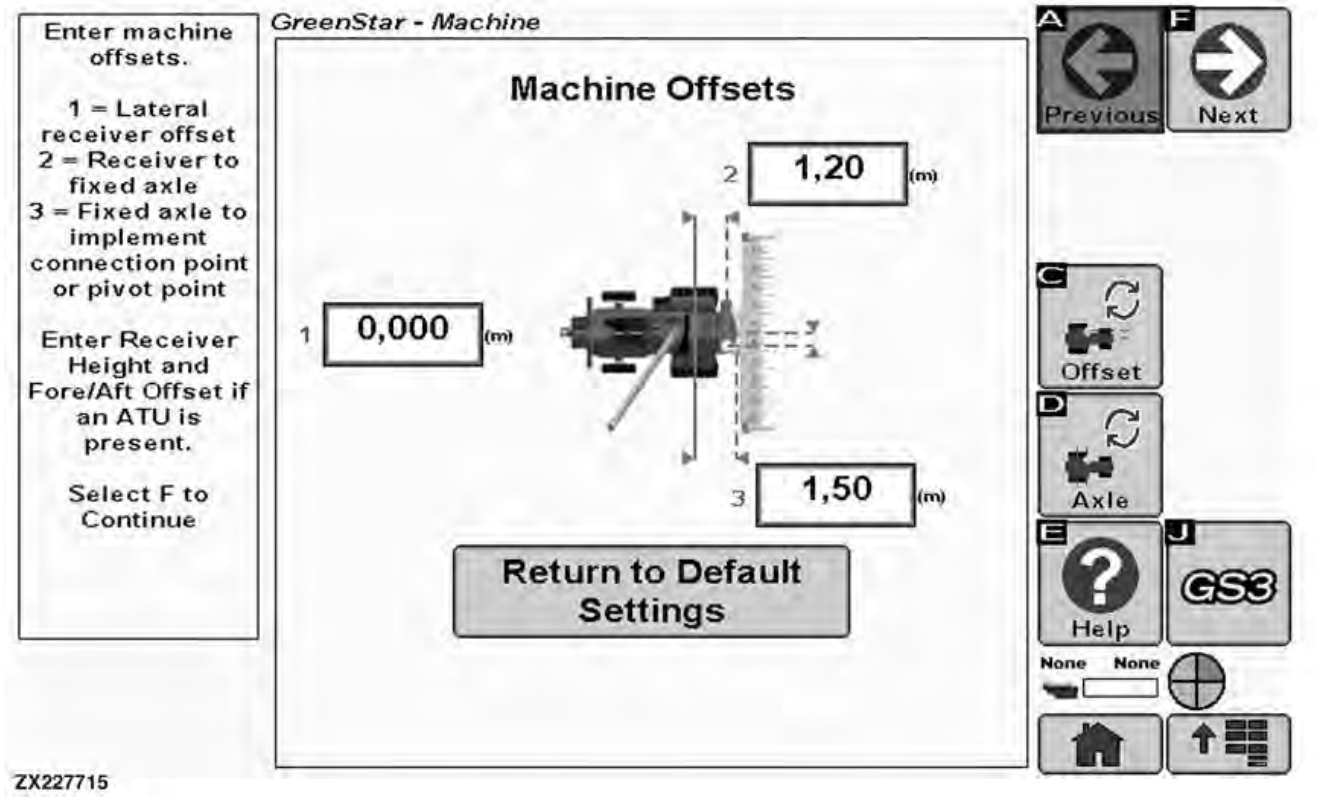

3. Input the machine offsets as described on screen:
   - 1—Lateral receiver offset.
   - 2—Receiver to fixed axle.
   - 3—Fixed axle to implement connection point or pivot point.

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OUCC002,0003E7D -19-17DEC14-7/11

Enable/Activate/Operate AutoTrac™ RowSense™

To enable system, the following conditions must be met:

- AutoTrac™ RowSense™ control unit (SSU) has been detected.
- Tracking has been set up.
- Tracking is ON.
- SSU is in normal operating mode.
- Main clutch is engaged.
- Press the Auto On/Off button (A) to toggle between enable/disable AutoTrac™.

After system has been ENABLED, operator must manually change system to ACTIVE status when steering assistance is desired.

To activate system, the following conditions must be met:

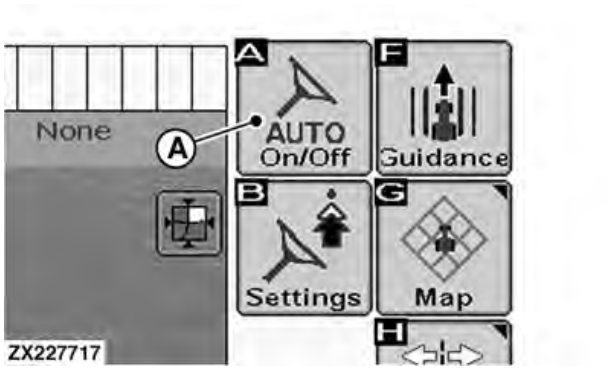
- Road safety mode button in field mode
- Header is engaged.
- Forward ground speed greater than 0.5 km/h (0.3 mph) or reverse ground speed is less than 10 km/h (6.0 mph).
- Forward ground speed less than 22 km/h (13.2 mph).
- Machine heading within 80° degrees of desired track if speed is less than 10 km/h (6.0 mph).
- Machine heading within 45° degrees of desired track if speed is higher than 10 km/h (6.0 mph).
- Off track error is within 40% of track spacing.
- Operator seated.

CAUTION: Always turn off (disable) AutoTrac™ RowSense™ system before entering a roadway. Do not attempt to turn on (activate) AutoTrac™ RowSense™ system while transporting on a roadway.

Press AutoTrac button (B) on multi-function lever to activate system. This initiates assisted steering under the default row guidance mode (see **GreenStar Settings Page**).

Check AutoTrac™ RowSense™ status pie (C). Status pie (C) indicates the stage that AutoTrac™ RowSense™ is in.

- Stage 1—**Installed (1/4 of pie)**—AutoTrac™ control unit (SSU) and all other hardware necessary for use are installed.
- Stage 2—**Configured (2/4 of pie)**—Valid AutoTrac™ Activation, Tracking Mode has been determined and a valid Track 0 has been established. Correct StarFire™ signal level for AutoTrac™ Activation is selected. Vehicle conditions met.
- Stage 3—**Enabled (3/4 of pie)**—Auto On/Off button has been pressed and “Steer On” is displayed.
- Stage 4—**Activated (4/4 of pie with “A”)**—AutoTrac™ button on multi-function lever has been pressed and AutoTrac™ RowSense™ is steering the machine.



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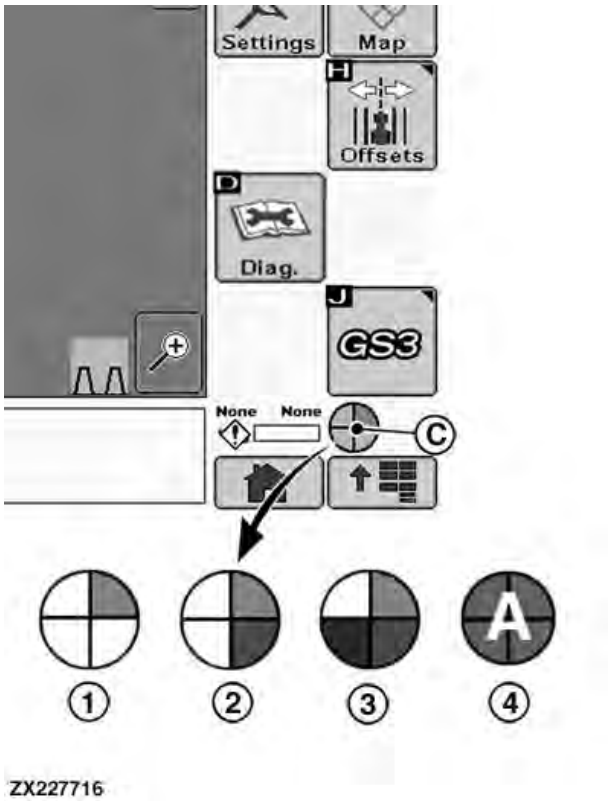
ZX227718 —UN—25NOV14



ZX227716 —UN—17DEC14

A—Auto On/Off Button
B—AutoTrac Button
C—AutoTrac™ RowSense™ Status Pie

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When operating AutoTrac™ RowSense™, an icon (A) appears indicating row sensor is available. Each icon (1, 2, 3 and 4) indicates what is happening on machine at that moment.

The guidance status Icon (A) changes from white to colored (green) animated form when row sensor is controlling machine, as follows:

1. **System Installed** (Gray Background)
2. **System Active**, operating with both, row sensor and GPS (Green Background)
3. **Lost GPS**, operating with row sensor data only (Yellow Background)
4. **Lost Row Sensor Signal** , operating with GPS only (Orange Background)

NOTE: Guidance accuracy is diminished when operating with icon status 3 or 4.

Row sensor guides machine whenever it can determine a row position. Operator knows that row sensor is guiding machine by AutoTrac™ RowSense™ icon (A) changing to green and showing motion.

Once initial path has been set (an AB line or initial recorded Curve Track Pass) and Auto On/Off button is pressed to enable AutoTrac™ RowSense™, then AutoTrac button can be pressed when machine is within half the track spacing and at acceptable angle to rows. Row sensor guides machine as soon as there is activity on row sensor.

Making a Headland Turn: Headland turns are accomplished the same as with GPS based AutoTrac™. Operator lines up with path operator desires to follow. Pressing AutoTrac button causes AutoTrac™ RowSense™ to drive to the guidance path. Row sensor then detects position of row and follow it. Line extension feature of Adaptive Curves, Circle Track, and AB Curves can be used to extend adjacent path projection into headlands.

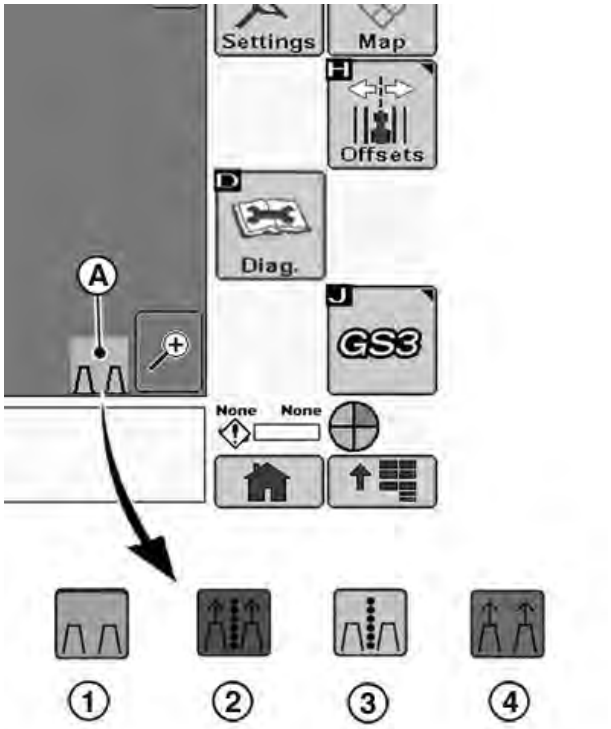
Adjust Row Guidance Offset

If necessary, use the control dial (B) to bring the machine back on track if it deviates (track adjustment).

Control dial (B) allows the row guidance system to move the machine to either side within the same crop row. This offset adjustment allows intermediate rows to be cropped and compensates for sideslip if the machine is operated on a slope. Turn control dial (B) to the left or right.

AutoTrac™ RowSense™ system can be made INACTIVE by the following methods:

- To toggle between enable/disable AutoTrac™, press the Auto on/off button.
- Turn steering wheel more than 30 degrees.
- Disengage main clutch.
- Switch road safety mode button to road mode.



ZX227709

ZX227709 —UN—17DEC14

ZX227719

ZX227719 —UN—25NOV14

A—Guidance Status Icon
B—Row Guidance Offset Control Dial
1— System Installed Icon
2— System Active Icon
3— Lost GPS Icon
4— Lost Row Sensor Signal Icon

- Decrease ground speed to less than 0.5 km/h (0.3 mph) longer than 30 seconds.
- Increase forward ground speed to more than 15 km/h (9.3 mph).
- Operate in reverse operation.
- Operator not seated for more than seven seconds.
- Track number is changed.

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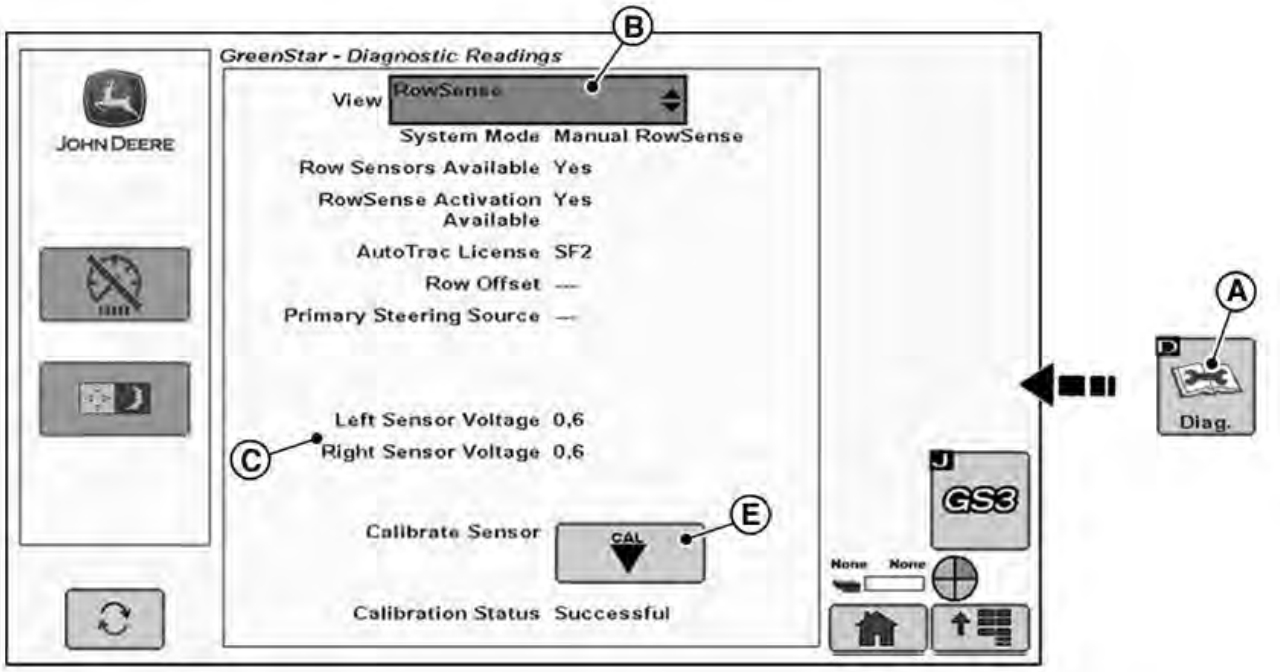

ZX227728

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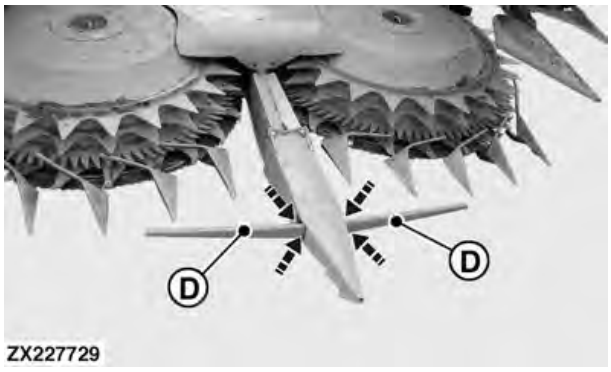
Calibrate The Row Sensor

IMPORTANT: Row sensor feelers must be installed and positioned against at-rest stops.

IMPORTANT: Make sure that no material as accumulated at row sensor areas that would prevent both feelers (D) being in theirs at-rest position (see arrows).

Upmost cleanness must be observed when calibrating row sensor, especially near the sensor to avoid improper calibration (wrong calibration values).



ZX227729

ZX227729 —UN—15JAN15

A—Diagnostic Button
B—View
C—Left/Right Sensor Voltage
D—Sensor Feeler
E—Calibration Button

In case the row sensor has been replaced, a calibration is required. Proceed as follows:

1. Raise header to ensure row sensor feelers are not contacting ground. Machine must not be moving.
2. On AutoTrac™ RowSense™ main page, press Diagnostic button (A) to access GreenStar-Diagnostic Readings page.
3. Select **RowSense** in View (B) drop-down list.
4. Read actual left and right sensor voltage value (C).
5. Calibrate sensor at-rest voltages. Press Calibration button (E) to store sensor at-rest voltages into AutoTrac™ RowSense™ (SSU) control unit.
6. Check that left and right sensor at-rest voltage value (C) is as close as to 0 volts.

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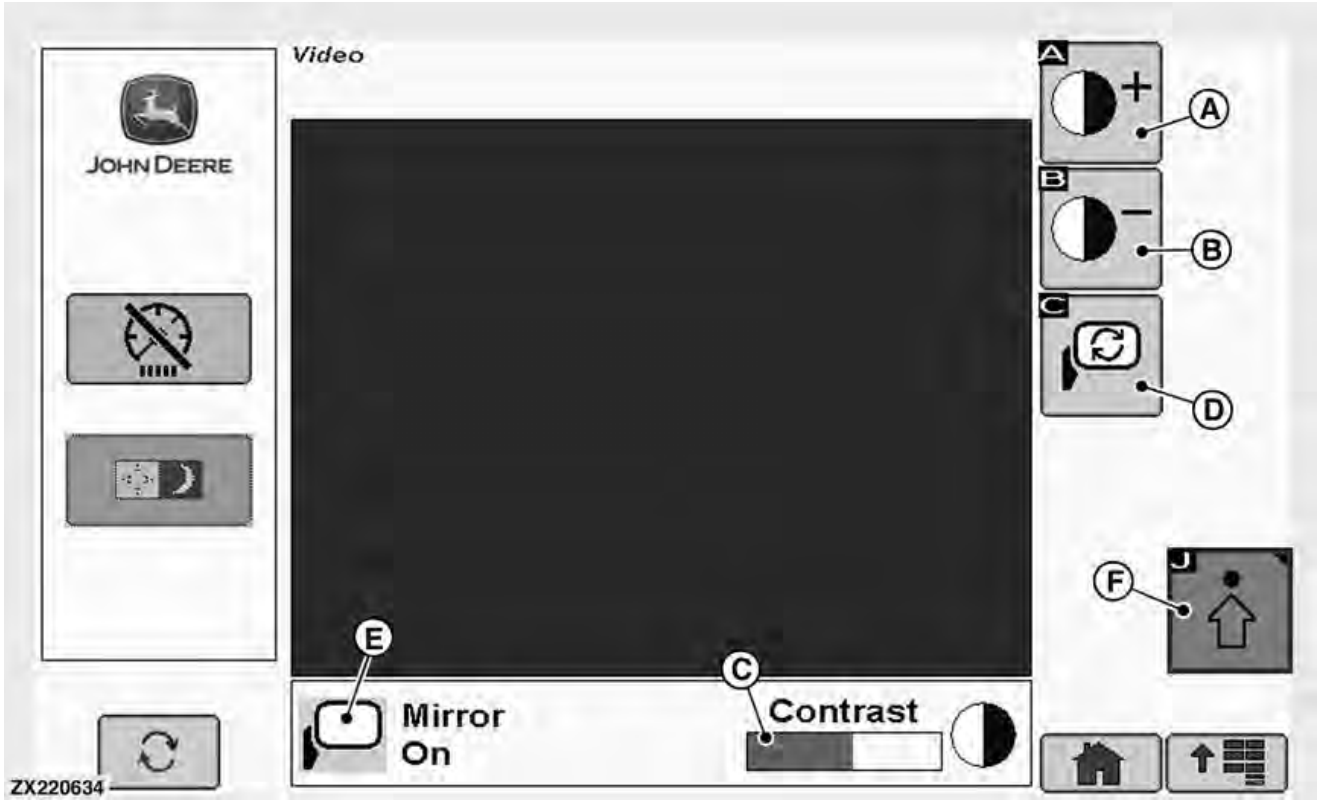
Video Interface (Option)



A—Contrast Increase Button
B—Contrast Decrease Button
C—Contrast Bar Graph
D—Mirror Image Button
E—Mirror Image ON/OFF
F—Video Advanced Settings Page Access Button

⚠ 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".**
- **Do not modify factory-installed camera location.**
- **Understand camera's field of view.**
- **Keep camera properly serviced.**
- **Keep camera lens clean.**

NOTE: To access the Video Interface (Option) Page refer to CommandCenter™ Display in this section.

From this page, following settings are available:

- **Contrast Adjusting:**
  Allows operator to lighten or darken video display.
  - Contrast increase button (A) - brightens video display.
  - Contrast decrease button (B) - darkens video display.

  NOTE: Contrast bar graph (C) displays contrast adjustment.

- **Mirror Image Settings:**
  Allows operator to mirror image on screen.
  Use mirror button (D) to toggle between Mirror ON/OFF.

  NOTE: Mirror ON/OFF (E) toggles to alert operator which angle is displayed.

- **Video-to-Multi-Function Lever Trigger Function:**

Press video advanced settings page access button (F) to activate this function (see **Video Trigger Setup Page** in this section).

Continued on next page

Video Trigger Setup Page:

When the video interface page is not active, the video trigger function enables the video screen to overcome the last function page displayed on CommandCenter™ Display as long as the machine is driven backward.

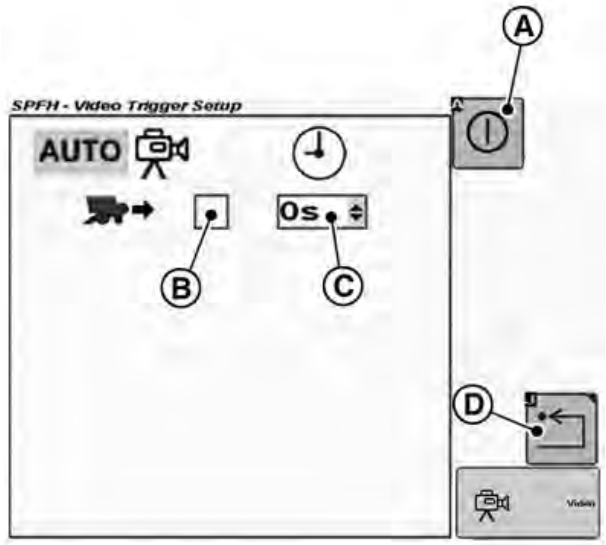
Press activation button (A) or check box (B) to activate the trigger function.

Input the desired duration (C) the video should remain visible on CommandCenter™ Display after the multi-function lever is set back to neutral or forward position.

NOTE: Last page displayed on CommandCenter™ Display is recovered after video trigger duration has ended.

Press return button (D) to go back to main Video Interface.

A—Trigger Activation Button
B—Trigger Activation Box
C—Trigger Duration
D—Return Button



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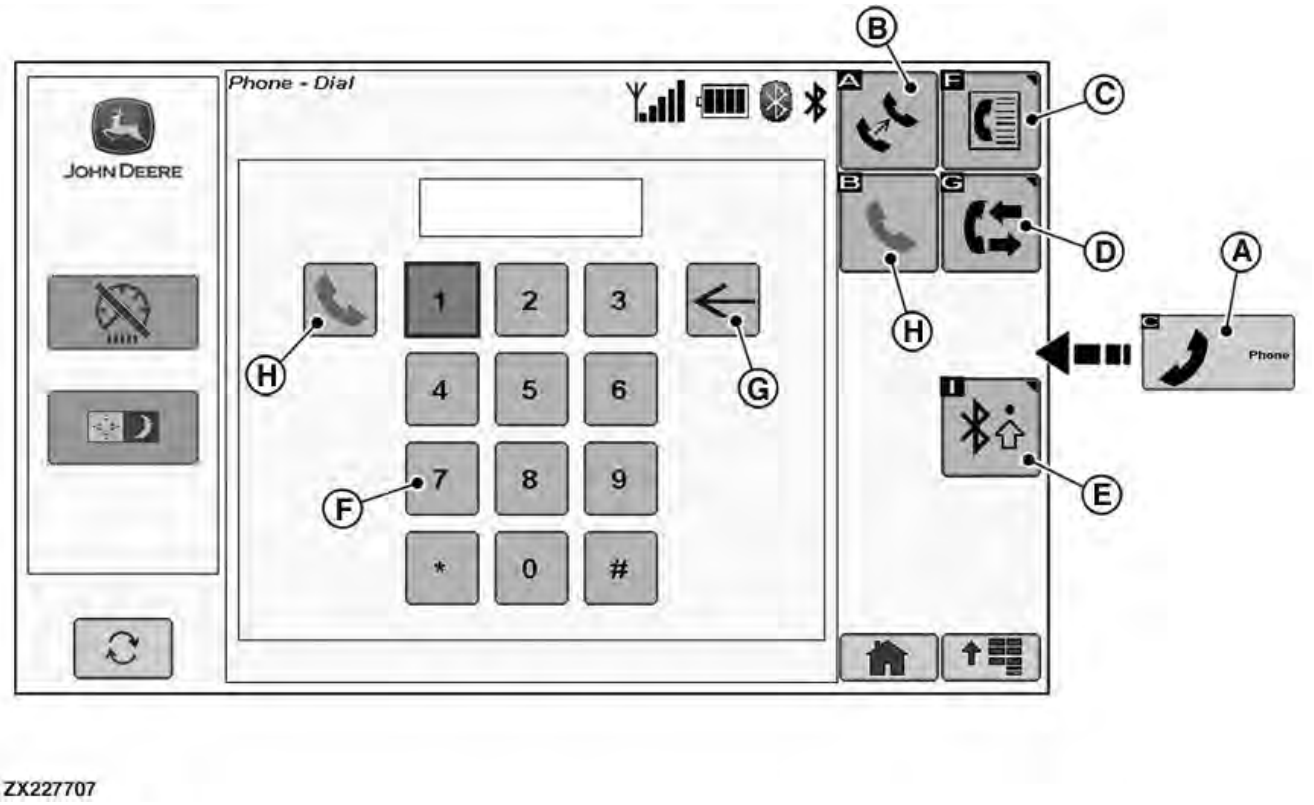
Phone Interface (Option)



A—Phone Button
B—Transfer Call Button
C—Phone Book Button
D—Call History Button
E—Bluetooth Settings Button
F—Numeric Keypad
G—Delete Button
H—Call Button

Touch or press confirm button when phone button (A) is highlighted. Phone Dial page appears.

- Press transfer call button (B) to transfer a call to a connected phone for privacy.
- Press phone book button (C) to view a synchronized phone book.
- Press call history button (D) to view missed calls, dialed call, and received call.
- Press Bluetooth settings button (E) to pair a cell phone with the machine phone interface.
- Use numeric keypad (F) to dial a telephone number using the display screen.
- Press delete button (G) to delete a number while dialing a telephone number.
- Press call button (H) to dial the telephone number previously entered using the telephone numeric keypad.

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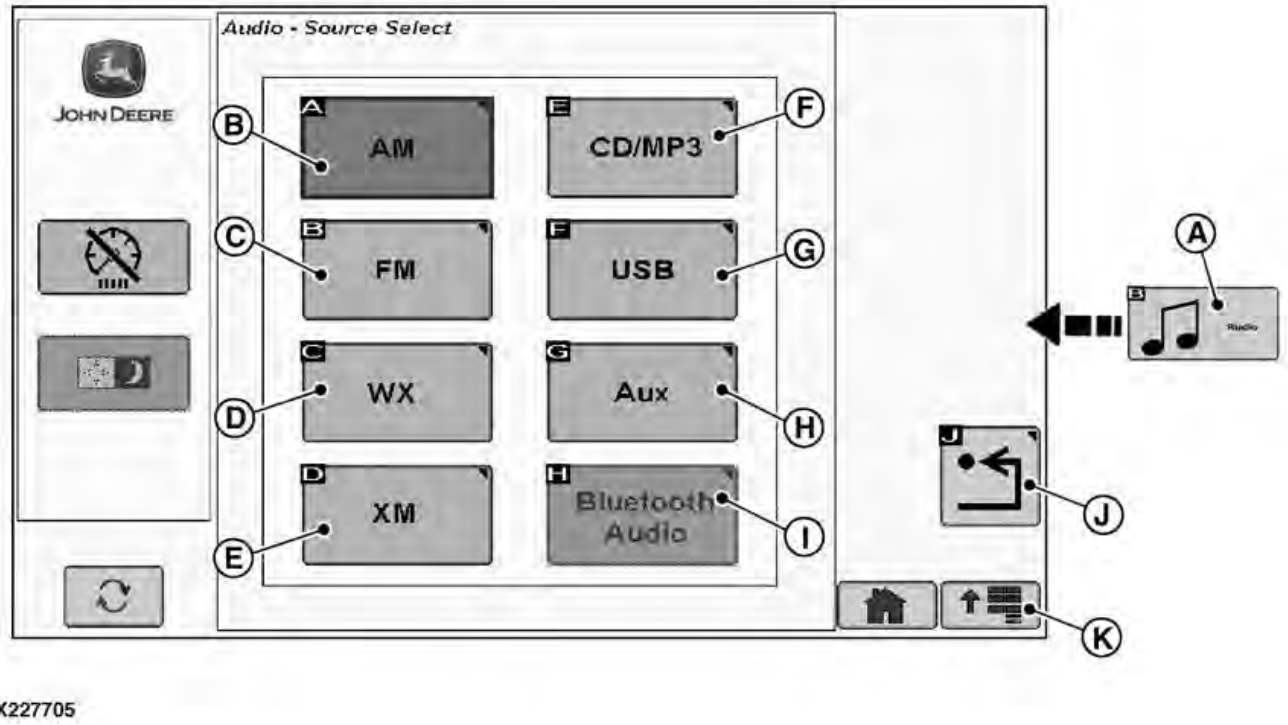
Audio Interface (Option)



ZX227705

A—Audio Button
B—AM
C—FM
D—WX
E—XM
F—CD/MP3
G—USB
H—AUX
I— Bluetooth Radio
J— Return Button
K—Menu Button

Touch or press confirm button when audio button (A) is highlighted. Audio Source Select page appears.

NOTE: Radio is OFF until a radio source is selected.

From this page, the desired radio source can be selected. Selecting a source from this screen turns radio ON to selected source.

- AM (B)
- FM (C)
- WX (D)
- XM (E)
- CD/MP3 (F)
- Universal Serial Bus (USB) (Premium radio only) (G)
- Auxiliary (AUX) (H)
- Bluetooth® Audio (Premium Radio Only) (I)

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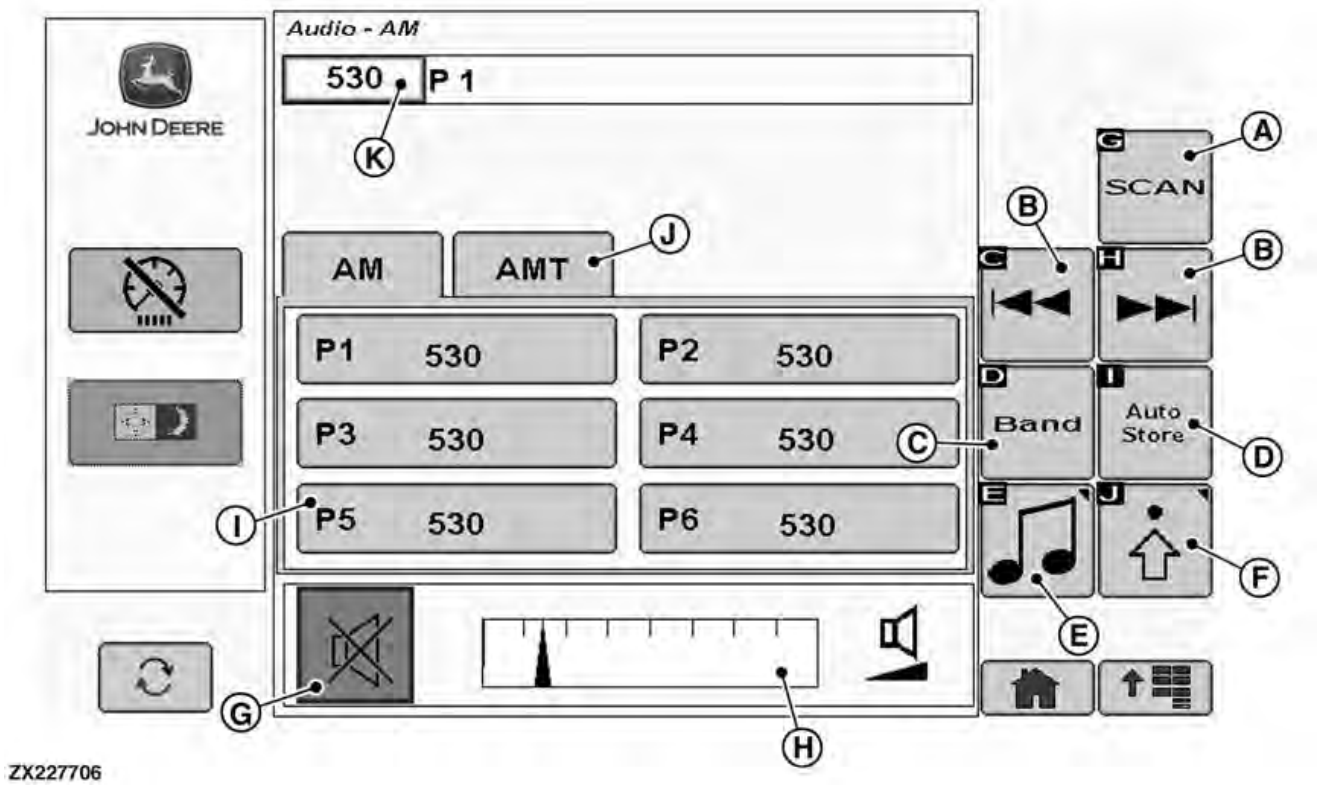


A—Scan Button
B—Channel Up/Down Button
C—Band Button
D—Auto Store Button
E—Source Select Button
F—Audio Settings Button
G—Mute Button
H—Volume Bar Graph
I— Channel Presets
J—Radio Band Tab
K—Radio Station Frequency Display

Once radio source is selected, relevant settings for each source page appear:

- Press scan button (A) to scan through available stations on selected radio band. Current station plays four—eight seconds (depending on time to produce audio) before scanning again.
- Press channel up and down buttons (B) to call up the channel with the strongest signals.
- Press band button (C) to toggle through waveband.
- Press auto store button (D) to store the strongest frequencies in the waveband.

NOTE: Press and hold Band (BND) key on radio for two seconds to start Auto Store.

- Press source select button (E) to cycle through radio tuner sources and external sources.
- Press audio settings button (F) to change desired audio settings:
  - Bass
  - Treble
  - Middle
  - Balance
  - Fade
- Press mute button (G) to mute radio sound level.
- Press volume bar graph (H) to adjust current sound level.
- Press channel preset 1—6 (I) to select desired preset stations (lowest frequency available is default). Press and hold for two seconds to store active station frequency (K) to preset.

NOTE: Radio and display buttons are synchronized.

- Press radio band tab (J) to cycle through additional preset stations on other tabs (if previously saved into memory).
- Radio frequency display (K) displays radio station frequency and channel preset number (if previously saved into memory).

NOTE: If available, artist name and song name from current radio station are displayed.

OUCC002,0004214 -19-23NOV14-2/2

Acoustic Alarm System

This machine is equipped with a cutterhead/blower rotation alarm system. This system provides an acoustic warning whenever the operator leaves the seat and the cutterhead and blower are turning. The two sounding alarms (A) and (B) indicate that the cutterhead and the blower are still turning. Do not open access doors or try to access the cutterhead or blower area while the two horns are sounding.

CAUTION: To avoid serious injury from rotating components, do not operate the machine unless both alarm horns sound when using this test procedure, indicating the system is working correctly.

NOTE: When leaving the seat while cutterhead is engaged, the switch (C) is actuated to activate the cutterhead/blower alarm system.

Test of Cutterhead/Blower Rotation Alarm System

To test the warning alarm system:

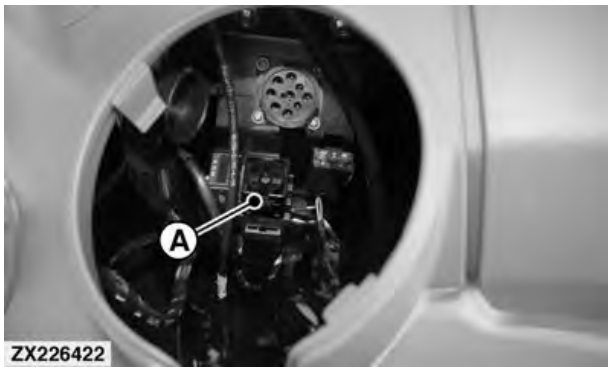
1. Make sure everyone is clear of machine.
2. Sound horn, turn engine key on, and start engine.
3. Sound horn and engage main clutch switch.
4. Increase engine rpm to operating speed.
5. Reduce engine speed to slow idle, shut off main clutch switch, and turn engine key to off position.
6. Get out of operator's seat, wait five seconds, open cab door and listen for two alarms.
7. If both alarms (A) and (B) are not heard, the system is not working properly. Contact your John Deere dealer to repair the system.

Beside the cutterhead/blower rotation alarm system, there are different operating modes for the audible alarm buzzer (A) to provide acoustic notification and system warning information.

If the following conditions are met, the audible alarm (A) sounds continuously:

- When a red stop light diagnostic trouble code information is displayed.
- When moving the multi-function lever in forward position with the parking brake applied.
- When turning on the turn signal switch and it stays in this position for longer than 2 minutes.

If the following conditions are met, the audible alarm (A) sounds temporarily:



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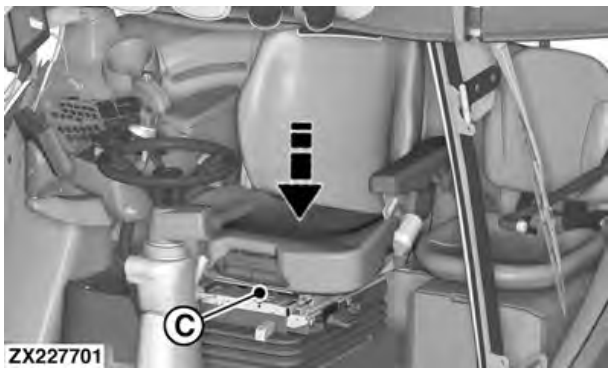

ZX227701 —UN—23NOV14

A—Buzzer
B—Horn
C—Operator's Seat Presence Switch

- When an amber warning light diagnostic trouble code information is displayed.
- When pressing the quick stop switch during operation.
- When metal detector has detected a piece of metal and main clutch is still engaged.
- When stone detector has detected an object and main clutch is still engaged.

OUCC002,0004216 -19-23NOV14-1/1

Field Operation

General

To obtain highest efficiency of your machine, pay attention to the following signs:

Signs for poor efficiency:

- Poor or irregular spout jet, crop spreading.
- Inconsistent cut.
- Cut material fibrous.
- Irregular engine rpm.
- Engine rpm below 1800 or above 2000.
- Load peaks.
- Irregular ground speed.
- Uneven crop flow.
- Compressor roll bouncing (on pickup header).

Signs for high efficiency:

- Clean, exact cut.
- Cut material not too fibrous.
- Smooth, compact spout jet.
- No black or white exhaust smoke.
- Smooth and even engine sound.
- Engine loaded between 1800 and 2000 rpm.
- Constant smooth ground speed.
- Smooth and continuous machine feeding.

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Prestarting Checks

Before operating the machine perform the following daily checks:

- Engine Oil Level

Check engine oil level. Do not operate engine when oil level is below low mark on dipstick.

NOTE: 8100—8600 (Final Tier 4/Stage IV Engine): The oil should be checked with the dipstick screwed all the way into the holder.

8100 and 8200 (Tier 2/Stage II Engine): The oil should be checked with the dipstick screwed all the way into the holder.

8300—8600 (Tier 2/Stage II and Tier 3/Stage III A Engine): The oil should be checked with the dipstick pushed all the way into the holder.

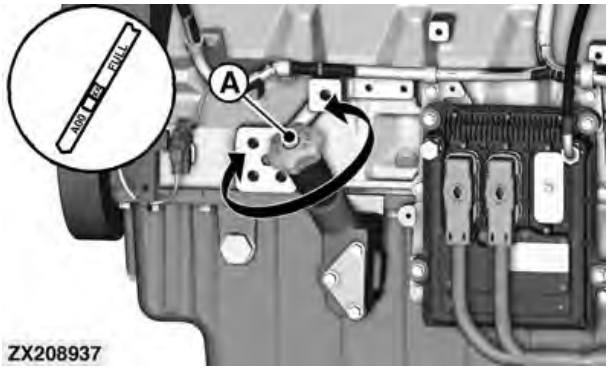
8700 and 8800: The oil should be checked with the dipstick pushed all the way into the holder.

Remove dipstick (A) and check oil level.

- **8100—8600:** Oil level should be between the ”ADD” and the top of the cross-hatch area on dipstick. Do not operate engine with oil level below the ”ADD” mark on dipstick.
- **8700 and 8800:** Oil level should be between upper and lower marks on dipstick.
  - High — Maximum
  - Low — Minimum

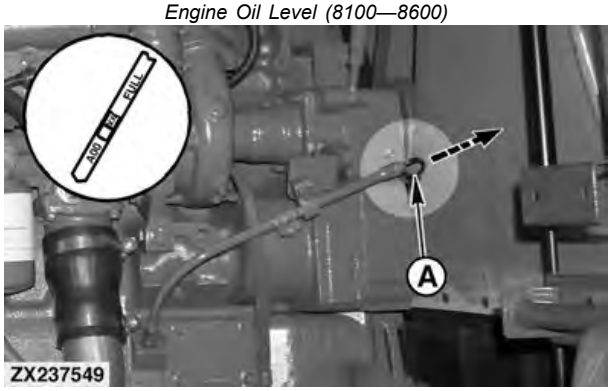
  Do not operate engine with oil level below the ”Low” mark on dipstick.

If needed, add oil as specified in the **Lubrication and Maintenance** section.



ZX208937 —UN—06OCT14

Engine Oil Level (8100—8600)



ZX237549 —UN—23MAR15

Engine Oil Level (8700 and 8800)

A—Dipstick

Continued on next page

OUCC002,0004D18 -19-05JUL16-1/9

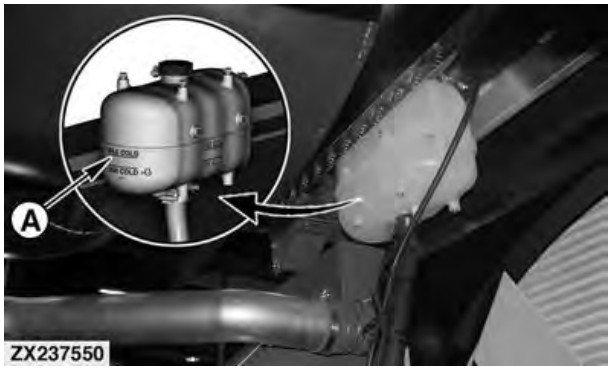
- Coolant Level

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 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.

A—Max Cold Line



ZX237550 —UN—23MAR15

OUCC002,0004D18 -19-05JUL16-2/9

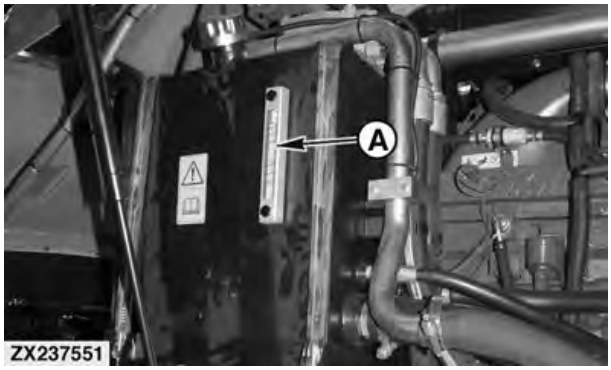
- Hydraulic System

Retract all hydraulic cylinders and lower header to the ground.

Oil must be visible in the sight glass (A).

IMPORTANT: If the option High Flow or Dual Header Drive is installed, check the oil level at the upper scale of sight glass.

A—Sight Glass



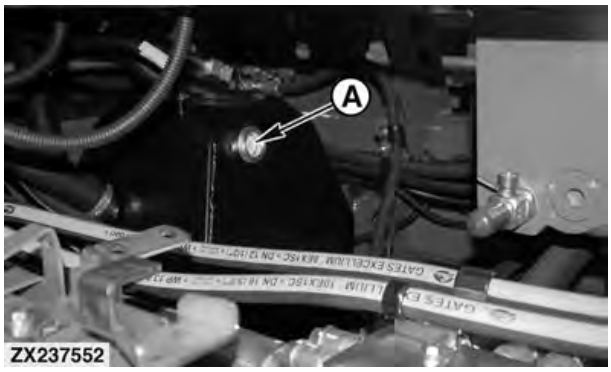
ZX237551 —UN—23MAR15

OUCC002,0004D18 -19-05JUL16-3/9

- Power Distribution Gear Lubrication System

Oil must be visible in the sight glass (A). If needed, add oil as specified in the **Lubrication and Maintenance** section.

A—Sight Glass



ZX237552 —UN—23MAR15

Continued on next page

OUCC002,0004D18 -19-05JUL16-4/9

- Rotary Screen (in Winter)

Make sure that rotary screen drive is free to turn (free from ice and snow) before starting the engine.

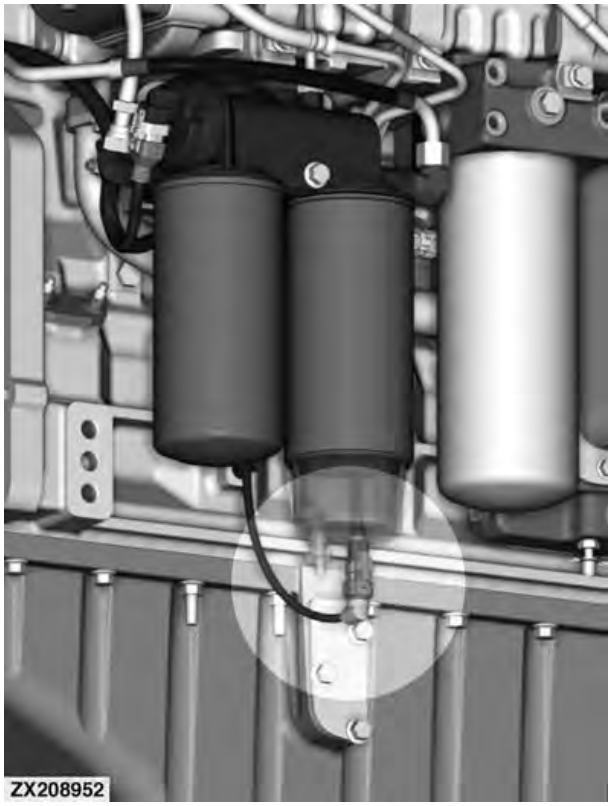
ZX237553 —UN—23MAR15

Continued on next page

OUCC002,0004D18 -19-05JUL16-5/9

- Fuel System

If necessary, drain water and sediment deposits from fuel system (see **Lubrication and Maintenance** section).



ZX208952 —UN—06OCT14

Fuel System (8100—8600)

ZX237554 —UN—23MAR15

Fuel System (8700 and 8800)

Continued on next page

OUCC002,0004D18 -19-05JUL16-6/9

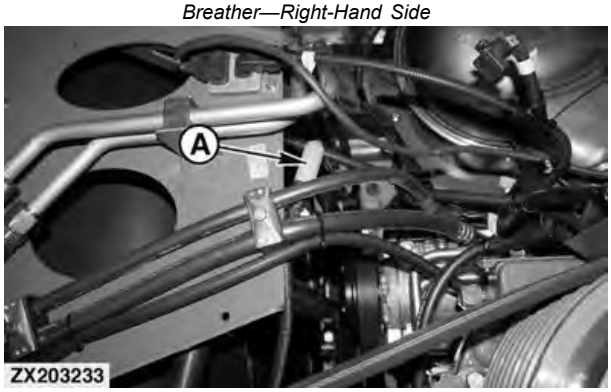
- Fuel Tank Breathers (8100—8600 Only)

Visually inspect fuel tank breathers (A) weekly. If breather is covered with debris, it does not allow fuel tank to breathe. Remove fuel tank breather from hose and clean.

A—Breather

ZX203232 —UN—06AUG13

Breather—Right-Hand Side



ZX203233 —UN—06AUG13

Breather—Left-Hand Side

Continued on next page

OUCC002,0004D18 -19-05JUL16-7/9

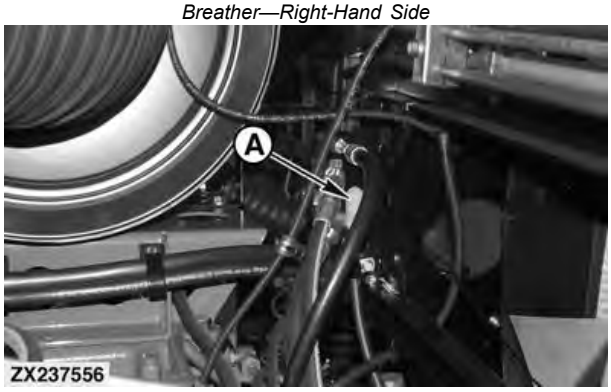
- Fuel Tank Breathers (8700 and 8800 Only)

Visually inspect fuel tank breathers (A) weekly. If breather is covered with debris, it does not allow fuel tank to breathe. Remove fuel tank breather from hose and clean.

A—Breather

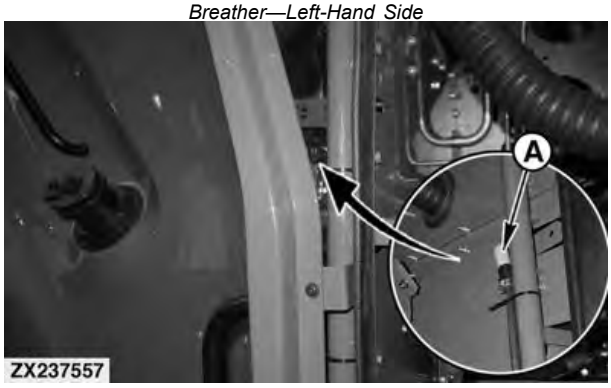
ZX237555 —UN—23MAR15

Breather—Right-Hand Side



ZX237556 —UN—23MAR15

Breather—Left-Hand Side



ZX237557 —UN—23MAR15

Breather—Left-Hand Side

Continued on next page

OUCC002,0004D18 -19-05JUL16-8/9

- Fire Extinguisher

John Deere recommends a 6 kg general-purpose fire extinguisher (“ABC”) mounted next to the cab door at the location shown in the illustration. Check every day that the fire extinguisher is in position.

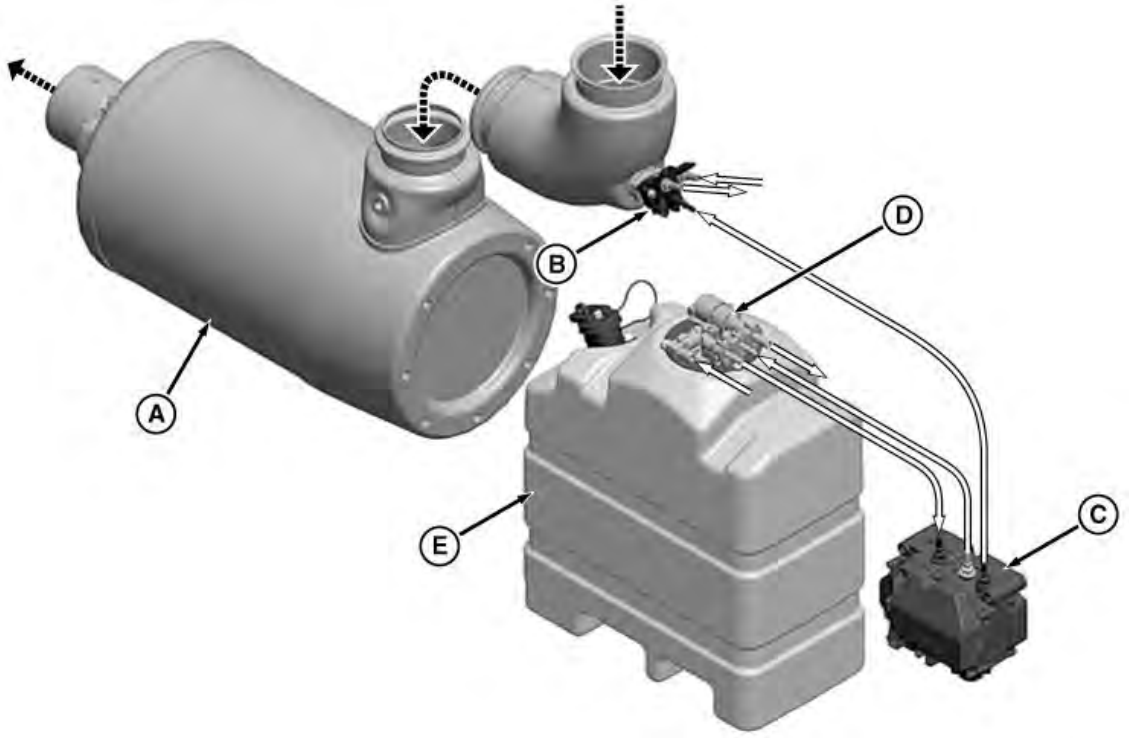
ZX1050672 —UN—16DEC14

- Miscellaneous Checks

- Tires: Inspect tires for cuts, breaks, or obviously low pressure. Check tire pressure at least weekly with an accurate gauge.
- Lights
- Brakes and park brake

OUCC002,0004D18 -19-05JUL16-9/9

Selective Catalytic Reduction (SCR) System Overview



RG22427 —UN—14FEB13

SCR System

A—SCR Catalyst
B—DEF Dosing Injector
C—DEF Dosing Unit
D—DEF Tank Header Assembly
E—DEF Tank

IMPORTANT: Do not remove battery leads for at least 4 minutes after engine stops. The SCR system automatically purges itself of Diesel Exhaust Fluid (DEF) immediately after the engine is stopped. If adequate time is not allowed for lines to be purged, residual DEF can freeze and possibly damage components of the SCR system during cold-weather exposure.

In order to comply with national and local emission requirements, this engine series contains a Selective Catalytic Reduction (SCR) system. The main components of the SCR system include the SCR catalyst (A), DEF dosing injector (B), DEF dosing unit (C), DEF tank header assembly (D), and DEF tank (E). The SCR system is effective at reducing the nitrogen oxides (NOx) emissions. NOx is a major component of smog and acid rain.

During combustion, NOx molecules are formed in the exhaust. DEF is injected into the exhaust stream before the SCR catalyst. Through a chemical reaction in the SCR, NOx is converted into nitrogen and water.

Water vapor is a normal by-product of combustion. During cold-weather operation at low exhaust temperatures, this water vapor can condense and resemble white smoke from the exhaust. This will dissipate as operating temperature increases and the water is further vaporized. This situation is considered normal.

A DEF solution begins to crystallize and freeze at -11 °C (12 °F). With climate temperatures that can range much colder than this, DEF is expected to freeze in the DEF tank. For this reason, the DEF tank contains a heating element that provides rapid thawing of DEF upon start-up. The heating element cycles to maintain fluidity during operation as needed. DEF is not dosed upon initial start-up, therefore it is not necessary to have liquid DEF at cold start-up.

If DEF quality deteriorates and it is no longer within specifications, the engine can derate. 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.

DX,SCR,OVERVIEW -19-05SEP14-1/1

Break in the Engine (8100—8600 Only)

The engine is ready for normal operation. However, extra care during the **first 100 hours** of operation will result in more satisfactory long-term engine performance and life. DO NOT exceed 100 hours of operation with break-in oil.

1. This engine is factory filled with John Deere Break-In™ oil. Operate the engine at heavy loads with minimal idling during the break-in period.
2. If the engine has significant operating time at idle, constant speeds, and/or light load usage, or adding oil is required in the first 100 hour period, a longer break-in period may be required. In these situations, an additional 100 hour break-in period is recommended using new John Deere Break-In™ oil and a new John Deere oil filter.

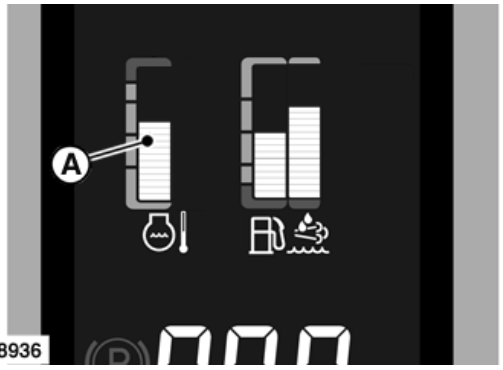
IMPORTANT: DO NOT add oil until the level is BELOW the ADD mark on dipstick. John Deere Break-In™ oil should be used to make up any oil consumed during the break-in period.

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

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

IMPORTANT: DO NOT fill above the FULL mark. Oil levels anywhere within the cross hatch marks are acceptable.

4. During the first 20 hours, avoid prolonged periods of engine idling or sustained maximum load operation. If engine will idle longer than 5 minutes, stop engine.



ZX208936 —UN—31DEC13

A—Temperature Indicator

5. After the first 100 hours maximum, change engine oil and replace engine oil filter. Fill crankcase with seasonal viscosity grade oil.

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

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

The temperature indicator (A) bar should be in the green zone.

If bar moves into red zone indicating overheating, stop engine and check problem immediately.

OUCC002,00046D1 -19-07SEP15-1/3

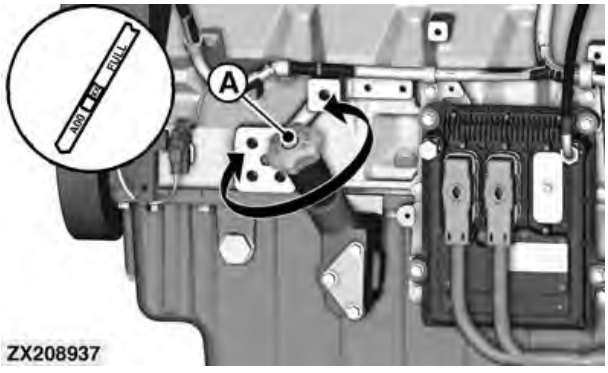
Check engine oil level at dipstick (A) periodically. Do not operate engine when oil level is below low mark on dipstick.

NOTE: The oil should be checked with dipstick screwed all the way into the holder.

Remove dipstick (A) and check oil level. Oil level should be between the ”ADD” and the top of the cross-hatch area on dipstick. If oil level is below the ”ADD” mark, add oil as needed. (See **Lubrication and Maintenance** section for oil recommendations).

Watch for leaks.

Do not operate engine with oil level below the ”ADD” mark.



ZX208937 —UN—06OCT14

A—Dipstick

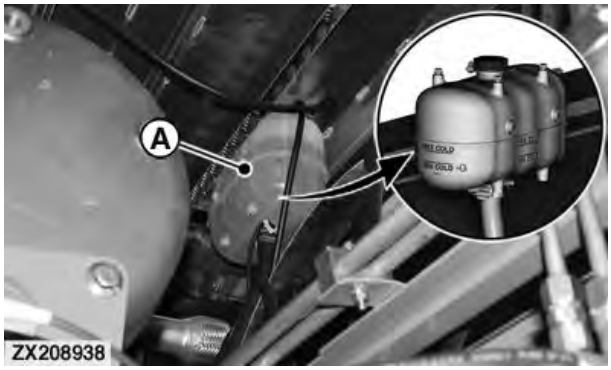
Continued on next page

OUCC002,00046D1 -19-07SEP15-2/3

Check coolant level periodically from ground. Watch for signs of leaks.

Until you become familiar with the sound of your forage harvester and the way it feels, be particularly alert.

A—Coolant Tank



ZX208938 —UN—31DEC13

OUCC002,00046D1 -19-07SEP15-3/3

Break in the Engine (8700 and 8800 Only)

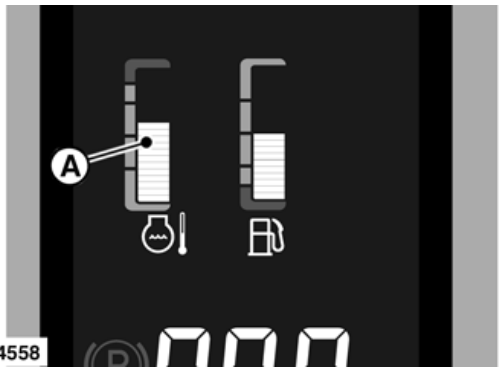
The engine is ready for normal operation. However, extra care during the **first 100 hours** of operation will result in more satisfactory long-term engine performance and life.

1. Operate the engine at heavy loads with minimal idling during the break-in period.
2. Check engine oil level more frequently during engine break-in period. If oil must be added during this period, John Deere Plus-50™ or Torq-Gard Supreme™ oils are preferred.

IMPORTANT: DO NOT fill above the FULL mark. Oil levels anywhere within the cross hatch marks are acceptable.

3. During the first 20 hours, avoid prolonged periods of engine idling or sustained maximum load operation. If engine will idle longer than 5 minutes, stop engine.
4. After the first 100 hours maximum, change engine oil and replace engine oil filter. Fill crankcase with seasonal viscosity grade oil.

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



ZX237558 —UN—23MAR15

A—Temperature Indicator

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

The temperature indicator (A) bar should be in the green zone.

If bar moves into red zone indicating overheating, stop engine and check problem immediately.

Continued on next page

OUCC002,00044EA -19-20MAR15-1/3

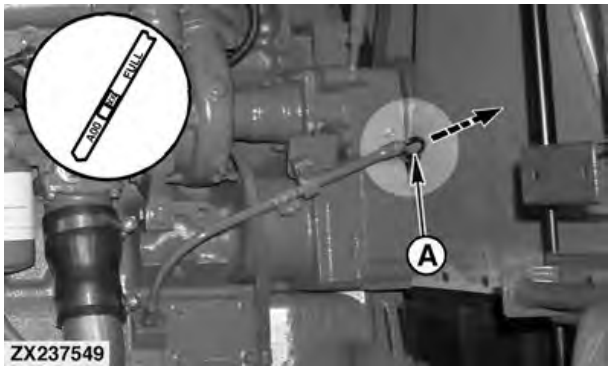
Check engine oil level at dipstick (A) periodically. Do not operate engine when oil level is below low mark on dipstick.

NOTE: The oil should be checked with the dipstick pushed all the way into the holder.

Remove dipstick (A) and check oil level. Oil level should be between the ”L” (Low) and the ”H” (High) mark on dipstick. If oil level is below the ”L” mark, add oil as needed. (See **Lubrication and Maintenance** section for oil recommendations).

Watch for leaks.

Do not operate engine with oil level below the ”L” mark or above the ”H” mark on dipstick.



ZX237549 —UN—23MAR15

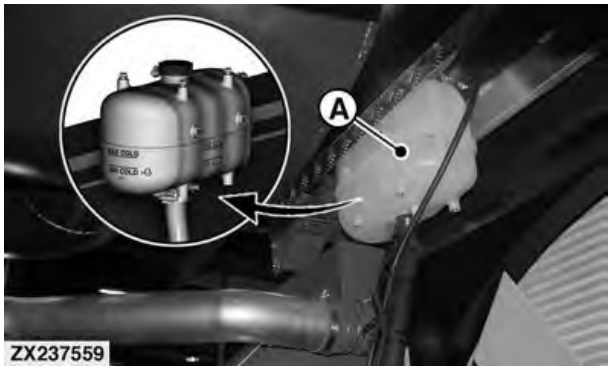
A—Dipstick

OUCC002,00044EA -19-20MAR15-2/3

Check coolant level periodically from ground. Watch for signs of leaks.

Until you become familiar with the sound of your forage harvester and the way it feels, be particularly alert.

A—Coolant Tank



ZX237559 —UN—23MAR15

OUCC002,00044EA -19-20MAR15-3/3

Operate the Engine

Starting the Engine

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 main clutch switch (B) is OFF.

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 operator seat. Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is 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 two minutes before trying again.

NOTE: If temperature is below -5 °C (23 °F) it may be necessary to use cold weather starting aid (see Cold Weather Starting Aid (If Equipped) in this section).

When 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 (D) under storage box lid (E) on the armrest shows engine starting information.

3. Sound horn and turn key switch (C) to START position.

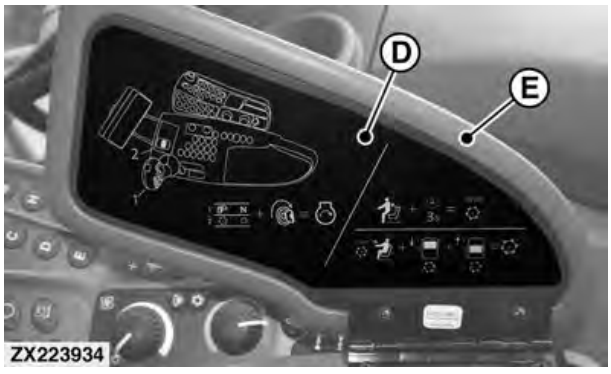
Key positions are:

First Position	Accessories
Second Position	OFF
Third Position	Run
Fourth Position	Start

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

ZX208939 —UN—31DEC13

ZX208940 —UN—31DEC13



ZX223934 —UN—30OCT14

A—Multi-Function Lever
B—Main Clutch Switch
C—Key Switch
D—Decal
E—Storage Box Lid

Continued on next page

4. Release key after engine starts and let engine run at low idle for five minutes to warm oil.
5. Adjust an engine speed of approx. 1200 rpm.

   Run a cold engine for approx. 1—2 minutes at this speed. At ambient temperatures below freezing, extend this warming up period to 2—4 minutes.

IMPORTANT: Never run engine without load for more than 5 minutes.

All indicator lights except the park brake light must be out. If any other lights stay on, stop the engine and correct the fault.

OUCC002,00041DE -19-29OCT14-2/5

Cold Weather Starting Aid (If Equipped)

⚠ CAUTION: Avoid personal injury and damage to engine. Inject fluid only while engine is turning.

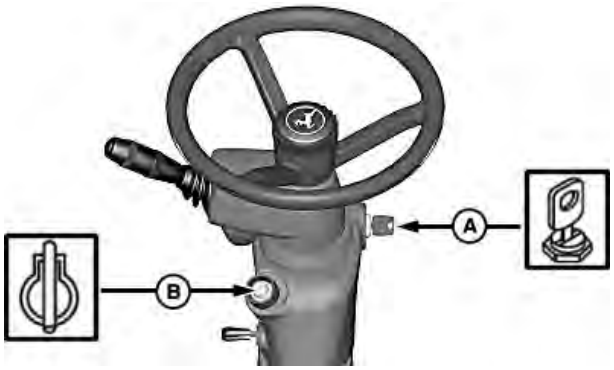
Starting aid only works in ”Run” or ”Start” positions.

Turn key switch (A) to start engine. As soon as engine starts to turn over, press starting aid button (B).

As soon as engine starts, release key, and starting aid button.

If temperature is below -5 °C (23 °F), hold starting aid button down for two to three seconds after engine starts. Repeat procedure until engine runs without faltering.

IMPORTANT: To assure proper lubrication, operate engine at low speed, with no load for one to two minutes. Extend this period to two to four minutes when operating at temperatures below freezing.



H96387 —UN—02NOV10

A—Key Switch **B—Starting Aid Button**

Continued on next page

OUCC002,00041DE -19-29OCT14-3/5

Coolant Heater

CAUTION: To avoid electrical shock, always use a 3-wire, heavy duty electrical cord, and be sure that it is properly grounded.

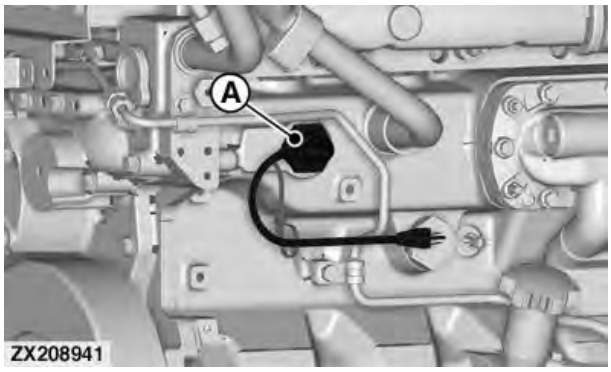
Before connecting coolant heater to power source, be sure that element is immersed in coolant. NEVER energize heater in air. Doing so can cause element sheath to burst causing personal injury.

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

NOTE: In extremely cold weather, it may take 1—2 hours to heat engine. Coolant heater (A) has a 1000 watt heating element.

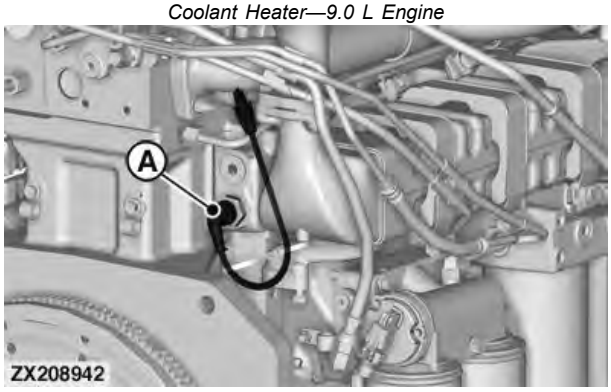
A—Coolant Heater

TS210 —UN—23AUG88



ZX208941 —UN—31DEC13

Coolant Heater—9.0 L Engine



ZX208942 —UN—31DEC13

Coolant Heater—13.5 L Engine

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OUCC002,00041DE -19-29OCT14-4/5

Stopping the Engine

1. Lower header completely to ground.
2. Move multi-function lever (A) to neutral position (B) and press low idle button (C).
3. Shut OFF main clutch 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.

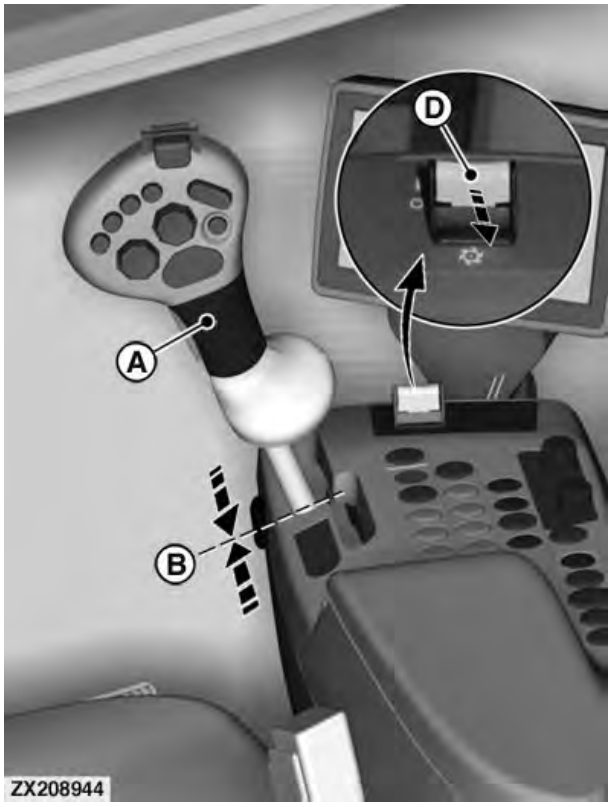
If an Exhaust Filter Cleaning has just been performed, increase engine idle time to 4 minutes.

4. Before stopping an engine that was operating at working load, idle engine two—three minutes to allow turbocharger to cool.

⚠ CAUTION: Press park brake button (E) to set park brake and remove key (F) before leaving machine.

5. Turn key switch OFF.

A—Multi-Function Lever
B—Neutral Position
C—Low Idle Button
D—Main Clutch Switch
E—Park Brake Button
F—Key Switch



ZX208944 —UN—31DEC13

ZX208945 —UN—03MAR14

ZX208946 —UN—31DEC13

OUCC002,00041DE -19-29OCT14-5/5

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.

Change Starting Fluid Cans

Pressurized cans (A) of starting fluid are available from your John Deere dealer.

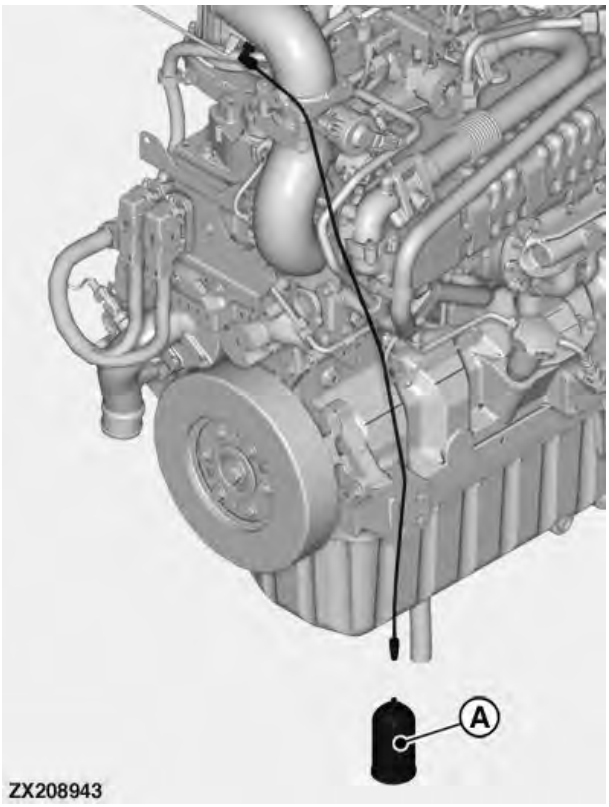
Remove safety cap and plastic spray nozzle from new can (A).

Loosen canister to remove old can.

Install new can and tighten canister.

IMPORTANT: To avoid drawing dust into engine, always keep a starting fluid can in position, or clean bottom of canister and install bottom side up.

A—Starting Fluid Can

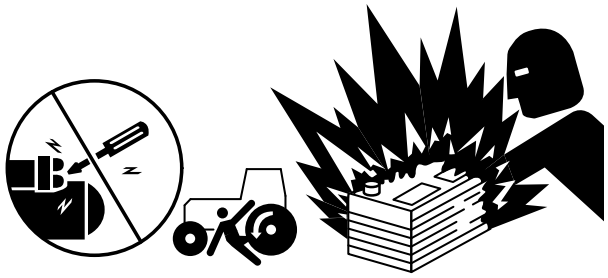


ZX208943 —UN—31DEC13

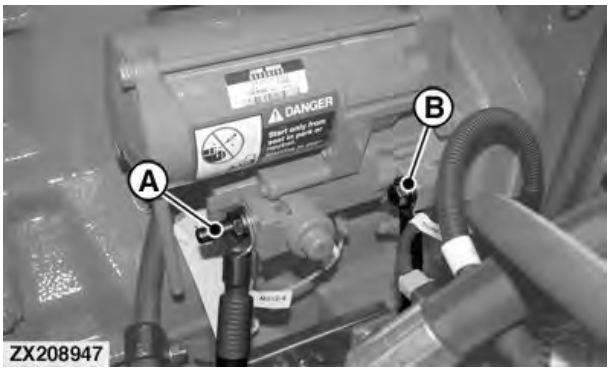
Starting Fluid Can—9.0 L Engine Shown

OUCC002,0003F1B -19-30DEC13-1/1

Start the Engine With a Battery Booster or Charger (8100—8600 Only)



RXA0086722 —UN—10FEB06



ZX208947 —UN—02JAN14

A—Positive Terminal **B—Ground**

⚠ CAUTION: Gas given off by batteries is explosive. Keep sparks and flames away from batteries. Make last connection and first disconnection at point away from booster batteries.

IMPORTANT: Be sure that polarity is correct before making connections. Reversed polarity will damage electrical system or possibly cause battery to explode.

If two or more booster batteries are used, they must be connected in parallel ensuring that booster batteries are producing 12 volt charge.

Avoid possible injury or death from machine runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.

Booster Battery

1. Attach red cable to remote positive terminal (A) of starter and positive terminal of booster battery.
2. Attach black cable to negative terminal of booster battery. Attach other end to ground (B) on machine frame.
3. Remove ground cable first when disconnecting.

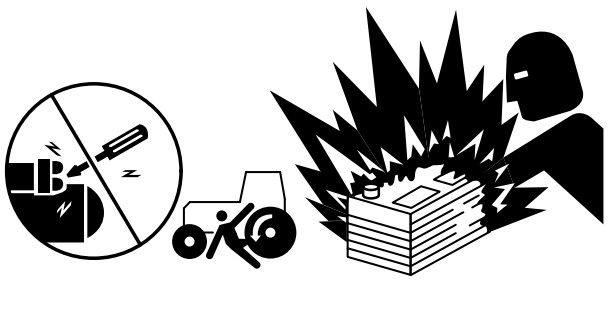
Battery Charger

IMPORTANT: Set battery charger at nominal 12 volt and no more than 16 volt maximum.

1. Attach positive charger lead to positive remote terminal with charger in OFF position. Attach negative charger lead to ground on machine frame, away from batteries.
2. Switch charger to ON and charge battery according to charger manufacturers instructions.
3. Switch charger to OFF. Remove negative charger lead first, then positive lead.

OUCC002,00046D2 -19-07SEP15-1/1

Start the Engine With a Battery Booster or Charger (8700 and 8800 Only)



RXA0086722 —UN—10FEB06

CAUTION: Gas given off by batteries is explosive. Keep sparks and flames away from batteries. Make last connection and first disconnection at point away from booster batteries.

IMPORTANT: Be sure that polarity is correct before making connections. Reversed polarity will damage electrical system or possibly cause battery to explode.

If two booster batteries are used, they must be connected in series ensuring that booster batteries are producing 24 volt charge. Do not connect a 24 volt booster battery on a 12 volt battery.

Avoid possible injury or death from machine runaway.

Do not start engine by shorting across starter terminals. Machine will start in gear if normal circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat, with transmission in neutral or park.

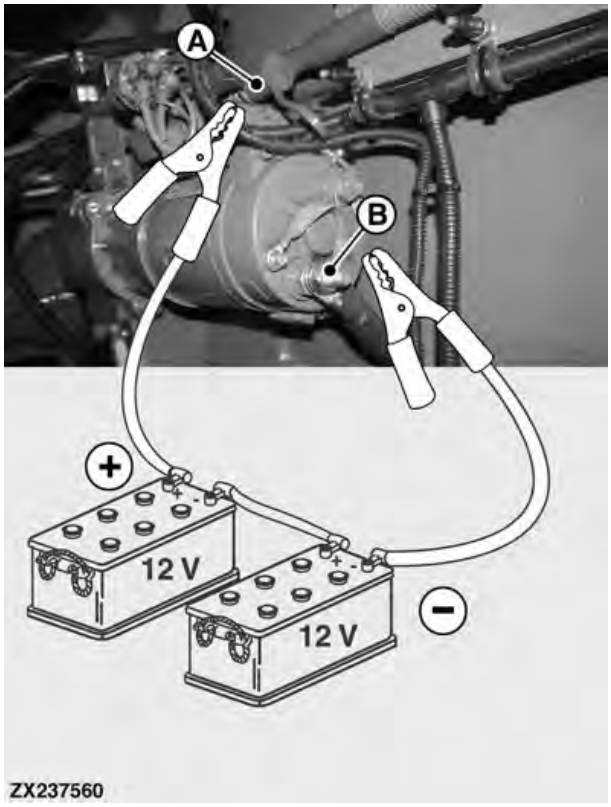
Booster Battery

1. Attach red cable to remote positive terminal (A) of starter and positive terminal of booster battery.
2. Attach black cable to negative terminal of booster battery. Attach other end to ground (B) on machine frame.
3. Remove ground cable first when disconnecting.

Battery Charger

IMPORTANT: Set battery charger at nominal 12 volt and no more than 16 volt maximum.

1. Attach positive charger lead to positive remote terminal with charger in OFF position. Attach negative charger lead to ground on machine frame, away from batteries.
2. Switch charger to ON and charge battery according to charger manufacturers instructions.



ZX237560 —UN—23MAR15

A—Positive Terminal **B—Ground**

3. Switch charger to OFF. Remove negative charger lead first, then positive lead.

OUCC002,00044EB -19-23MAR15-1/1

Disconnect the Battery on Engines with Diesel Exhaust Fluid (DEF)

IMPORTANT: Do not disconnect battery for at least 4 minutes after engine stops. The exhaust cleaning system automatically purges lines of Diesel Exhaust Fluid (DEF) during this time, immediately after engine is stopped. If adequate time is not allowed for lines to be purged, any DEF remaining in lines can crystallize and plug lines. In freezing weather, DEF will freeze and possibly burst lines.

OUCC002,00041DC -19-29OCT14-1/1

Battery Disconnect Switch

CAUTION: Never turn power off on the battery disconnect switch while the engine is running. This could result in serious damage to the machine's electrical components.

IMPORTANT: During a long storage period, always turn battery disconnect switch to OFF position. The battery could lose power if the battery disconnect switch is left ON.

ZX214861 —UN—06OCT14

Open Battery Box Cover

OUCC002,00046D3 -19-07SEP15-1/3

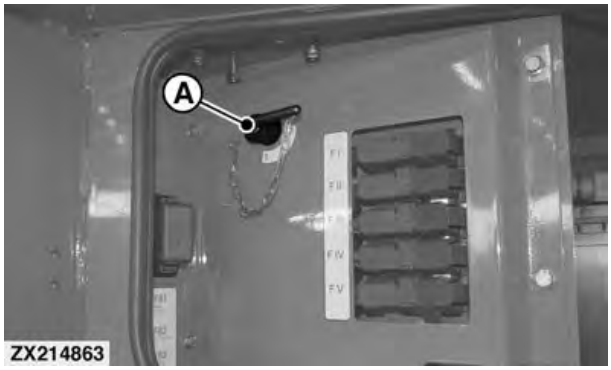
8100—8600:

With battery disconnect switch lever in "OFF" position (A) the battery is electronically disconnected from the machine and the entire electrical and electronic system of the machine is disabled.

Turn battery disconnect switch lever to "ON" position (B) to activate the electrical and electronic system of the machine.

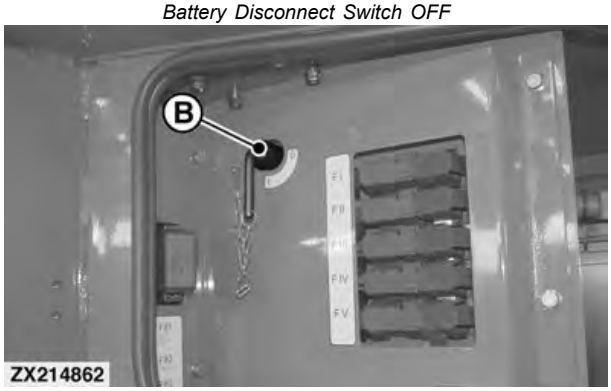
A—Battery Disconnect Switch Lever "OFF"

B—Battery Disconnect Switch Lever "ON"



ZX214863 —UN—06OCT14

Battery Disconnect Switch OFF



ZX214862 —UN—06OCT14

Battery Disconnect Switch ON

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OUCC002,00046D3 -19-07SEP15-2/3

8700 and 8800:

With battery disconnect switch lever in “OFF” position (A) the battery is electronically disconnected from the machine and the entire electrical and electronic system of the machine is disabled.

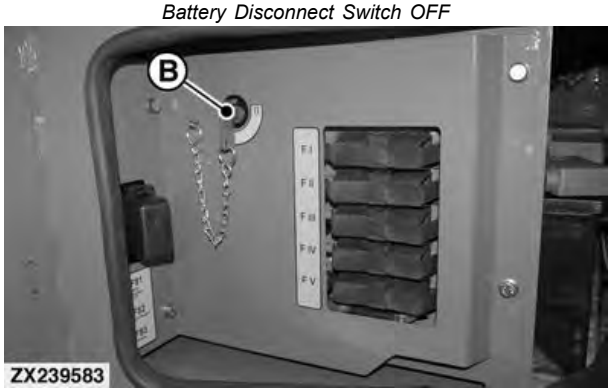
Turn battery disconnect switch lever to “ON” position (B) to activate the electrical and electronic system of the machine.

A—Battery Disconnect Switch Lever “OFF”

B—Battery Disconnect Switch Lever “ON”

ZX239582 —UN—23MAR15

Battery Disconnect Switch OFF



ZX239583 —UN—23MAR15

Battery Disconnect Switch ON

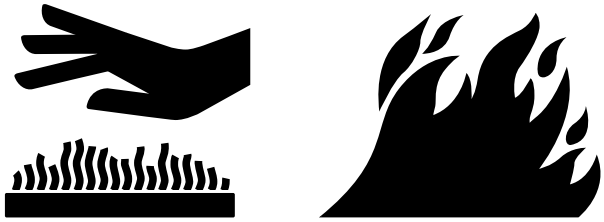
OUCC002,00046D3 -19-07SEP15-3/3

Operate the Exhaust Cleaning System

Exhaust Filter Cleaning

Servicing machine or attachments during 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 will 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.



RG17488 —UN—21AUG09

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OUCC002,00041DD -19-29OCT14-1/5

Exhaust Cleaning System Overview

The machine is equipped with an emission compliant engine which cleans and filters the exhaust. Under normal machine operation and with system in AUTO mode, the system requires minimal operator interaction.

To avoid unnecessary buildup of diesel particulates or soot in the exhaust filter system;

- Utilize AUTO Exhaust Filter Cleaning mode
- Avoid unnecessary idling
- Use proper engine oil. See **Lubrication and Maintenance** section for specifications.
- Use only ultra low sulfur fuel. See **Lubrication and Maintenance** section for specifications.

Touch or press engine settings page button.

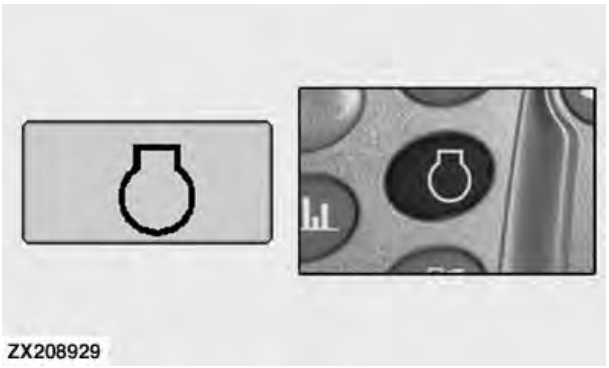
There are two exhaust filter system modes:

- Auto (A)
- Disable (B)

IMPORTANT: Disable mode should ONLY be used when temporarily connected to an indoor exhaust system for diagnostic and repair activities.

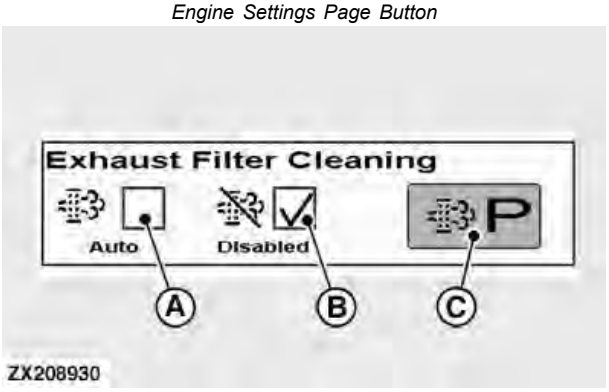
NOTE: Parked exhaust filter cleaning button (C) may be active or inactive (grayed out) depending on exhaust filter restriction level. See Parked Exhaust Filter Cleaning in this section.

System defaults to AUTO mode when parked exhaust filter cleaning is complete or key switch is cycled. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See When to Disable Exhaust Cleaning System in this section.



ZX208929 —UN—31DEC13

Engine Settings Page Button



ZX208930 —UN—31DEC13

A—AUTO Exhaust Filter Cleaning Mode
B—Disable Exhaust Filter Cleaning Mode
C—Parked Exhaust Filter Cleaning Button

Continued on next page

OUCC002,00041DD -19-29OCT14-2/5

Exhaust Filter AUTO Mode

Auto mode allows the Exhaust Filter System to intelligently perform exhaust filter cleaning as required. Exhaust Filter Cleaning Indicator (A) illuminates when exhaust filter system is actively performing exhaust filter cleaning.

IMPORTANT: Service cleaning is required when Diagnostic Trouble Code ECU 003719.13 is generated. Contact your John Deere dealer.

When to Disable Exhaust Cleaning System

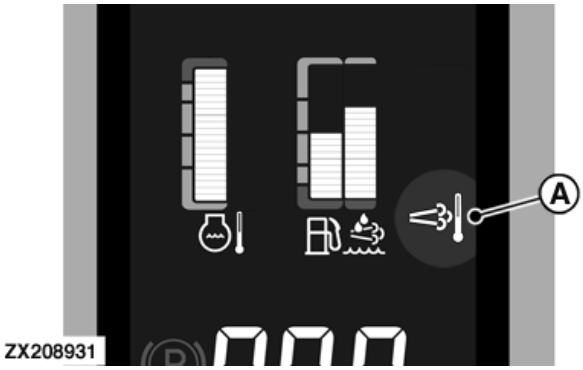
IMPORTANT: Disable the automatic exhaust filter cleaning system only when necessary.

CAUTION: 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.

Such as:

- Indoors or under a roof unless a high temperature externally vented exhaust system is connected.



ZX208931 —UN—31DEC13

A—Exhaust Filter Cleaning Indicator

- When there is not enough time available for the machine to complete a cleaning cycle before it is shut down.
- High crop dust or chaff conditions.
- Next to a fueling area.

Continued on next page

OUCC002,00041DD -19-29OCT14-3/5

Parked Exhaust Filter Cleaning

Parked Exhaust Filter Cleaning is an automated process which allows the system to clean the exhaust filter when required. During the process the engine speed will be controlled by the system and the machine must remain parked to complete the procedure. Time required for the Parked Exhaust Filter Cleaning process is dependent upon the level of exhaust filter restriction, ambient temperatures and current exhaust gas temperature. Display will provide estimated time to completion.

Follow instructions shown on display to complete the Parked Exhaust Filter Cleaning process.

NOTE: Parked Exhaust Filter Cleaning may exceed 40 minutes.

Prior to initiating the Parked Exhaust Filter Cleaning process:

- Position machine outdoors
- Engage park brake
- Disengage all drives
- Set engine speed to low idle
- Object detection sensor on rear composite panel MUST be clear and far enough away from objects

Touch or press engine settings page button.

Touch or press confirm switch when parked exhaust filter cleaning button (A) is highlighted. Parked Filter Cleaning Step 1 appears.

- To start procedure, touch or press confirm switch when next page button (C) is highlighted.
- To cancel procedure, touch or press confirm switch when cancel button (B) is highlighted.

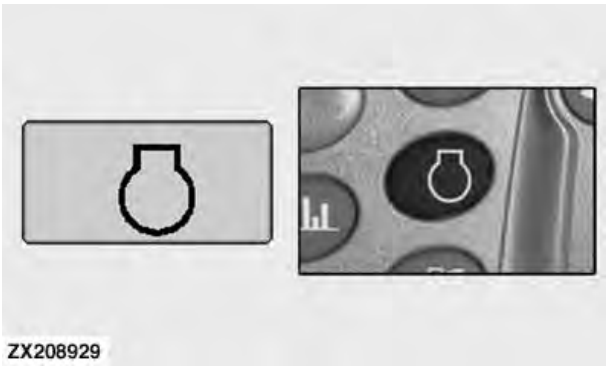
Follow instructions shown on remaining screens.

IMPORTANT: Engine speed is controlled by the machine during filter cleaning.

1. Prepare vehicle for parked exhaust filter cleaning:
   a. Stop vehicle
   b. Engage park
   c. Set engine speed to low idle
   d. Disengage main clutch

NOTE: Procedure starts when all above conditions are met only.

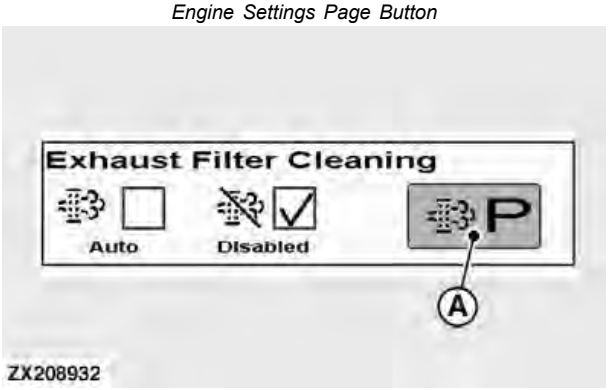
A—Parked Exhaust Filter Cleaning Button
B—Cancel Button
C—Next Page Button



ZX208929

ZX208929 —UN—31DEC13

Engine Settings Page Button



ZX208932

ZX208932 —UN—31DEC13

ZX208933

ZX208933 —UN—31DEC13

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OUCC002,00041DD -19-29OCT14-4/5

2. Once process is started a status screen appears.

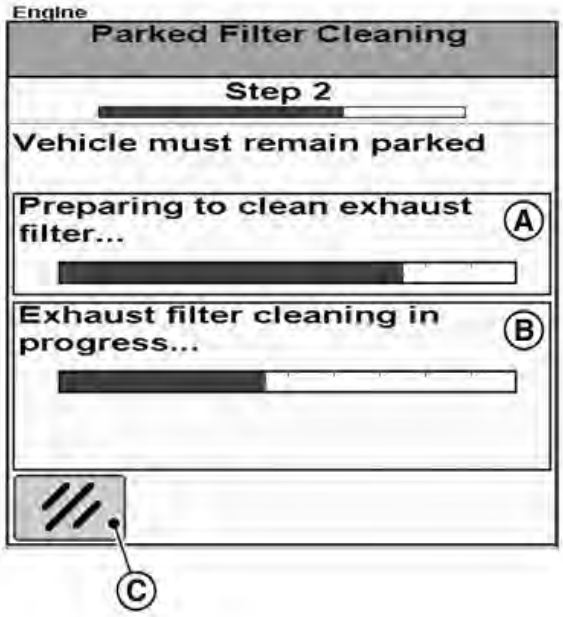
   There are two steps in the Parked Filter Cleaning process, preparation (A) and cleaning (B). During the preparation step, the Exhaust Filter System controls engine speed to increase exhaust temperature. During the cleaning step, diesel particulates or soot is cleaned from the Exhaust Filter System.

NOTE: At any time during the parked procedure, the process can be canceled by pressing cancel button (C), advancing the throttle, engaging transmission, or stopping engine.

   System defaults to AUTO mode when parked exhaust filter cleaning is complete. Always verify that AUTO mode is selected, unless in conditions where it may be unsafe. See **When to Disable Exhaust Cleaning System** in this section.

3. System informs operator when Parked Filter Cleaning is complete. If you are not returning the machine to service immediately after procedure, allow engine time to return to normal operating temperature before stopping engine.

   Once process is complete, press enter button (D) to go back to Engine Settings Page.



ZX208934

ZX208934 —UN—31DEC13

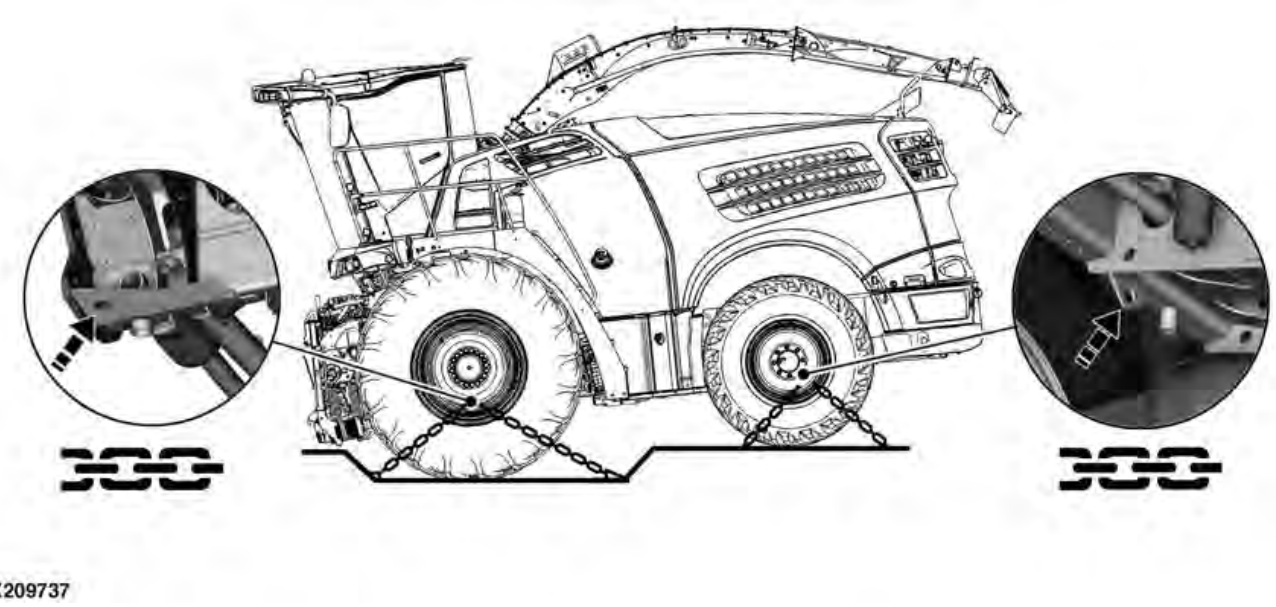
A—Preparation
B—Cleaning
C—Cancel Button
D—Enter Button

ZX208935

ZX208935 —UN—31DEC13

OUCC002,00041DD -19-29OCT14-5/5

Transport Information



Tie-down Points

CAUTION: To avoid contact with electrical cables and electrical shock, no portion of the machine should exceed 4 m (13 ft).

CAUTION: 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 vehicle operators.

IMPORTANT: If transporting machine on a low-bed truck, cover exhaust to prevent turbocharger from rotating.

NOTE: Use safety chain to secure side covers (both sides) during transport.

During transport on a low-bed truck, use tie-down points on the frame to secure the machine during transport (see illustration).

OUCC002,0004239 -19-17DEC14-1/1

Ballast the Machine

IMPORTANT: Proper ballasting will keep efficiency of the four-wheel drive system and steering function when braking.

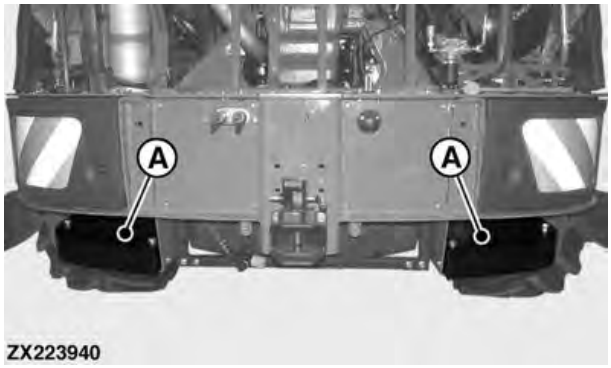
IMPORTANT: For road transport, the rotary harvesting unit 375+, 390+, and 475/475+ are only allowed on machine with support wheel. See supplementary Operator's Manual for support wheel F300 or F400.

IMPORTANT: Always put same amount of weight plates (A) inside left and right hand weight carrier.

IMPORTANT: Do not overload rear tires, especially when header is removed.

IMPORTANT: Special field conditions may require higher ballasting to keep efficiency of the four-wheel drive system and steering function.

Depending on machine/header type configurations, ballasting differs. To properly ballast the machine, ALWAYS refer to the relevant ballasting chart, then install required amount of weight plates (A).



ZX223940 —UN—30OCT14

A—Weight Plates

NOTE: Weight of one plate (A) = 30 kg (66 lb).

Road Transport Ballasting Chart

⚠ CAUTION: Always refer to the following ballasting chart for road transport.

Ballasting Chart—Road Transport—Mandatory				
Harvesting Unit	**8100, 8200 (# of weight plates on each side)**	**8300—8500 (# of weight plates on each side)**	**8600—8800 (# of weight plates on each side)**	**Support wheel F300/F400**
639 Pickup	0	0	0	No
649 Pickup	0	0	0	No
659 Pickup	0	0	0	No
445+ RHU	12	NR	NR	No
460+ RHU	19	19	19	No
475/475+ RHU	NA	10	10	Mandatory
345+ RHU	12	NR	NR	No
360+ RHU	19	19	19	No
375+ RHU	NA	10	10	Mandatory
390+ RHU	NA	NA	12	Mandatory

RHU: Rotary Harvesting Unit

NR: Not Recommended

NA: Not Applicable

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OUCC002,00046D4 -19-07SEP15-1/3

Attach Weight Plates

1. Remove locking screw (A) then open weight carrier cover (B).
2. Stack up the quantity of weight plates (C) required for one side of the machine on a pallet (D) and two wooden blocks (E) as shown.

NOTE: The arrow indicates the direction of travel. Illustration shows weight plates to be installed on the left-hand side of the machine.

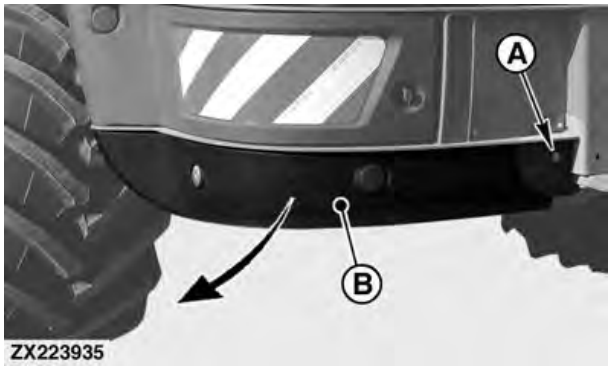
NOTE: Place wooden blocks (E) in such a way they will not interfere with weight carrier when inserting plates.

3. Make sure all plates are aligned.

NOTE: Use weight plates fixing screws to help in plate alignment.

4. Using adequate lifting device, center the weight plates (C) with the weight carrier (F).
5. Insert weight plates (C) in weight carrier (F) until they bottom.

A—Locking Screw
B—Cover
C—Weight Plates
D—Pallet
E—Wooden Block
F—Weight Carrier



ZX223935

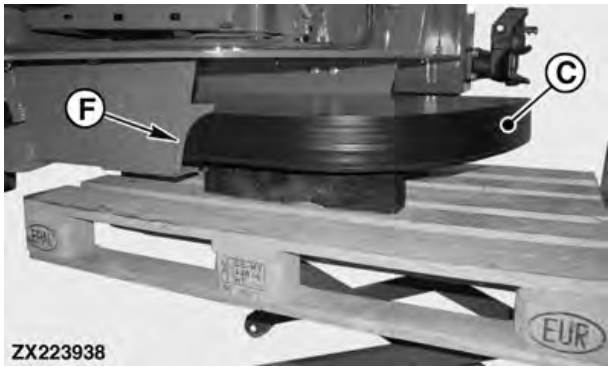
ZX223935 —UN—30OCT14

ZX223936

ZX223936 —UN—30OCT14

ZX223937

ZX223937 —UN—30OCT14



ZX223938

ZX223938 —UN—30OCT14

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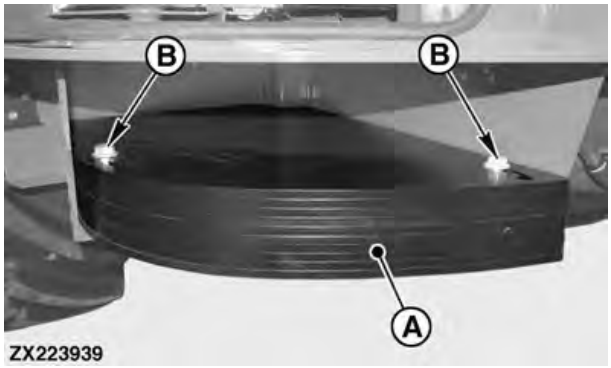
6. Secure the weight plates (A) using relevant attaching screws (B). Screws (B) are stored in the tool box compartment (C).

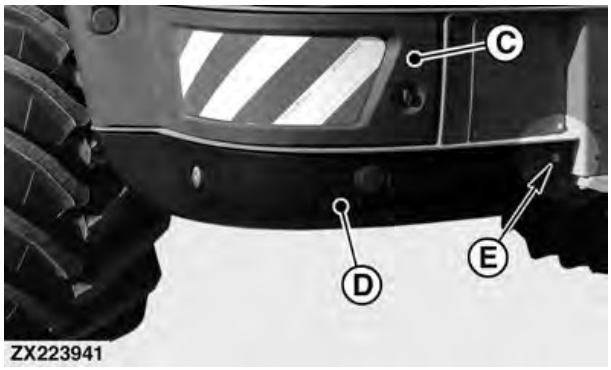
NOTE: See Tool Box Compartment in Lubrication and Maintenance section.

7. Repeat procedure on the other side of the machine.

A—Weight Plates
B—Attaching Screw
C—Tool Box Compartment



ZX223939 —UN—30OCT14



ZX223941 —UN—30OCT14

ZX223942 —UN—30OCT14

OUCC002,00046D4 -19-07SEP15-3/3

Lateral Tilt Frame Locking Device

Depending on the header attached on the machine, the lateral tilt frame (A) must be locked or unlocked BEFORE attaching the header:

- On machine WITHOUT Advanced Header Control (AHC) option, lock the lateral tilt frame (A) before attaching all header type on machine.
- On machine WITH Advanced Header Control (AHC) option, disconnect the hydraulic cylinder AND lock the lateral tilt frame (A) before attaching a pickup, a ProfiCut or a Rotary Harvesting Unit without height sensors.
- On machine WITH Advanced Header Control (AHC) option, unlock the lateral tilt frame (A) AND connect the hydraulic cylinder before attaching a Rotary Harvesting Unit with height sensors.

Machine With Advanced Header Control Option

To lock the lateral tilt frame (A) in vertical position, proceed as follows:

1. Remove hydraulic cylinder (B) pin (C) from lateral tilt frame (A).

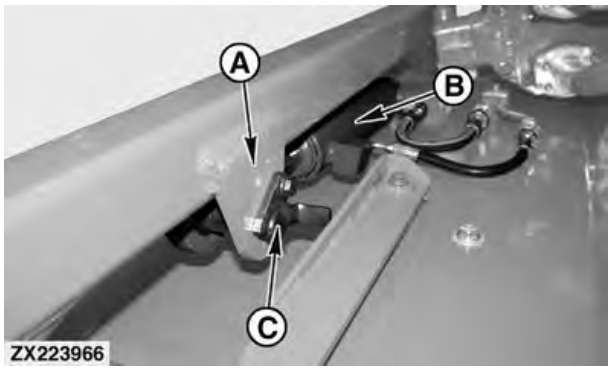
NOTE: Store pin (C) and fixing screw in tool box compartment.

2. Let the hydraulic cylinder (B) rest on the feed roll housing.
3. Unhook locking device handle (D) from the unlock position (E) and slide it as shown.
4. Pivot lateral tilt frame (A) by hand so that the locking pin (F) is engaged into lateral tilt frame groove (G) as shown. Lateral tilt frame (A) is locked.

IMPORTANT: Before attaching header to the machine, check that locking pin (F) is fully engaged into groove (G).

A—Lateral Tilt Frame
B—Hydraulic Cylinder
C—Pin
D—Handle
E—Unlock Position Hook
F—Locking Pin
G—Groove

ZX223965 —UN—01NOV14



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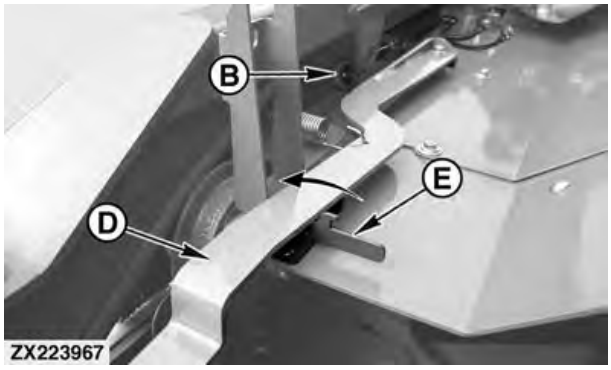
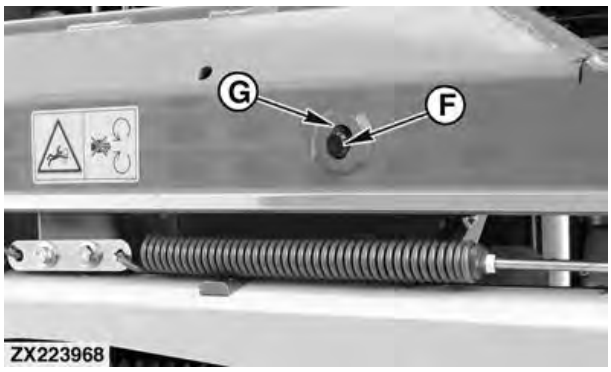


ZX223967 —UN—01NOV14



ZX223968 —UN—01NOV14

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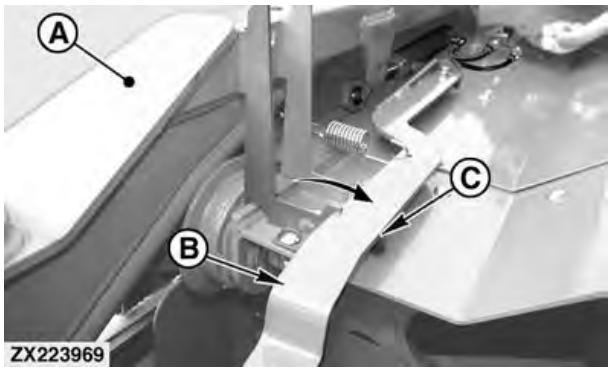
OUCC002,00041EC -19-07NOV14-1/4

5. To unlock the lateral tilt frame (A), place handle (B) back in unlock position (C) then attach hydraulic cylinder (D) back on lateral tilt frame (A) with pin (E) as shown. Lateral tilt frame (A) can be controlled by the Advanced Header Control system.

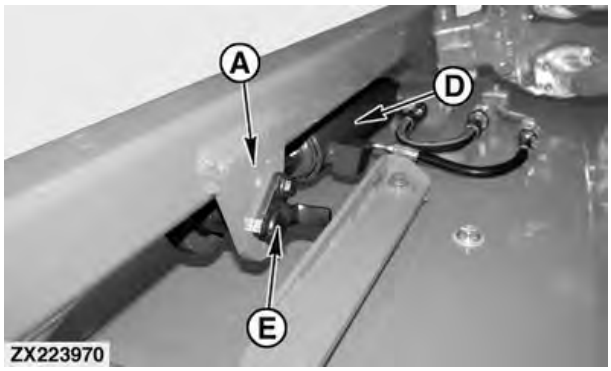
IMPORTANT: Make sure that locking pin is fully disengaged from lateral tilt frame groove (F).

A—Lateral Tilt Frame
B—Handle
C—Unlock Position Hook
D—Hydraulic Cylinder
E—Pin
F—Groove

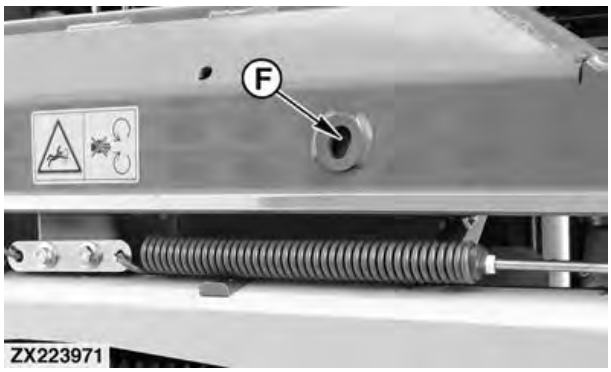
ZX223965 —UN—01NOV14



ZX223969 —UN—01NOV14



ZX223970 —UN—01NOV14



ZX223971 —UN—01NOV14

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OUCC002,00041EC -19-07NOV14-2/4

Machine Without Advanced Header Control Option

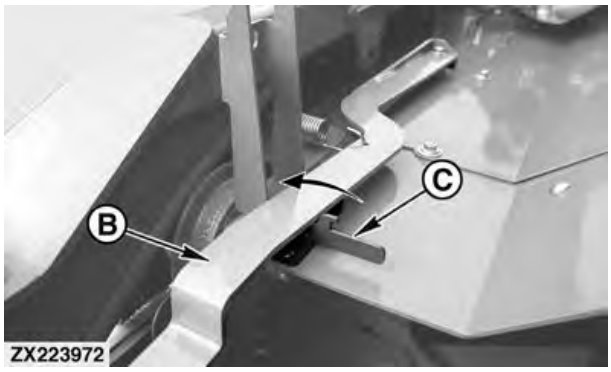
To lock the lateral tilt frame (A) in vertical position, proceed as follows:

1. Unhook locking device handle (B) from the unlock position (C) and slide it as shown.
2. Pivot lateral tilt frame (A) by hand so that the locking pin (D) is engaged into lateral tilt frame groove (E) as shown. Lateral tilt frame (A) is locked.

IMPORTANT: Before attaching header to the machine, check that locking pin (D) is fully engaged into groove (E).

A—Lateral Tilt Frame
B—Handle
C—Unlock Position Hook
D—Locking Pin
E—Groove

ZX223965 —UN—01NOV14



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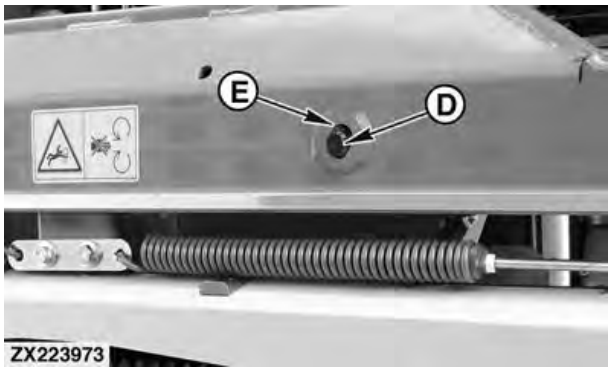

ZX223973 —UN—01NOV14

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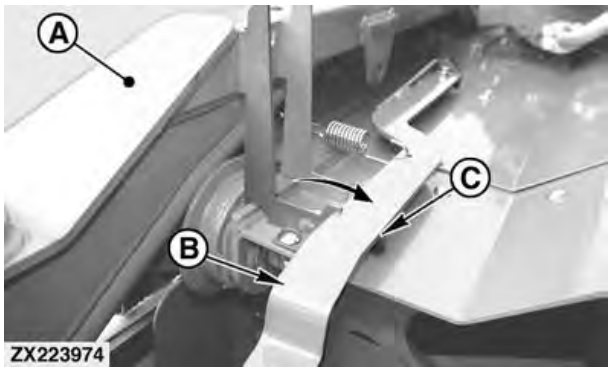
OUCC002,00041EC -19-07NOV14-3/4

3. To unlock the lateral tilt frame (A), place handle (B) back in unlock position (C). Lateral tilt frame (A) moves freely.

IMPORTANT: Make sure that locking pin is fully disengaged from lateral tilt frame groove (D).

A—Lateral Tilt Frame
B—Handle
C—Unlock Position Hook
D—Groove

ZX223965 —UN—01NOV14



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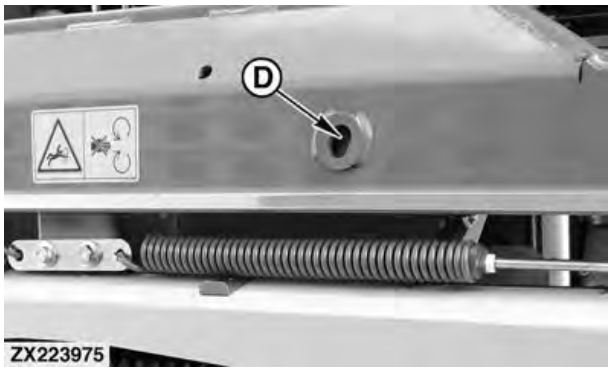

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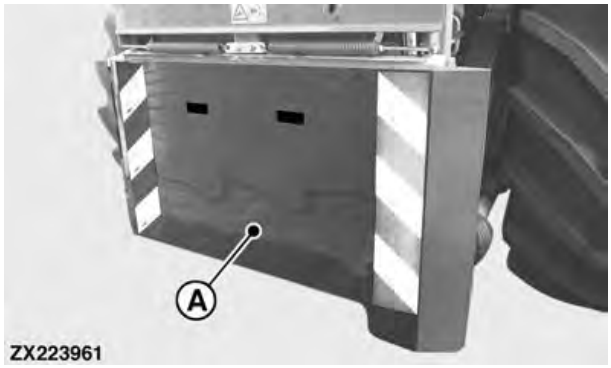
Machine Road Transport Guard (Germany and Italy Only)

Guard (A) must be installed when machine is driven on public road without header attached.

Make sure that guard (A) is correctly installed before driving the machine on the road. Proceed as follows:

1. Engage top of guard on hooks (B).
2. Remove quick-lock pin (C) then pull down the handle (D) so that latching hooks (E) are fully retracted.
3. Pull up the handle (D) and check that rods (F) of guard (A) are engaged in latching hooks (E) as shown.
4. Secure handle (D) with quick-lock pin (C).

A—Guard
B—Hook
C—Quick-lock Pin
D—Handle
E—Latching Hook
F—Rod



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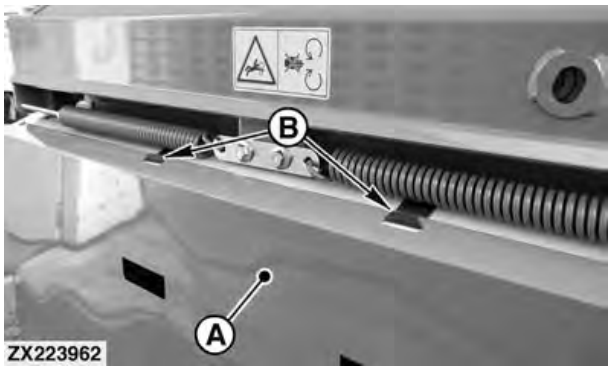

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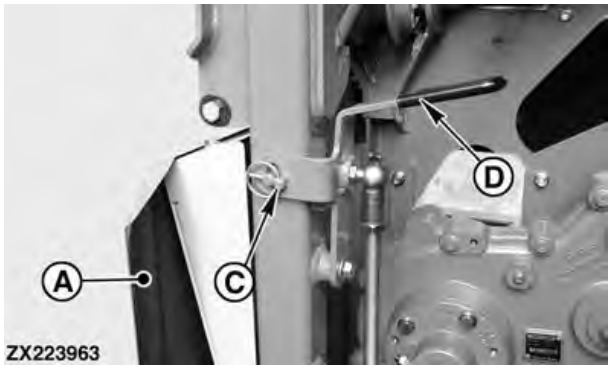

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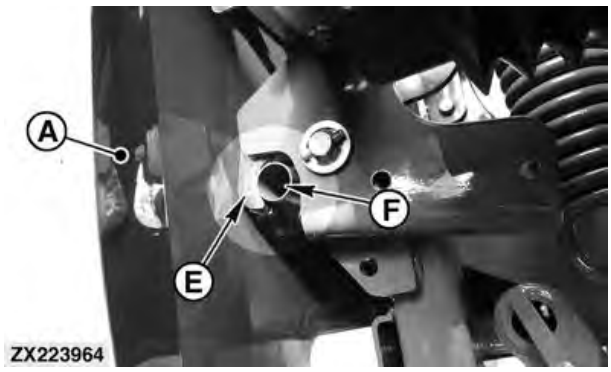

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Machine Road Transport Deflectors

All deflectors (A) must be placed to transport position (1) when machine is driven on public road.

- Fold out rear deflectors (A).
- Rotate front deflectors (A) so that they are oriented frontward, as shown.
- On machine with a 12-row spout extension, ensure that when spout extension is folded in and that deflector (A) is automatically folded out to transport position (1) when machine is driven on public road.

A—Deflector
1— Transport Position
2— Field Position

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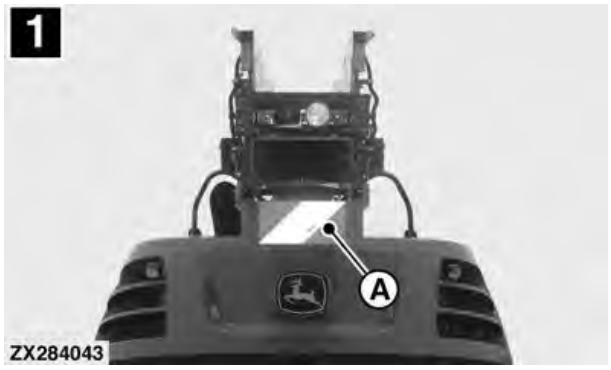
ZX284041 —UN—18JUN16

ZX284042 —UN—18JUN16



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Attach and Detach Header

IMPORTANT: Before attaching to the machine, refer to the Operator's Manual of the header for the correct preparation or adaptation to the machine.

If the header is attached to the machine for the first time, make sure to perform the following calibration procedures:

- SCV Sensor (for Pickup only).

- Header Raise Rate.

- Header Calibration.

See Header Page in Operating the Controls and Displays section.

NOTE: The header must be attached on level ground.

Depending on the header attached on the machine, the lateral tilt frame (A) must be locked or unlocked BEFORE attaching the header (see **Lateral Tilt Frame Locking Device** in this section):

- On machine WITHOUT Advanced Header Control (AHC) option, lock the lateral tilt frame (A) before attaching all header type on machine.
- On machine WITH Advanced Header Control (AHC) option, disconnect the hydraulic cylinder AND lock the lateral tilt frame (A) before attaching a pickup, a ProfiCut or a Rotary Harvesting Unit without height sensors.
- On machine WITH Advanced Header Control (AHC) option, ensure that the lateral tilt frame (A) is unlocked AND the hydraulic cylinder is connected before attaching a Rotary Harvesting Unit with height sensors.

Attach the header to the machine as follows:

1. Set the lateral tilt frame (A) to its vertical position (see **Lateral Tilt Frame Locking Device** in this section).
2. Remove quick-lock pin (B) then lower the handle (C) so that latching hooks (D) are fully retracted (see arrows).
3. Lower cutterhead assembly until engaging lugs (E) are slightly below the header crossbar openings (F).
4. Slowly drive the machine forward until lifting position is reached.

A—Lateral Tilt Frame
B—Quick-Lock Pin
C—Handle
D—Latching Hook
E—Engaging Lug
F—Opening

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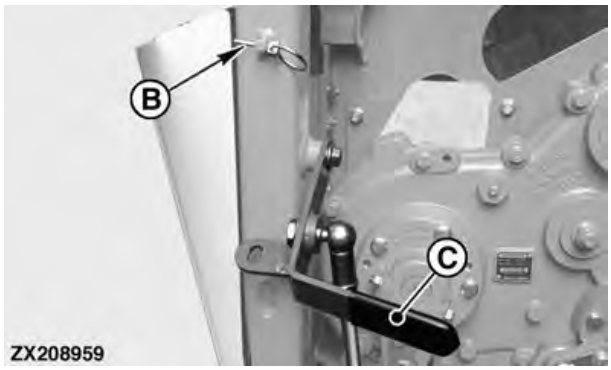

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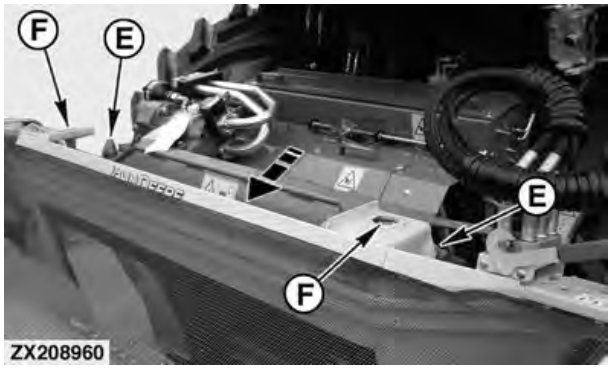

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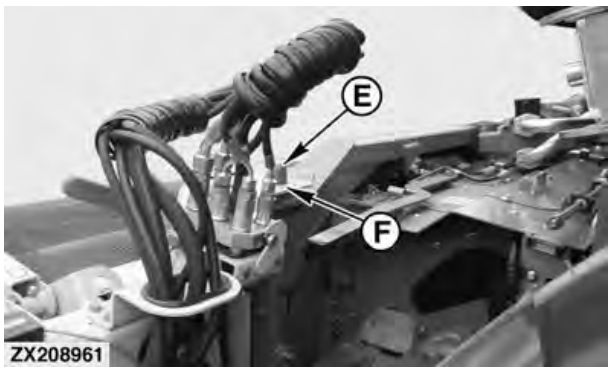

ZX208961 —UN—03NOV14

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5. Raise the cutterhead assembly and lift the header.

IMPORTANT: On both side of the header, check that the lower hinges (A) are correctly aligned and in contact with lateral tilt frame (B). If necessary re-adjust hinge (A) position on the header.

6. Raise handle (C) and secure with quick-lock pin (D) as shown.

IMPORTANT: Check that both lower hooks (E) correctly lock the header hinges (A). Never attempt to operate header with improper hook latch.

A—Hinge
B—Frame
C—Handle
D—Quick-Lock Pin
E—Hook

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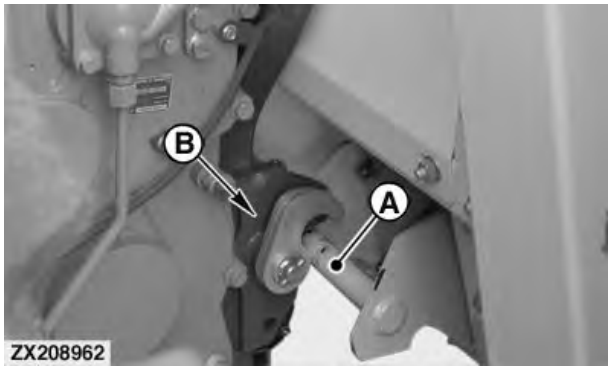

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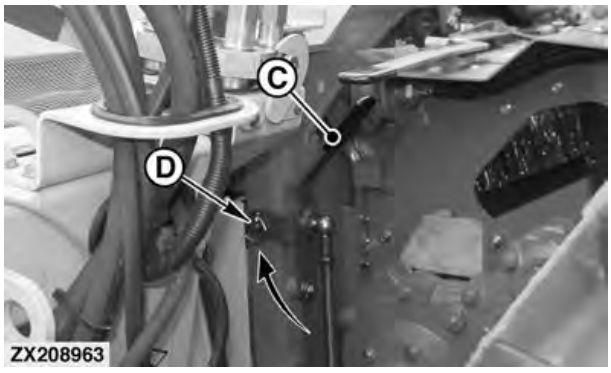

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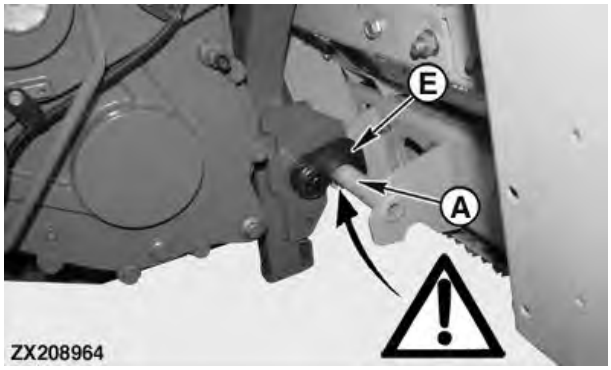

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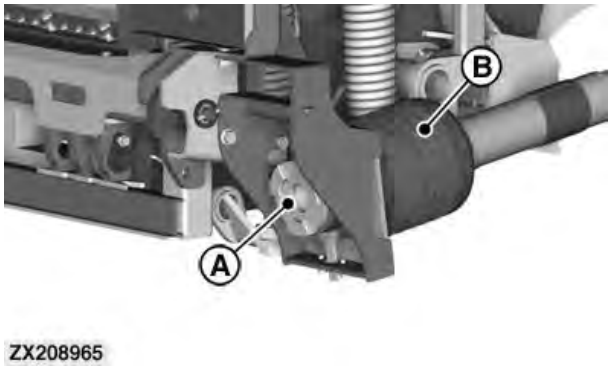
7. **Machines With Automatic Driveline Coupler:**

   Coupler (A) is automatically engaged.

IMPORTANT: Make sure that coupler (A) is correctly engaged. It is recommended to engage and reverse cutterhead briefly to check for proper coupler (A) engagement.

A—Coupler **B—Driveline**



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8. **Machines Without Automatic Driveline Coupler:**

   Remove driveline (A) from holder (B) and engage yoke (C) in header drive shaft (D).

NOTE: Push in locking pin (E) to engage yoke (C).

   Secure driveline (A) shield to cutterhead frame with safety chain (F).

9. At left and right, raise jackstand (G) and secure with spring-loaded pin (H) in upmost position.

10. Connect multicoupler (I) to receptacle (J). Push and hold button lock (K) to close handle (L).

IMPORTANT: When multicoupler handle is fully closed, button lock (K) automatically locks couplers together.

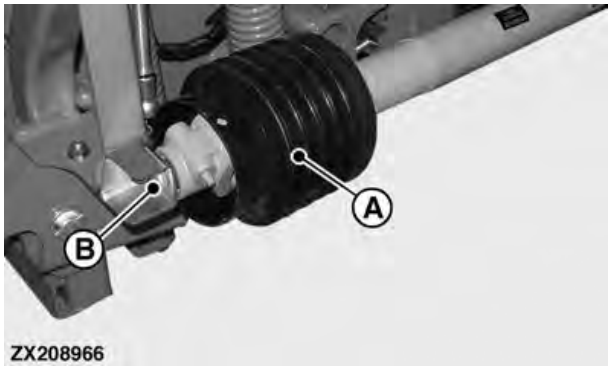
11. Depending on the header attached on the machine, the lateral tilt frame must be locked or unlocked for field operation:

   - On machine WITHOUT Advanced Header Control (AHC) option, unlock the lateral tilt frame before operating any header.
   - On machine WITH Advanced Header Control (AHC) option, the lateral tilt frame must be unlocked AND the hydraulic cylinder kept disconnected for field operation of pickup, ProfiCut or Rotary Harvesting Unit without height sensors.
   - On machine WITH Advanced Header Control (AHC) option, ensure that the lateral tilt frame (A) is kept unlocked AND the hydraulic cylinder connected for field operation of Rotary Harvesting Unit with height sensors.

IMPORTANT: Make sure that the header is set up for the display (see Header Setup Page in Operating the Controls and Displays section).

If a pickup or a rotary harvesting unit without height sensors is attached, adjust lateral tilt frame balance springs accordingly (see Adjust Lateral Tilt Frame Balance Springs in this section).

A—Driveline
B—Holder
C—Yoke
D—Drive Shaft
E—Locking Pin
F—Safety Chain
G—Jackstand
H—Spring-Loaded Pin
I— Multicoupler
J— Receptacle
K—Button Lock
L—Handle



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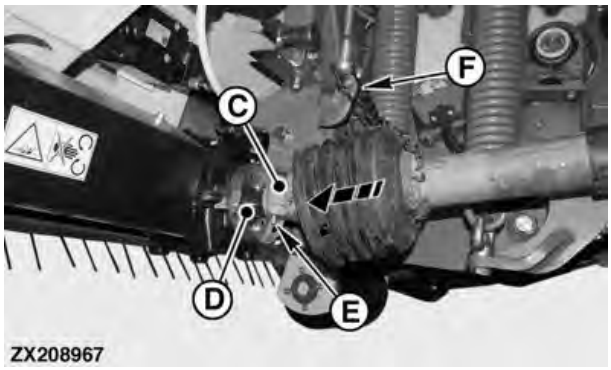

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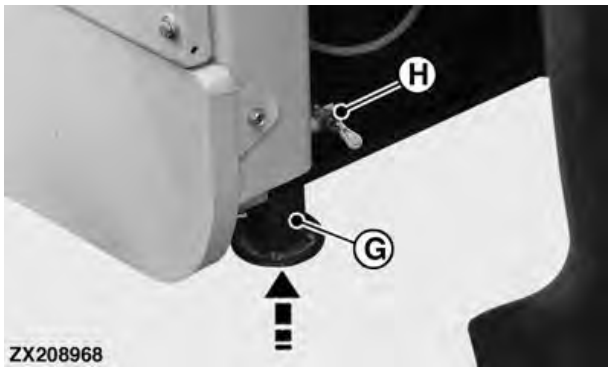

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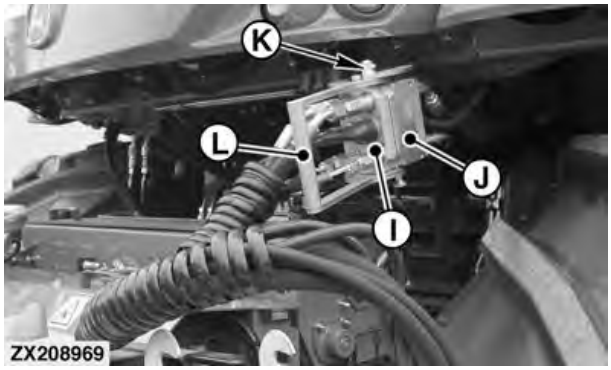

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Detach Header

IMPORTANT: Before detaching the header, make sure that:

- Header is in folded position (if applicable).

- No header hydraulic functions activated.

Proceed as follows:

1. Lower the header (A) to the ground.

IMPORTANT: Leave the header standing at a height that allows the unit to be re-attached to the machine at a later time. Never select a height that is too low.

2. Shut off the engine, remove the key and apply the park brake.
3. Push and hold button lock (B) to unlatch handle (C). Disconnect multicoupler (D) from receptacle (E).

A—Header
B—Button Lock
C—Handle
D—Multicoupler
E—Receptacle

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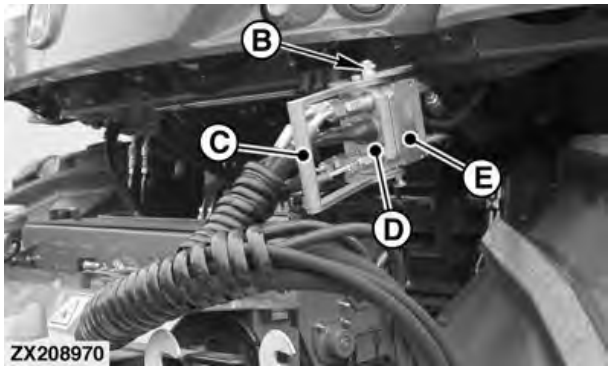

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4. At left and right, lower jackstand (A) and lock at a suitable height. Pull out spring-loaded pin (B) and let it re-engage when the jackstand (A) is at the correct height.
5. **Machines Without Automatic Driveline Coupler Only:**

   Push in lock pin (C) then disengage yoke (D) from header drive shaft (E) to disconnect driveline (F). Store driveline (F) on storage support (G).

IMPORTANT: Make sure driveline (F) is firmly engaged on its storage support (G).

A—Jackstand
B—Spring-Loaded Pin
C—Locking Pin
D—Yoke
E—Drive Shaft
F—Driveline
G—Storage Support

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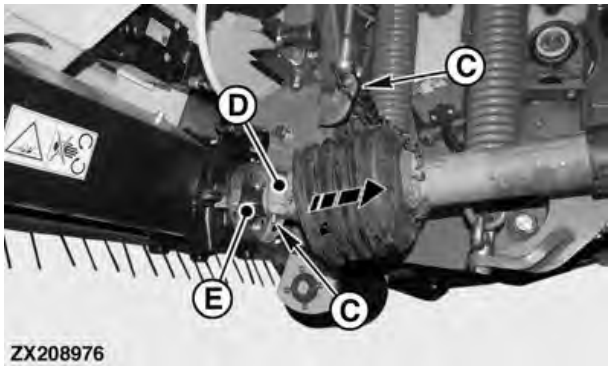

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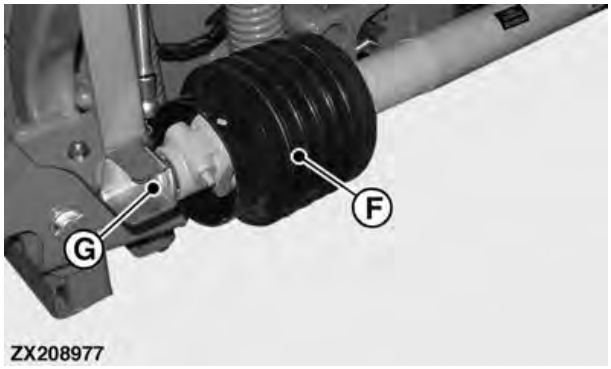

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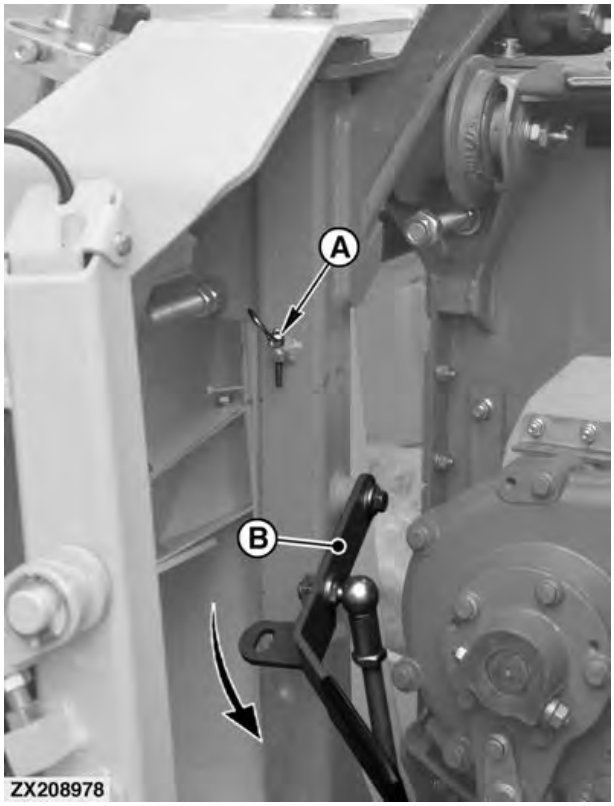
6. Remove quick-lock pin (A) then lower the handle (B) so that latching hooks (C) are fully retracted (disengaged) from header lower hinge (D).
7. Start the engine. Lower cutterhead assembly until engaging lugs (E) are slightly below the header crossbar openings (F) and drive away from the header frame.

A—Quick-Lock Pin
B—Handle
C—Latching Hook
D—Hinge
E—Engaging Lug
F—Opening



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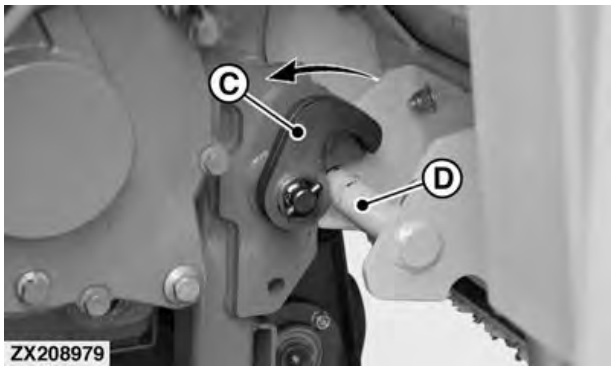

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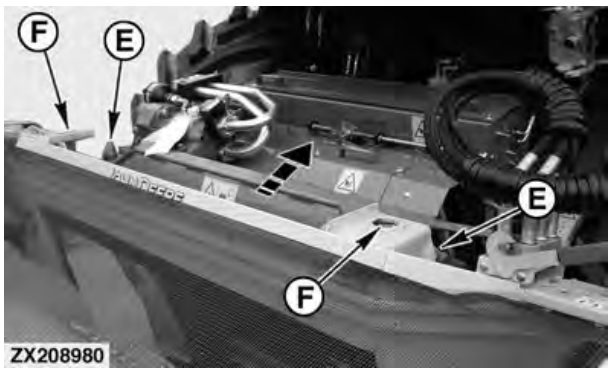

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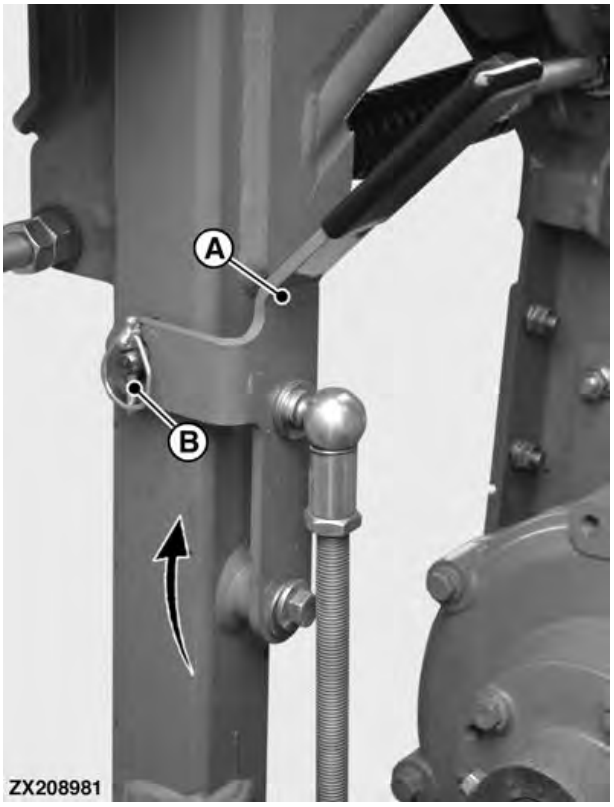
8. Place the handle (A) to its storage position then secure with quick-lock pin (B).

A—Handle **B—Quick-Lock Pin**



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Basic Settings of Machine

For optimum harvesting performance:

1—Properly set or adjust header (refer to the relevant header Operator's Manual).

2—After attaching the header, ballast machine correctly (see **Ballast the Machine** in this section).

3—Make sure that feed roll springs are properly adjusted (see **Adjust Feed Roll Springs** in this section).

4—Make sure that smooth roll scraper adjustment is correct (see **Adjust Smooth Roll Scraper** in this section).

5—Sharpen cutterhead knives, if necessary (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section).

6—Adjust stationary knife after sharpening cutterhead knives (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section).

7—Adjust stationary knife BETWEEN two sharpening procedures to save power and improve quality of cut.

8—Adjust spiral floor or recutter floor (see **Adjust Spiral/Recutter Floor** in this section).

9—Depending on harvested crop, use the right type of kernel processor rolls (see **Kernel Processor Rolls** in this section).

NOTE: Keep the kernel processor roll teeth in good condition to maintain an accelerated material flow.

10—Make sure the blower paddles are correctly adjusted for true running and good flow of material (see **Replace and Adjust Blower Paddles** in Lubrication and Maintenance section).

11—Also refer to **Remove Machine from Storage** in Lubrication and Maintenance section.

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Operate Machine in Grass or Alfalfa Harvest

Use preferably:
- Grass stationary knife (see **Stationary Knife** in this section).
- Straight cutterhead knives (see **Cutterhead Knives** in this section).

Attach and prepare pickup according to header Operator's Manual recommendations (see **Attach and Detach Header** in this section).

No ballast is required when attaching pickup header to the machine (see **Ballast the Machine** in this section).

More tension can be applied to rear feed roll springs in case of uneven windrows (see **Adjust Feed Roll Springs** in this section).

Bars on upper front feed roll can be reversed (smooth side out) for fragile crops (see **Adjust Feed Roll Bars** in this section).

In gummy and sticky grass conditions (high sugar content), it is recommended to adjust the clearance between tip of knives and floor to 2-3 mm (0.08-0.12 in) (see **Adjust Spiral/Recutter Floor** in this section).

If equipped with kernel processor, swing in grass channel between cutterhead and blower fan (see **Operate the Grass Chute** and **Operate the Kernel Processor (Option)** in this section). A stainless steel liner is available for gummy crop conditions.

NOTE: If machine is equipped with grain panels under the feed rolls, remove the lower panel. Rear panel can stay in place (see Grain Panels (Corn) in this section).

To match field conditions, several options can be installed on pickup:

- Compressor roll
  - Hold down windrow and prevent grass from banking in front of the pickup.
  - Guide compression sheet over windrow and enhance crop flow.
- Compression sheet/rake
  - Guide material under feeding auger to enhance crop flow.
  - Rake is available for normal grass application.
  - Sheet is available for alfalfa.
- Feeding auger
  - Paddles are available.
- Gauge wheel
  - Foldable (Hydraulic or manually).

Adjust selective control valves (I or II) according to the pickup options installed.

Fine-Tune Pickup

- Adjust gauge wheels so that tines are 50 mm (1.97 in.) above the ground.
- Adjust gauge wheel tire pressure to 4.5 bars (450 kPa; 65 psi).
- Adjust compressor roll so that it slightly touches the top of the windrow (immersion depth 50—80 mm (1.97—3.15 in.) max).

  NOTE: Adjust compressor roll without crop in pickup.

- In very dry or low volume conditions, lift the rear of compression rake or compression sheet.
- In very wet conditions, lower the rear of compression rake or compression sheet.
- Select header drive Auto mode to adjust speed according to LOC setting (see **Header Speed Page** in Operating the Controls and Displays section).
- With Auxiliary drive option: Pickup drum speed depending on machine ground speed.
- Start the optimization without feeding auger paddles. Fit paddles back if a more aggressive feeding is needed. Standard setup is smooth side out. Serrated side out can lead to backfeed.
  - Low volume windrows = move paddles out (bigger auger diameter).
  - Medium volume windrows = move paddles in.
  - High volume windrows = remove paddles and brackets.

IMPORTANT: Use slow feed auger speeds when harvesting large swaths.

NOTE: The smaller the swath size (for example, during the second or third cut), the faster the feed auger speed can be adjusted.

OUCC002,0004C8E -19-13JUN16-1/1

Operate Machine in Corn (Maize) Harvest

Use preferably:
- Corn stationary knife (see **Stationary Knife** in this section).
- Corn curved cutterhead knives (see **Cutterhead Knives** in this section).

Bars on upper front feed roll can be reversed—serrated side out (see **Adjust Feed Roll Bars** in this section).

Swing in kernel processor if necessary (see **Operate the Kernel Processor (Option)** in this section).

Install grain panels under the feed rolls (see **Grain Panels (Corn)** in this section).

Attach and prepare rotary harvesting unit according to header Operator's Manual recommendations (see **Attach and Detach Header** in this section).

IMPORTANT: Ballast is required when attaching rotary harvesting unit to the machine (see Ballast the Machine in this section).

For road transport, the rotary harvesting unit 375+, 390+, and 475/475+ are only allowed on machine with support wheel. See supplementary Operator's Manual for support wheel F300 or F400.

Make sure to select road transport floating mode on Header Setup Page (see Header Setup Page in Operating the Controls and Displays section).

Fine-Tune Rotary Harvesting Unit

- Select header drive Auto mode to adjust speed according to LOC setting (see **Header Speed Page** in Operating the Controls and Displays section).
- Adjust drum scrapers as close as possible to the drum to prevent plugging.
- Check drum cleaners (sharp edges) frequently to prevent plugging and to reduce power consumption.
- Adjust distance between crop dividers and drum (1—7 mm (0.04—0.31 in.) to prevent plugging in tough harvesting conditions.
- Check stubble scrapers frequently for wear condition.
- Check cutting blades for wear conditions (sharp edges) frequently to reduce power consumption.

OUCC002,0004C8F -19-13JUN16-1/1

Operate Machine in Ear Corn Silage

Use preferably:
- Corn stationary knife (see **Stationary Knife** in this section).
- Corn curved cutterhead knives (see **Cutterhead Knives** in this section).

Swing in kernel processor (see **Operate the Kernel Processor (Option)** in this section).

Install grain panels under the feed rolls (see **Grain Panels (Corn)** in this section).

Adjust feed roll springs to the minimum tension (see **Adjust Feed Roll Springs** in this section).

Install and adjust recutter floor with sharp knives (see **Adjust Spiral/Recutter Floor** in this section).

Install feed roll sealing kit (see **Ear Corn Silage Machine Adaptation** in this section).

Remove lower feed roll paddles (see **Feed Roll Paddles** in this section).

Attach and prepare corn header according to header Operator's Manual recommendations (see **Attach and Detach Header** in this section).

IMPORTANT: Perform the Mass Flow Sensor Zero Distance calibration after ear corn silage adaptation kit installation or removal. Perform the Deck Plate Sensor calibration if the corn head is equipped with adjustable deck plates. Refer to Interactive Calibration Procedures in Lubrication and Maintenance section.

Fine-Tune Corn Header

- Select header drive Auto mode to adjust speed according to LOC setting (see **Header Speed Page** in Operating the Controls and Displays section).

OUCC002,0004C81 -19-10JUN16-1/1

Operate Machine in Whole Plant Silage

Use preferably:
- Corn stationary knife (see **Stationary Knife** in this section).
- Corn curved cutterhead knives (see **Cutterhead Knives** in this section).

Swing in kernel processor (see **Operate the Kernel Processor (Option)** in this section).

Install grain panels under the feed rolls (see **Grain Panels (Corn)** in this section).

Attach and prepare header according to header Operator's Manual recommendations (see **Attach and Detach Header** in this section).

IMPORTANT: Ballast is required when attaching rotary harvesting unit to the machine (see Ballast the Machine in this section).

For road transport, the rotary harvesting unit 375+, 390+, and 475/475+ are only allowed on machine with support wheel. See supplementary Operator's Manual for support wheel F300 or F400.

Make sure to select road transport floating mode on Header Setup Page (see Header Setup Page in Operating the Controls and Displays section).

Fine-Tune Rotary Harvesting Unit

- Select header drive Auto mode to adjust speed according to LOC setting (see **Header Speed Page** in Operating the Controls and Displays section).
  - Set the speed ratio to maximum. If that is still not fast enough, select manual mode and set the header speed manually to its maximum.
- Remove bars and scrapers located on top of drums.
- Remove guides from cross feed drum scrapers on each side of the rotary harvesting unit.
- Adjust drum scrapers as close as possible to the drum to prevent plugging.
- Install guide plates on drums.
- Check drum cleaners (sharp edges) frequently to prevent plugging and to reduce power consumption.
- Adjust distance between crop dividers and drum (1—7 mm (0.04—0.31 in.) to prevent plugging in tough harvesting conditions.
- Check stubble scrapers frequently for wear condition.
- Check cutting blades for wear conditions (sharp edges) frequently to reduce power consumption.

OUCC002,0004201 -19-17DEC14-1/1

Operate Machine in Sorghum (Milo) Harvest

Use preferably:
- Corn stationary knife (see **Stationary Knife** in this section).
- Corn curved cutterhead knives (see **Cutterhead Knives** in this section).

Use kernel processor with milo rolls (see **Kernel Processor Rolls** in this section).

Swing in kernel processor if necessary (see **Operate the Kernel Processor (Option)** in this section).

Install grain panels under the feed rolls (see **Grain Panels (Corn)** in this section).

Attach and prepare rotary harvesting unit according to header Operator's Manual recommendations (see **Attach and Detach Header** in this section).

IMPORTANT: Ballast is required when attaching rotary harvesting unit to the machine (see Ballast the Machine in this section).

For road transport, the rotary harvesting unit 375+, 390+, and 475/475+ are only allowed on machine with support wheel. See supplementary Operator's Manual for support wheel F300 or F400.

Make sure to select road transport floating mode on Header Setup Page (see Header Setup Page in Operating the Controls and Displays section).

Fine-Tune Rotary Harvesting Unit

- Select header drive Auto mode to adjust speed according to LOC setting (see **Header Speed Page** in Operating the Controls and Displays section).
- Adjust drum scrapers as close as possible to the drum to prevent plugging.
- Check drum cleaners (sharp edges) frequently to prevent plugging and to reduce power consumption.
- Adjust distance between crop dividers and drum (1—7 mm (0.04—0.31 in.) to prevent plugging in tough harvesting conditions.
- Check stubble scrapers frequently for wear condition.
- Check cutting blades for wear conditions (sharp edges) frequently to reduce power consumption.

OUCC002,0004202 -19-17DEC14-1/1

Tow the Machine

CAUTION: Always use a suitable tow bar or chain. Do not exceed the breaking strength. Do not mix chain with tow straps or ropes. Energy stored in the towing device could cause serious bodily injury if it should break.

Do not remove couplers. When couplers are removed, brakes are disabled.

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 road users.

Avoid crushing injuries from runaway machine. If machine is on a slope, do not disengage park brake until wheels are blocked.

Releasing the park brake lock must be carried out ONLY for towing purposes! NEVER operate machine with the park brake lock released! ALWAYS set park brake lock back to its initial status when towing is no longer required.

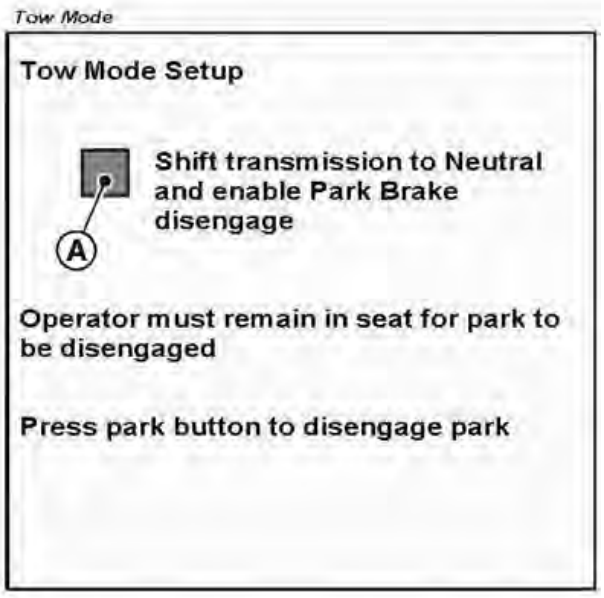
In an emergency, the machine may be towed for up to 10 minutes with a maximum speed of 10 km/h (6.2 mph).

NOTE: The engine must be running when towing the machine. If the engine is not operational, see your John Deere dealer for more information.

Refer to Vehicle Settings Page in Operating the Controls and Displays section to activate the tow mode (shift the transmission to neutral and enable park brake disengage). Box (A) must be checked.

Press the park brake switch (B) on the armrest to disengage the brakes before towing the machine.

NOTE: The operator must be seated to disengage the park brake.



ZX201251 —UN—15NOV14

ZX201251

ZX201250 —UN—21JUN13

A—Box **B—Park Brake Switch**

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Operate the Grass Chute

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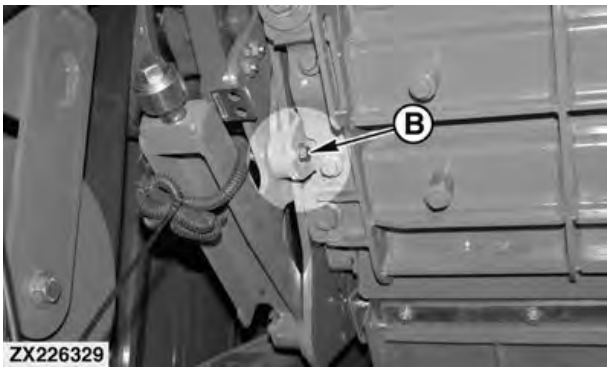


ZX226329 —UN—13NOV14

Grass Chute—In Working Position

On machine without kernel processor, the grass chute (A) can be easily set to its working (swing in) or servicing (swing out) position. When the grass chute is swung out, the blower paddles and blower inlet scraper are easily accessible (see **Replace and Adjust Blower Paddles** in Lubrication and Maintenance section).

CAUTION: Before carrying out any adjustment or service work, disengage all drives, shut off engine and wait until all moving parts have stopped.

NOTE: If the machine is equipped with a kernel processor, also refer to Operate the Kernel Processor (Option) in this section.

To swing in or out grass chute, proceed as follows:

1. On each side of the blower, loosen pivoting frame lock nut (B). Do not remove lock nut (B).
2. Engage crank (C) into the swinging device adapter (D).
   a. **To Swing Grass Chute out to Servicing Position:** Turn crank (C) clockwise to swing grass chute out until the pivoting frame touches stops (E).

IMPORTANT: Do not continue turning crank (C) once pivoting frame touches the stop (E).

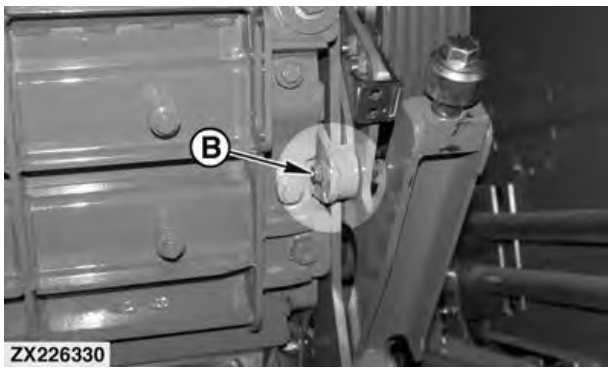
NOTE: Stops (E) are located on both sides, in front of the blower.

   b. **To Swing Grass Chute in to Working Position:** Turn crank (C) counterclockwise to swing grass chute in as far as possible.

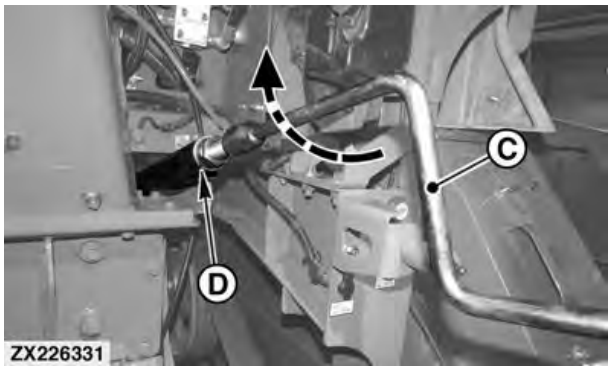
IMPORTANT: Do not continue turning crank (C) once pivoting frame bushings reach end of slot.

3. Tighten pivoting frame lock nut (B).

IMPORTANT: Do not operate the machine with loose lock nuts (B).



ZX226330 —UN—13NOV14



ZX226331 —UN—13NOV14

ZX226332 —UN—13NOV14

A—Grass Chute
B—Pivoting Frame Lock Nut
C—Crank
D—Swinging Device Adapter
E—Stop

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OUCC002,0004204 -19-14NOV14-1/2

Operate the Kernel Processor (Option)

CAUTION: Before carrying out any adjustment or service work, disengage all drives, shut off engine and wait until all moving parts have stopped.

IMPORTANT: Check rope for visible damage every time hoist is operated. Examples of damage are: cuts, knots, mashed or frayed portions, and broken strands. Replace rope immediately if damaged. Failure to replace a damaged rope could result in breakage.

Swing Kernel Processor In and Out:

The kernel processor can be easily set to its working (swing in) or storing (swing out) position. When the kernel processor is swung out to storing position the grass chute is, at the same time, swung in to working position. Proceed as follows:

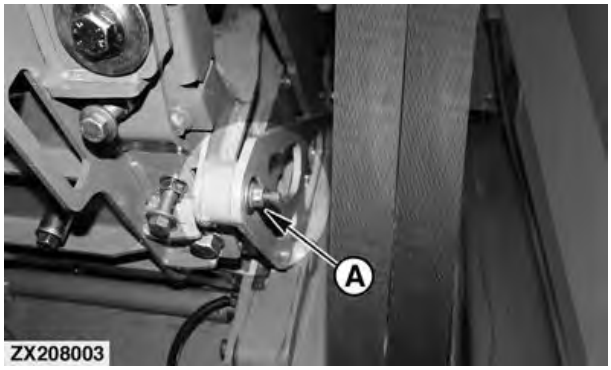
1. On each side of the blower, loosen pivoting frame lock nut (A). Do not remove lock nut (A).
2. Engage crank (B) into the swinging device adapter (C).
   a. **To Swing Kernel Processor in to Working Position:** Turn crank (B) clockwise until the pivoting frame touches stop (D).

IMPORTANT: Do not continue turning crank (B) once pivoting frame touches the stops (D).

NOTE: Stops (D) are located on both sides, in front of the blower.

   b. **To Swing Kernel Processor out to Storing Position:** Turn crank (B) counterclockwise to swing kernel processor out as far as possible.
3. Tighten pivoting frame lock nut (A).

A—Pivoting Frame Lock Nut
B—Crank
C—Swinging Device Adapter
D—Stop



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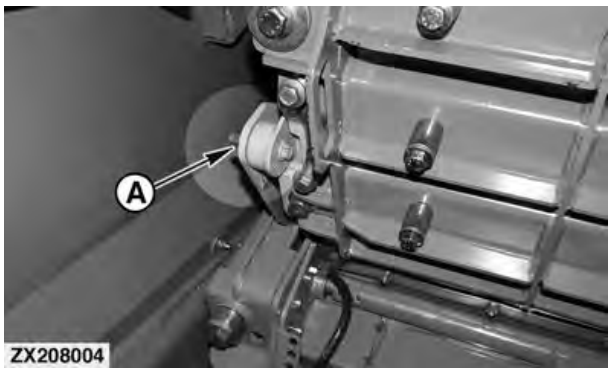

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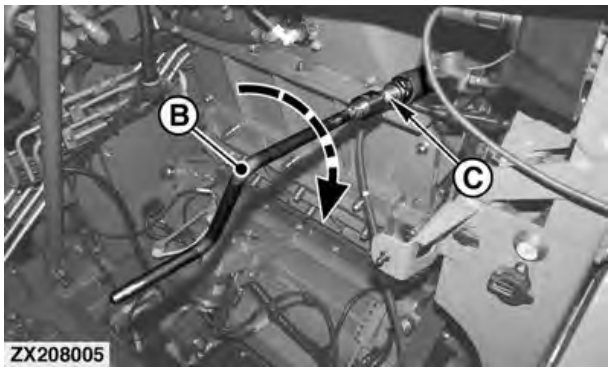

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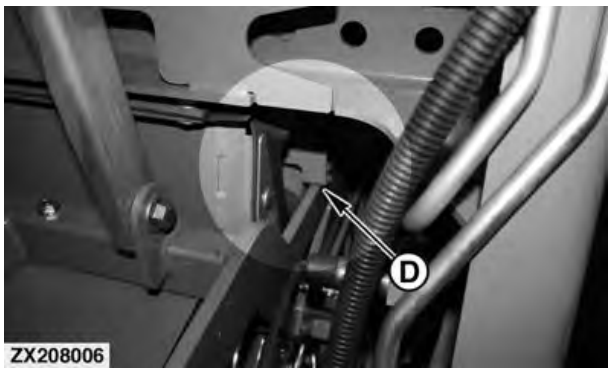

ZX208006 —UN—20DEC13

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OUCC002,0004203 -19-09SEP15-1/21

CAUTION: To operate the winch safely, observe the following instructions:

- Always inspect and carefully rewind rope after each use. Cuts, kinks, or frayed areas reduce the tensile strength of rope. Replace rope if damaged.

- Use shackle and a snatch block provided with the winch to reduce winch load.

- Do not leave remote control plugged when the winch is not used.

- Never hook rope back onto itself. This damages the rope.

- Never hoist with less than 5 wraps of rope around the drum, the rope could come loose from the drum.

- Never touch rope or hook while in tension or under load.

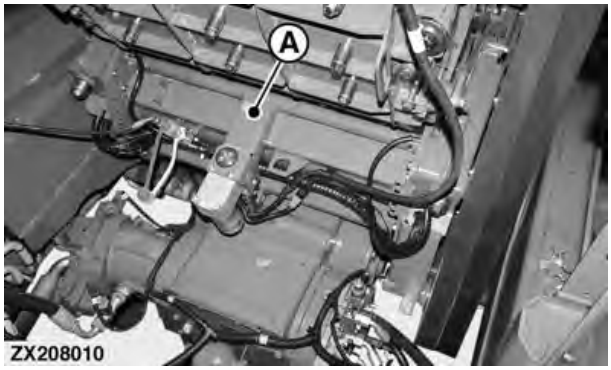
- Never touch rope or hook while someone else is performing a hoisting operation.

- Never leave suspended load unattended.

For service purpose, the kernel processor (A) can be removed from the machine using the electrical winch composed of:

- Pivoting arm (B) to move the kernel processor in or out of machine.
- Electrical motor (C).
- Remote control (D) connected to control box (E).

A—Kernel Processor
B—Pivoting Arm
C—Electrical Motor
D—Remote Control
E—Control Box



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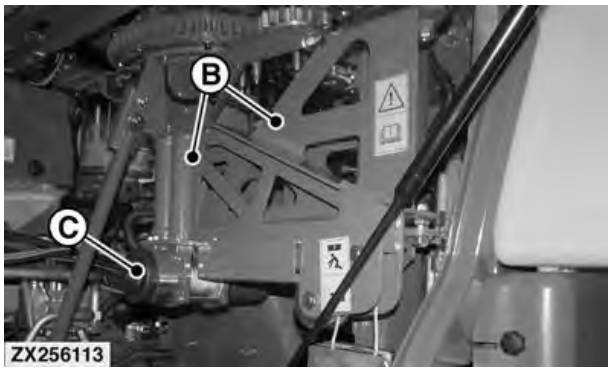
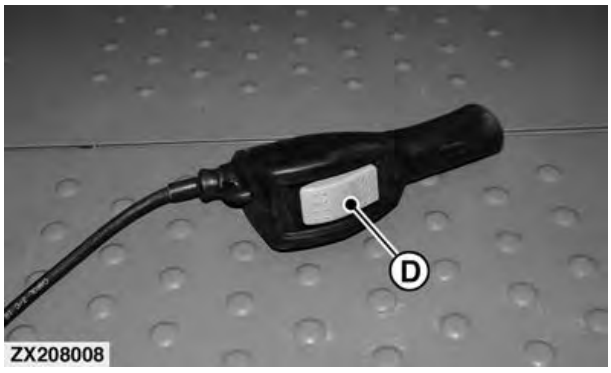
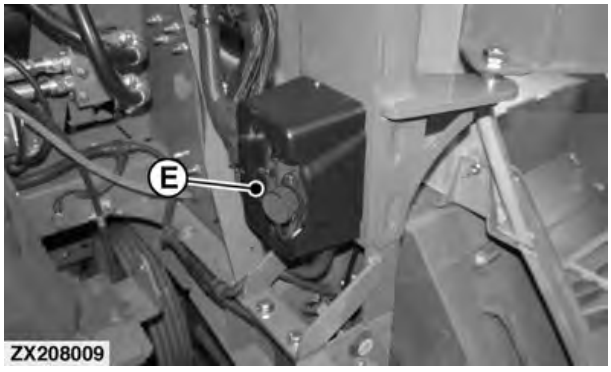


ZX256113 —UN—09SEP15



ZX208008 —UN—20DEC13



ZX208009 —UN—08NOV14

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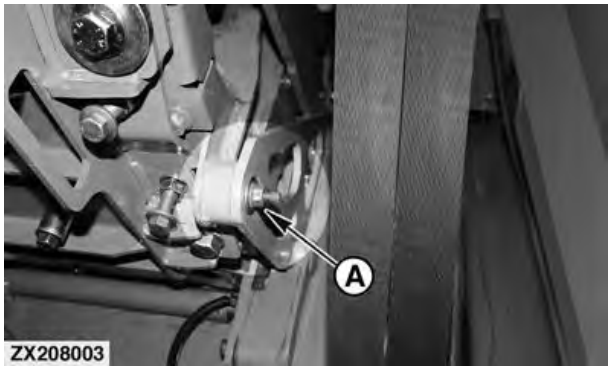
Remove the Kernel Processor:

To remove the kernel processor from the machine, proceed as follows:

1. Set kernel processor gap to its smallest value.
2. On each side of the blower, loosen pivoting frame lock nut (A). Do not remove lock nut (A).
3. Engage crank (B) into the swinging device adapter (C).
4. Turn crank (B) counterclockwise to swing kernel processor out as far as possible.

A—Pivoting Frame Lock Nut
B—Crank
C—Swinging Device Adapter



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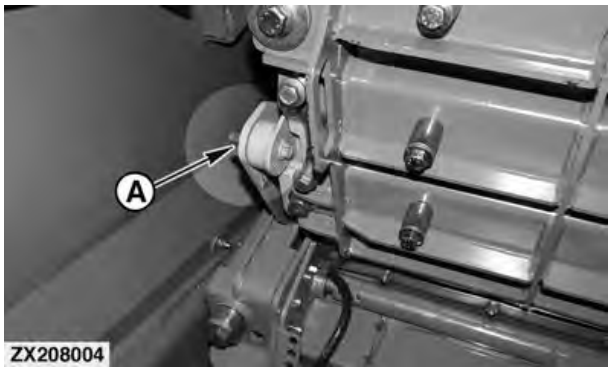

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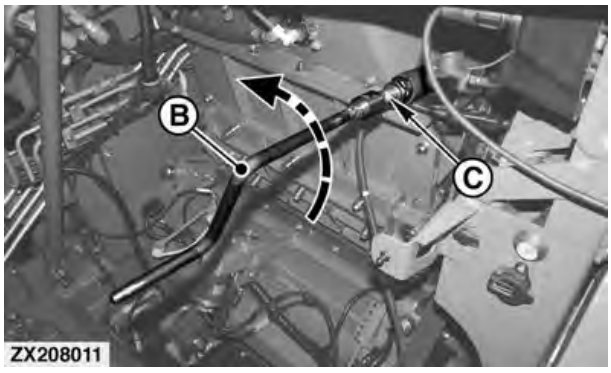

ZX208011 —UN—20DEC13

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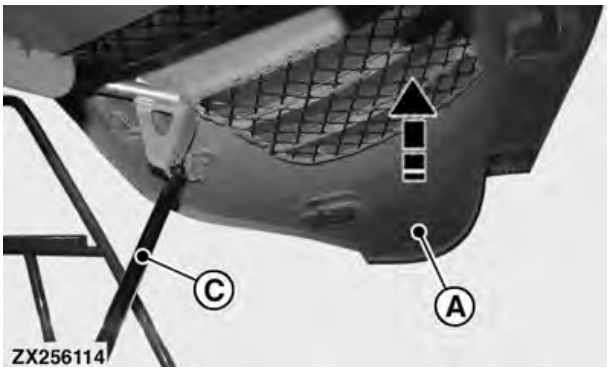

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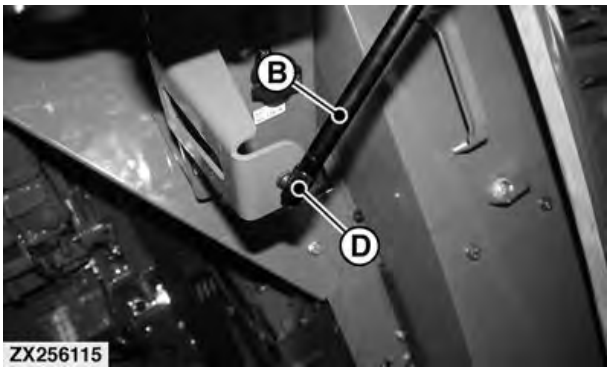


ZX256115 —UN—09SEP15

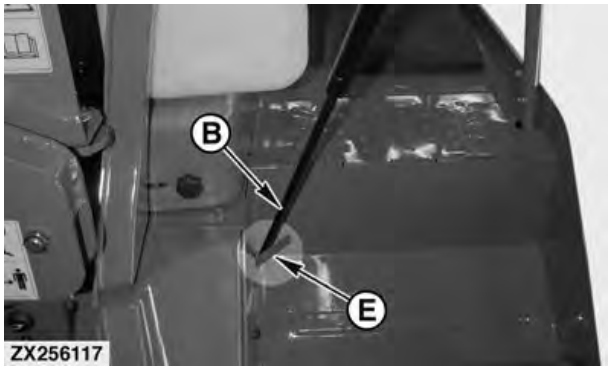
5. While firmly holding the side door (A) of the central service compartment, disconnect lower attaching point (B) of gas-filled strut (C), then place the lower attaching point into holder (E) on top of right hand cab access ladder, as shown.

IMPORTANT: Side door (A) handling might need two persons.

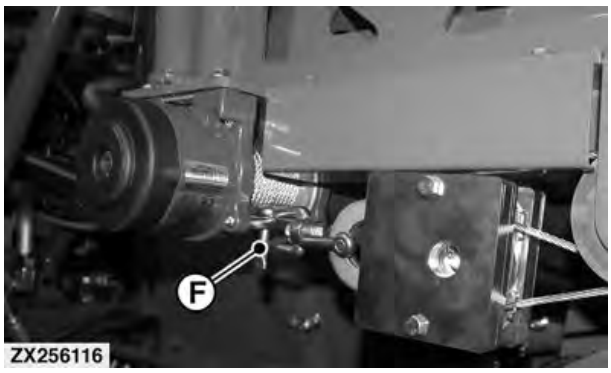
NOTE: Pull ring (D) to disconnect gas-filled strut (C).

6. Disconnect shackle (F).
7. Release latch (G).

A—Side Door
B—Attaching point
C—Gas-Filled Strut
D—Ring
E—Holder
F—Shackle
G—Latch



ZX256117 —UN—09SEP15



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8. Disconnect both connectors (A) from electrical motor (B).

IMPORTANT: Store connectors (A) in their receptacle on left-hand side of the blower as shown.

9. Disconnect inlet line (C) of automatic lubrication system distributor (D) and connect it to its storage coupler (E), as shown.

A—Connector
B—Electrical Motor
C—Inlet Line
D—Distributor
E—Storage Coupler

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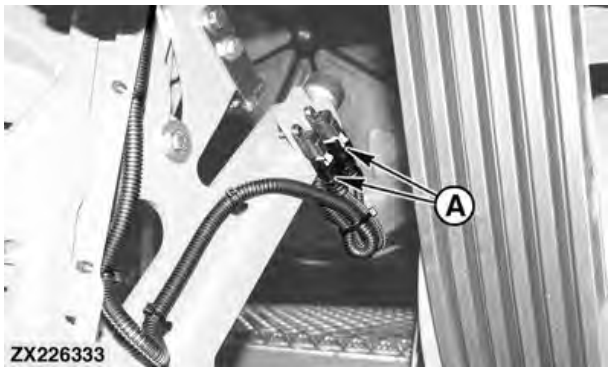

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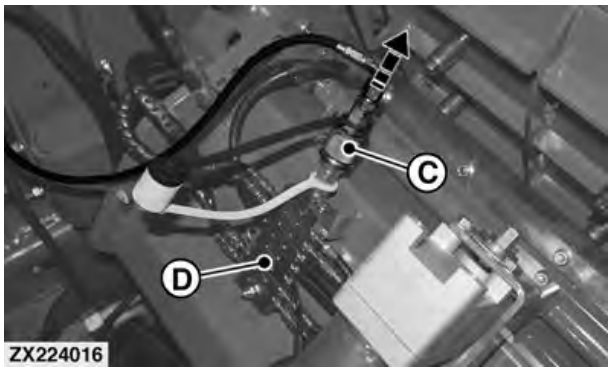

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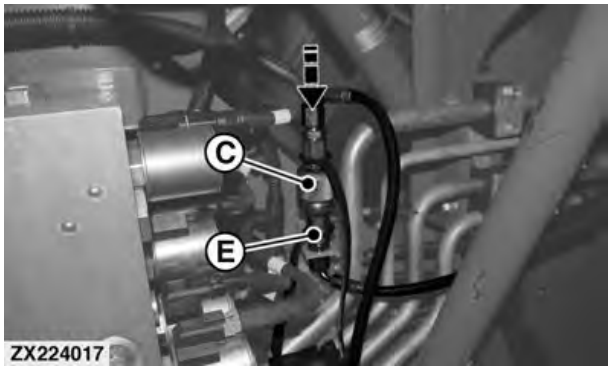

ZX224017 —UN—08NOV14

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OUCC002,0004203 -19-09SEP15-5/21

10. Remove the kernel processor drive belt (A) from pulleys (B).

IMPORTANT: On 8600—8800: Two drive belts (A) are used.

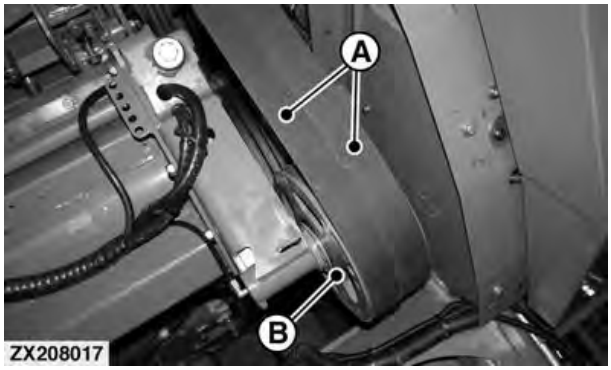
On 8100—8500: One drive belt (A) is used.

NOTE: If the machine must be started after kernel processor removal, then completely remove drive belts (A). Otherwise, to ease future installation of drive belts, do not remove drive belts (A) from drive pulley (C) and tensioner (D).

Several shields have been removed for illustration purpose only.

11. On left and right-hand side of kernel processor frame, remove attaching screw (E), bushing (F), and bracket (G).

A—Drive Belt
B—Pulley
C—Drive Pulley—Blower
D—Tensioner
E—Attaching Screw
F—Bushing
G—Bracket



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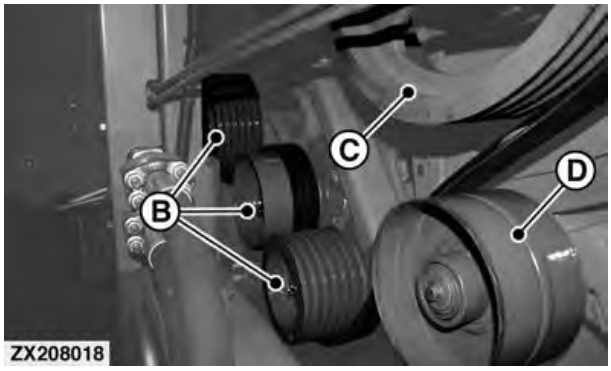

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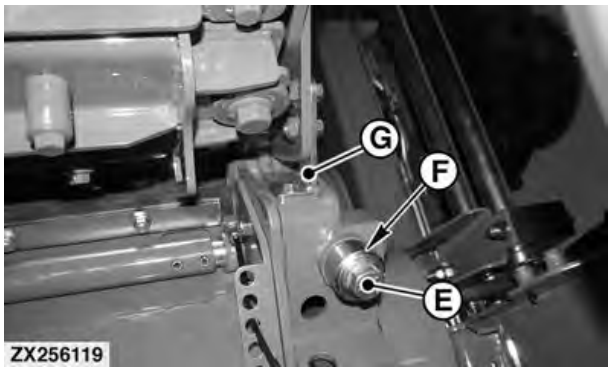

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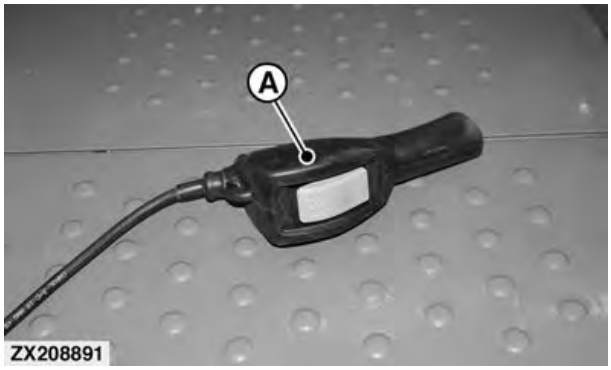
OUCC002,0004203 -19-09SEP15-6/21

12. Connect remote control (A) to control box (B).
13. Remove stud (C) from its storing position then unfold and secure middle piece (D) of winch with stud (C) as shown (see arrows and illustration sequence).

IMPORTANT: Middle piece (D) of winch MUST be secured in position as shown (2) before operating winch. Do not operate winch with middle piece (D) not secured in place.

A—Remote Control
B—Control Box
C—Stud
D—Middle Piece
1— Middle Piece in Storing Position
2— Middle Piece in Secured Position



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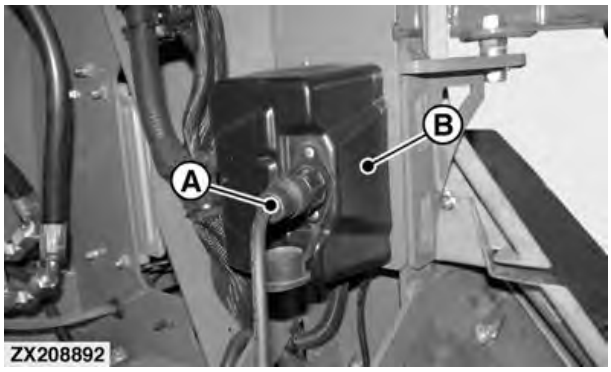

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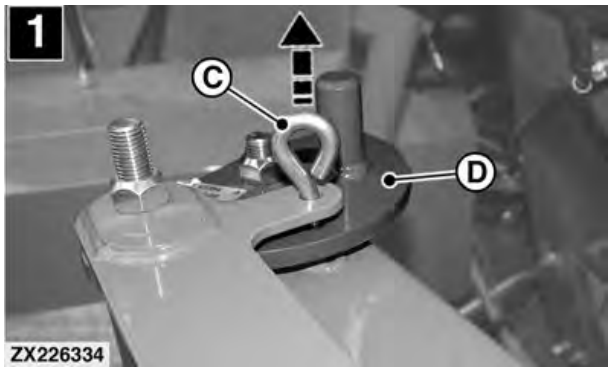

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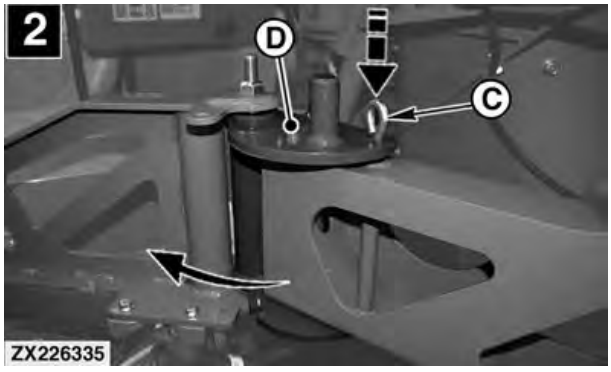

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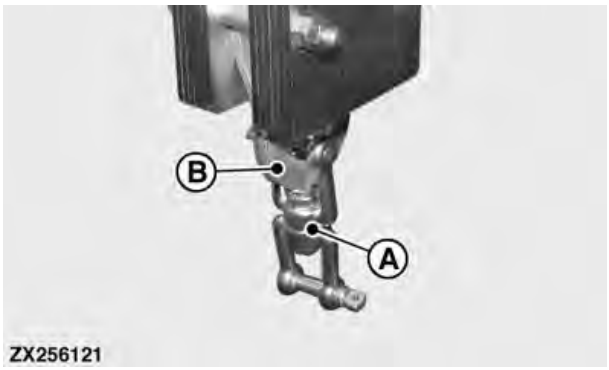

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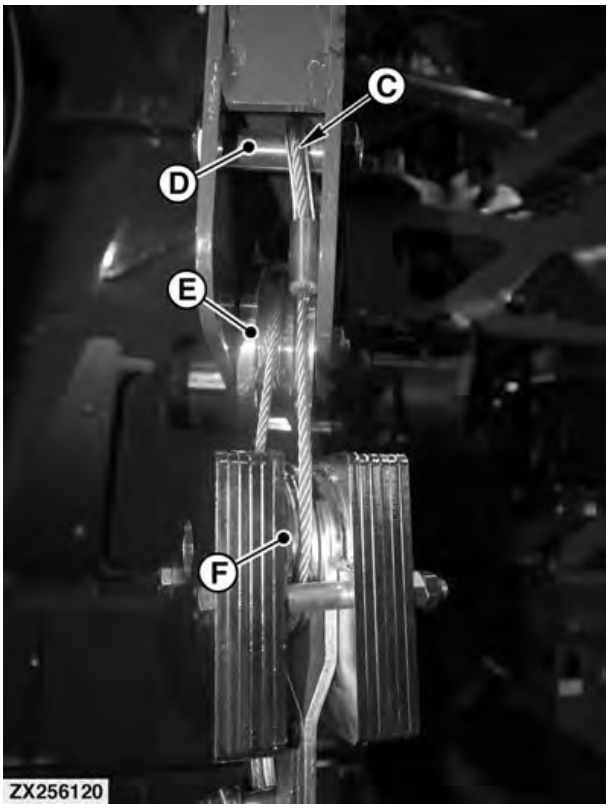


ZX256120 —UN—09SEP15

14. Check that shackle (A) is attached to bracket (B) and hook (C) to screw (D) as shown.

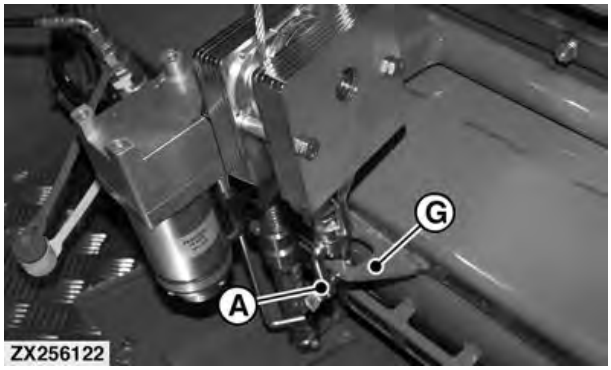
IMPORTANT: Before attaching shackle (A) to kernel processor frame, make sure that cable is routed over the two pulleys (E) and (F) as shown (double lining).

15. Attach and secure shackle (A) to kernel processor bracket (G).

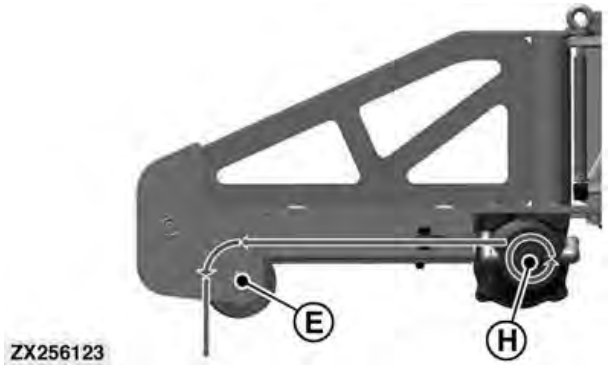
IMPORTANT: Before lifting the kernel processor, make sure the shackle (A) is correctly secured.

The winch must be operated exclusively in double lining mode. Single line operation significantly reduces the lifetime of the components. Do not use hook (C) to lift kernel processor.

Before lifting the kernel processor, the winding direction of the winch has to be checked. The illustration shows winding direction of a proper setup. The cable must go to the upper side of pulley (E) and electrical motor drum (H) as shown. Operating the winch in any different mode will lead to mechanical damage.



ZX256122 —UN—09SEP15



ZX256123 —UN—09SEP15

A—Shackle
B—Bracket
C—Hook
D—Screw
E—Pulley
F—Pulley
G—Bracket
H—Electrical Motor Drum

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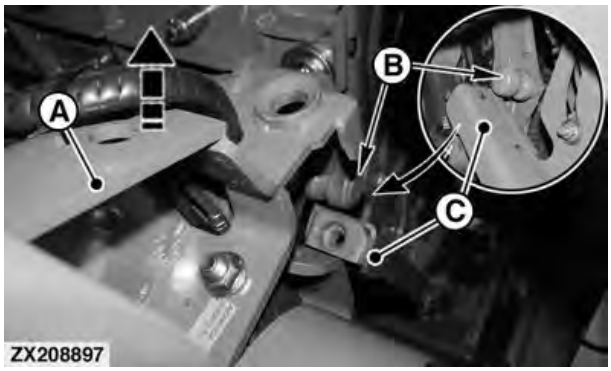
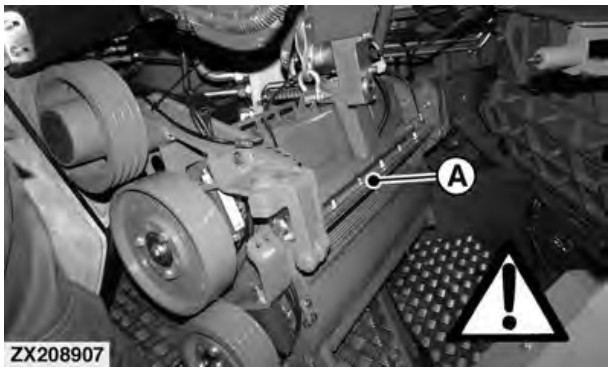
OUCC002,0004203 -19-09SEP15-8/21



ZX208897 —UN—20DEC13



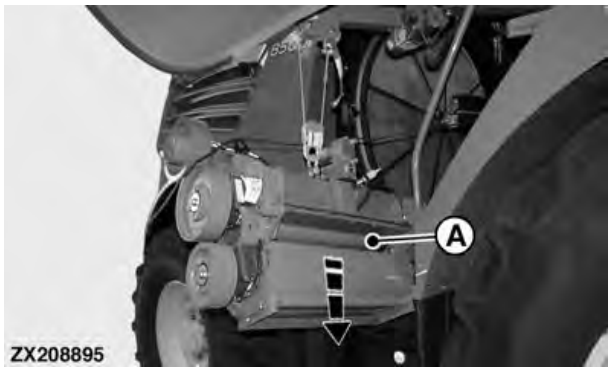
ZX208907 —UN—13NOV14

CAUTION: The kernel processor is heavy. Pay extreme attention while removing kernel processor. Under load, the pivoting winch can fold or unfold unexpectedly. Keep your hands away from areas where they can be crushed in case of unexpected pivoting movement of the winch.

16. Slowly raise kernel processor (A) until rolls (B) are away from guide rail (C) on both sides.
17. Pivot winch out of the central service compartment, then unfold the winch. Lower kernel processor (A) to the ground.
18. On each side of the blower, tighten pivoting frame lock nut (D).

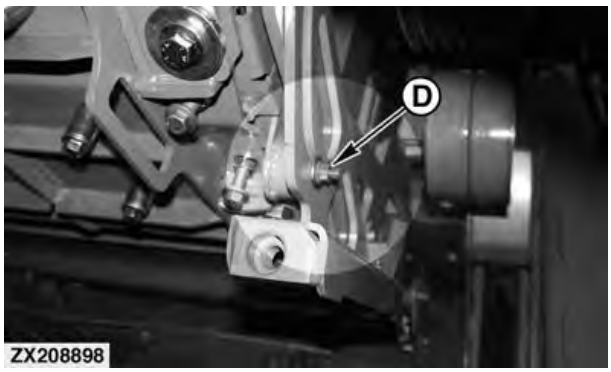
IMPORTANT: Do not operate the machine with loose lock nuts (D).

A—Kernel Processor
B—Roll
C—Guide Rail
D—Lock Nut



ZX208895 —UN—13NOV14

ZX208896 —UN—13NOV14



ZX208898 —UN—20DEC13

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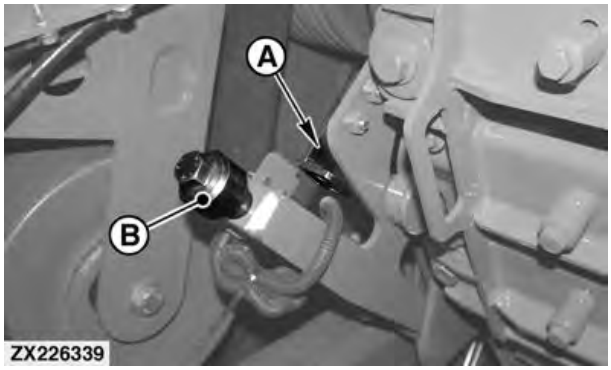
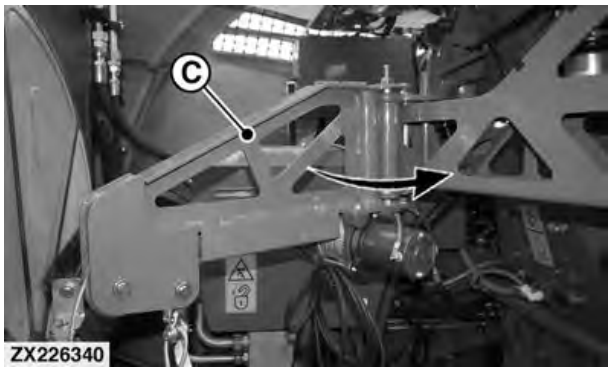
OUCC002,0004203 -19-09SEP15-9/21

19. For storage purpose, install brackets (A) and bushing assemblies (B) back to their respective place.
20. Fold winch (C), then pivot the winch into central service compartment.
21. Place stud (D) back in its storage position as shown.
22. Secure winch (C) with latch (E).

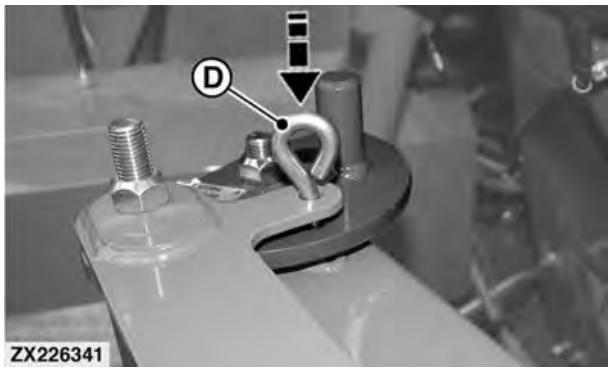
A—Bracket
B—Bushing and Screw
C—Winch
D—Stud
E—Latch



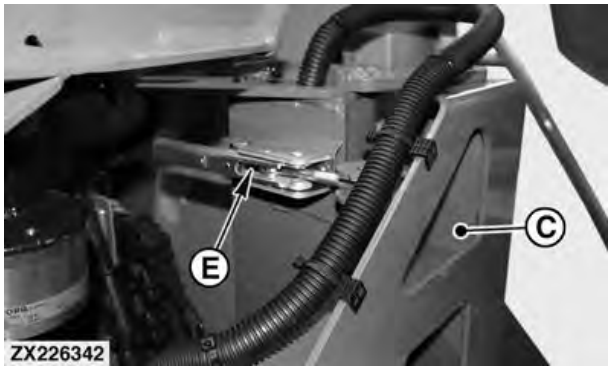
ZX226339 —UN—13NOV14



ZX226340 —UN—13NOV14



ZX226341 —UN—13NOV14



ZX226342 —UN—13NOV14

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23. While firmly holding the side door of the central service compartment, reconnect lower attaching point (A) of gas-filled strut (B), as shown.

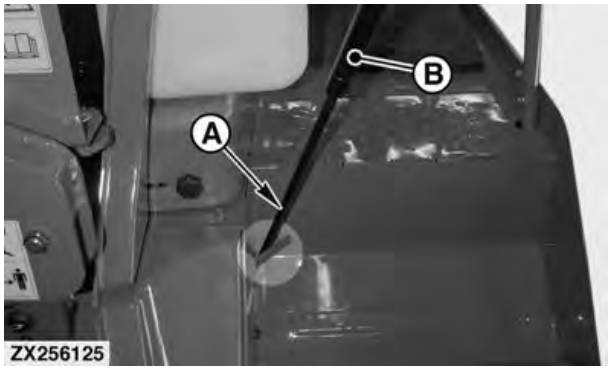
IMPORTANT: Side door handling might need two persons.

NOTE: Pull ring (C) to connect gas-filled strut (B).

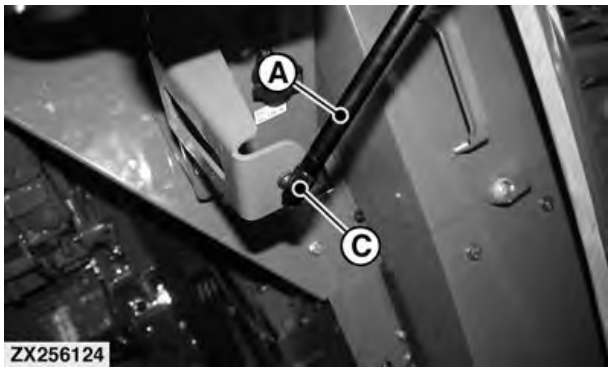
24. Attach shackle (D) to electrical motor (E) as shown.

25. Disconnect remote control cable (F) from control box (G).

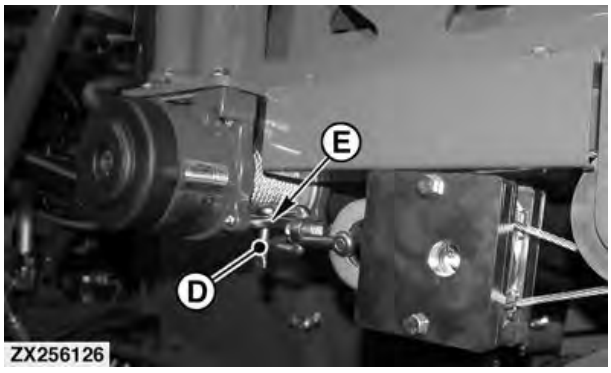
A—Attaching point
B—Gas-Filled Strut
C—Ring
D—Shackle
E—Electrical Motor
F—Remote Control Cable
G—Control Box



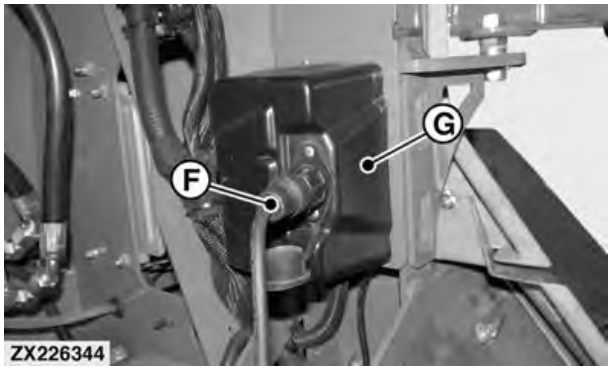
ZX256125 —UN—09SEP15



ZX256124 —UN—09SEP15



ZX256126 —UN—09SEP15



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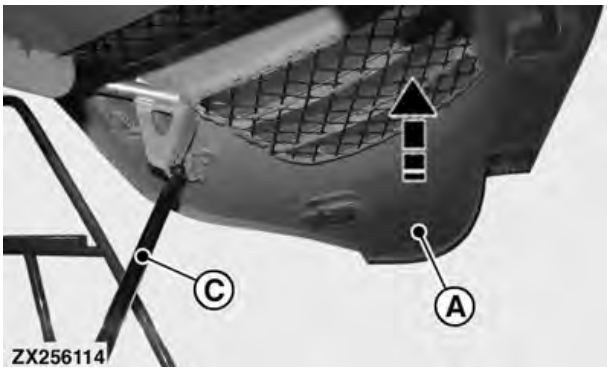
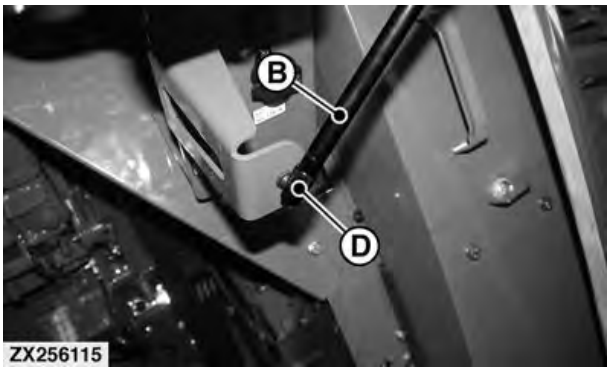


ZX256114 —UN—09SEP15



ZX256115 —UN—09SEP15

Install Kernel Processor:

To install the kernel processor, proceed as follows:

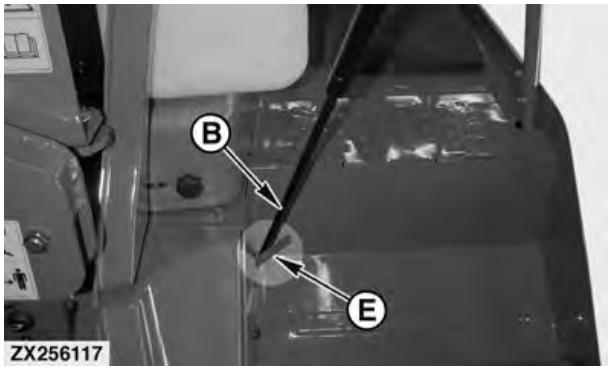
1. While firmly holding the side door (A) of the central service compartment, disconnect lower attaching point (B) of gas-filled strut (C), then place the lower attaching point into holder (E) on top of right hand cab access ladder, as shown.

IMPORTANT: Side door (A) handling might need two persons.

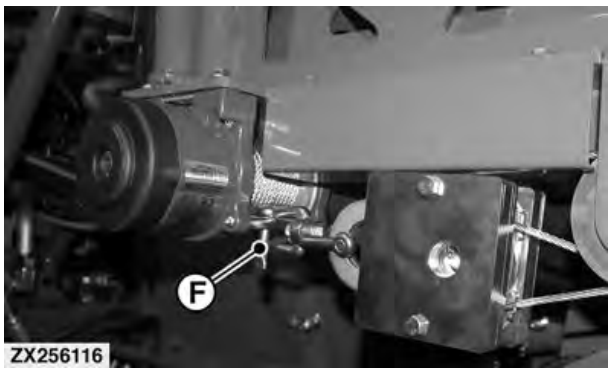
NOTE: Pull ring (D) to disconnect gas-filled strut (C).

2. Disconnect shackle (F).
3. Release latch (G).

A—Side Door
B—Attaching point
C—Gas-Filled Strut
D—Ring
E—Holder
F—Shackle
G—Latch



ZX256117 —UN—09SEP15



ZX256116 —UN—09SEP15

ZX256118 —UN—09SEP15

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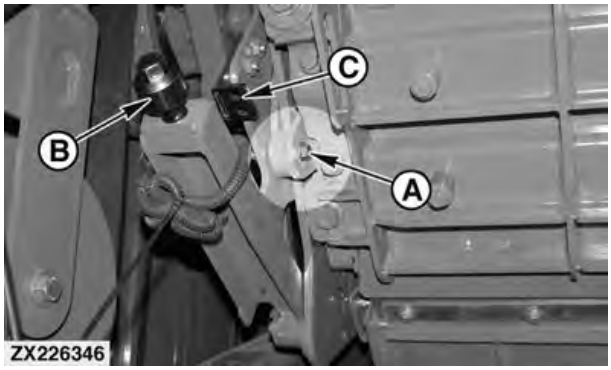
OUCC002,0004203 -19-09SEP15-12/21

4. On each side of the blower, loosen pivoting frame lock nut (A). Do not remove lock nut (A).

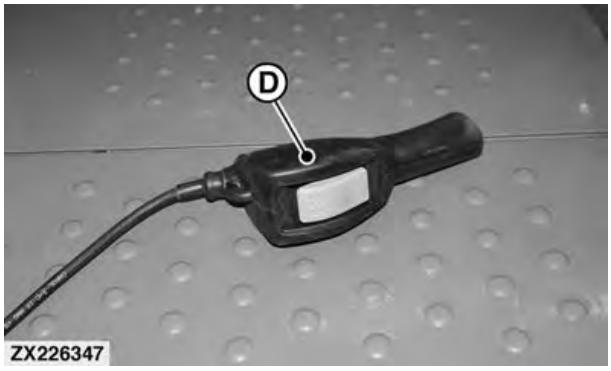
   If necessary, remove bushing with screw (B) and bracket (C) on each side of the blower.

5. Connect remote control (D) to control box (E).

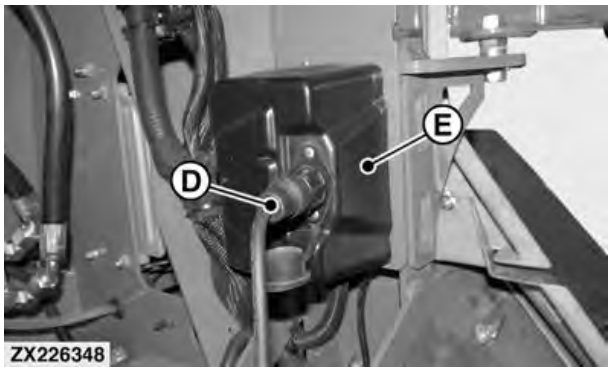
A—Lock Nut
B—Bushing and Screw
C—Bracket
D—Remote Control
E—Control Box



ZX226346 —UN—13NOV14



ZX226347 —UN—13NOV14



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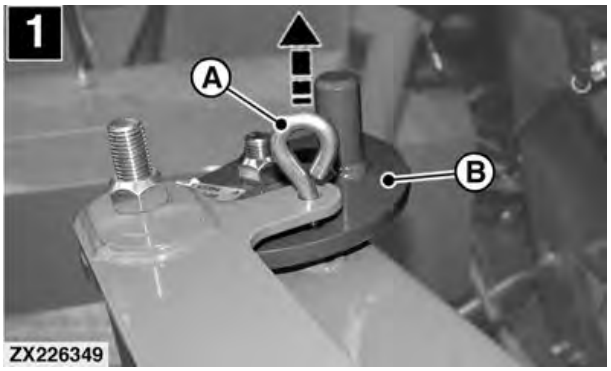

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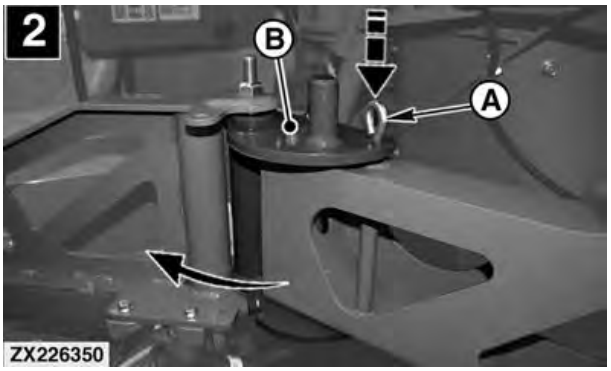


ZX226350 —UN—13NOV14

6. Remove stud (A) from its storing position then unfold and secure middle piece (B) of winch with stud (A) as shown (see arrows and illustration sequence).

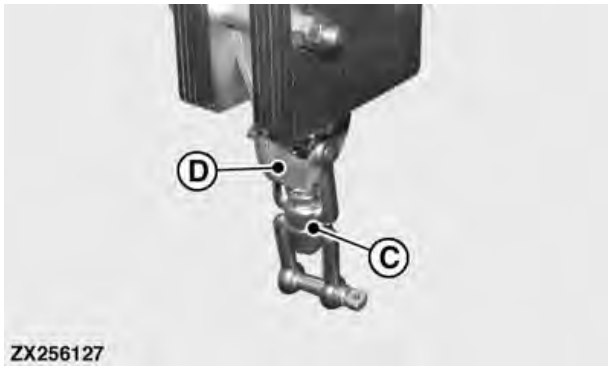
IMPORTANT: Middle piece (B) of winch MUST be secured in position as shown (2) before operating winch. Do not operate winch with middle piece (B) not secured in place.

7. Pivot winch out of the central service compartment, then unfold the winch.

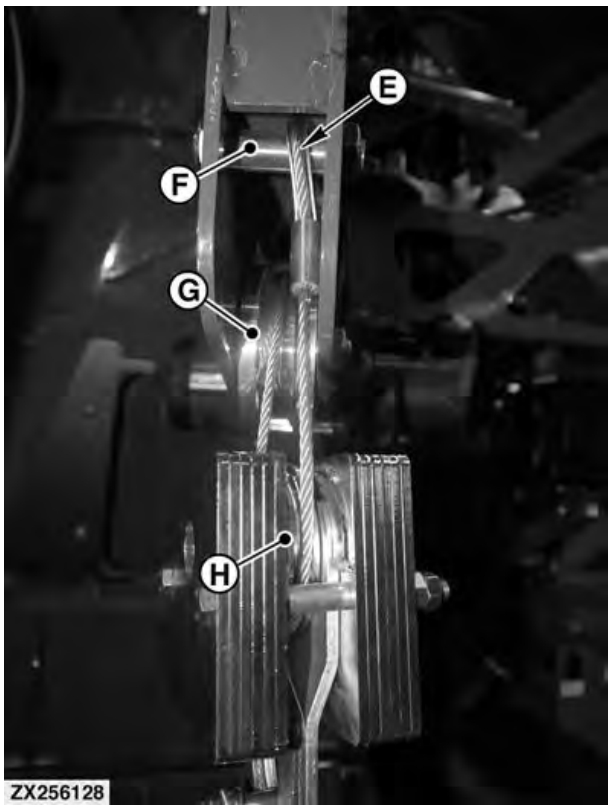
8. Check that shackle (C) is attached to bracket (D) and hook (E) to screw (F) as shown.

IMPORTANT: Before attaching shackle (C) to kernel processor frame, make sure that cable is routed over the two pulleys (G) and (H) as shown (double lining).

A—Stud
B—Middle Piece
C—Shackle
D—Bracket
E—Hook
F—Screw
G—Pulley
H—Pulley
1—Middle Piece in Storing Position
2—Middle Piece in Secured Position



ZX256127 —UN—09SEP15



ZX256128 —UN—09SEP15

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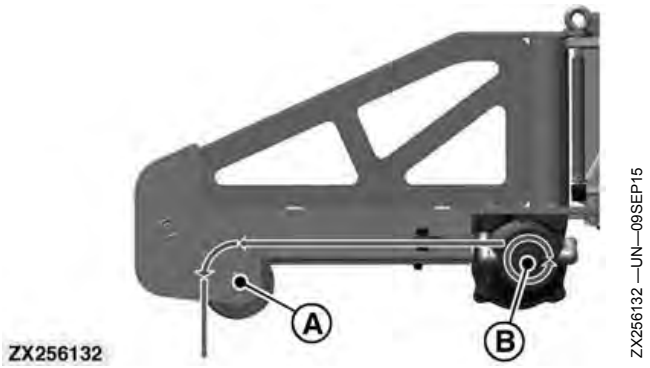
IMPORTANT: Before lifting the kernel processor, the winding direction of the winch has to be checked. The illustration shows winding direction of a proper setup. The cable must go to the upper side of pulley (A) and electrical motor drum (B) as shown. Operating the winch in any different mode will lead to mechanical damage.

A—Pulley **B—Electrical Motor Drum**



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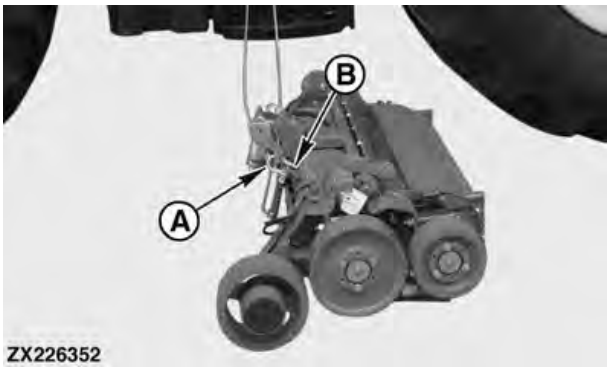
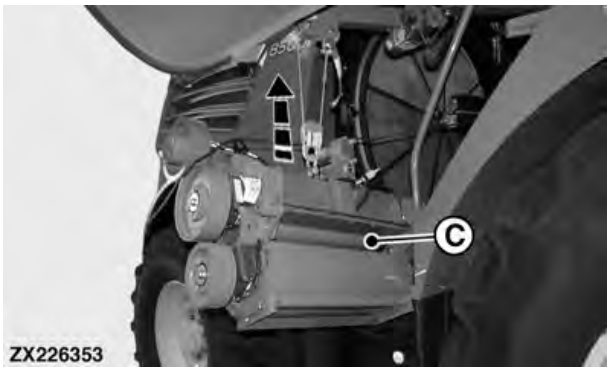


ZX226352 —UN—13NOV14



ZX226353 —UN—13NOV14

⚠ CAUTION: The kernel processor is heavy. Pay extreme attention while installing kernel processor. Under load, the pivoting winch can fold or unfold unexpectedly. Keep your hands away from areas where they can be crushed in case of unexpected pivoting movement of the winch.

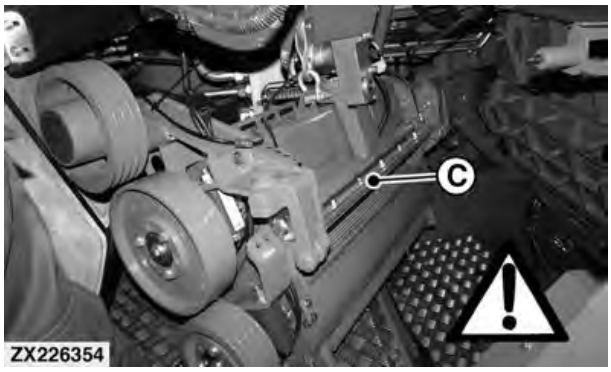
9. Place the kernel processor as shown on the ground then attach and secure shackle (A) to kernel processor bracket (B).

IMPORTANT: Before lifting the kernel processor (C), make sure the shackle (A) is correctly secured.

The winch must be operated exclusively in double lining mode. Single line operation significantly reduces the lifetime of the components. Do not use hook to lift kernel processor.

10. Raise kernel processor (C) until it can be moved into central service compartment and aligned with rear of blower.
11. Slowly lower kernel processor (C) until on both sides the rolls (D) are above guide rail (E). Push the kernel processor (C) to help guiding the roll (D) engagement on guide rail (E).

A—Shackle
B—Bracket
C—Kernel Processor
D—Roll
E—Guide Rail



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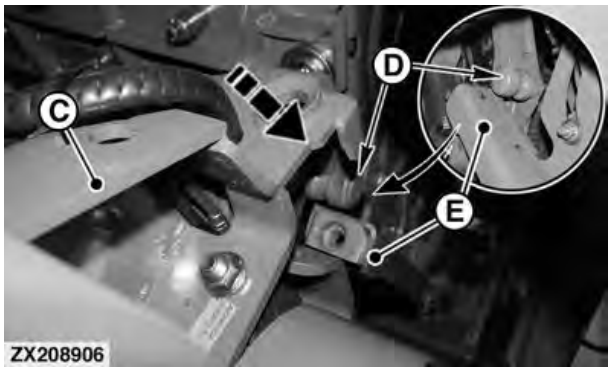

ZX208906 —UN—20DEC13

ZX256129 —UN—09SEP15

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12. On left and right-hand side of kernel processor frame, install attaching screws (A) and bushings (B).
13. Install the kernel processor drive belt (C) on pulleys (D), drive pulley (E), and tensioner (F) as shown.

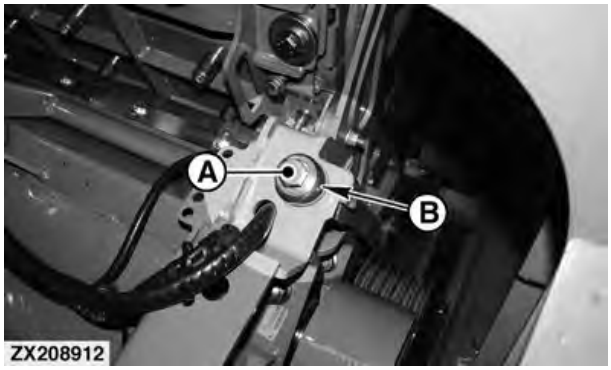
IMPORTANT: On 8600—8800: Two drive belts (C) are used.

On 8100—8500: One drive belt (C) is used.

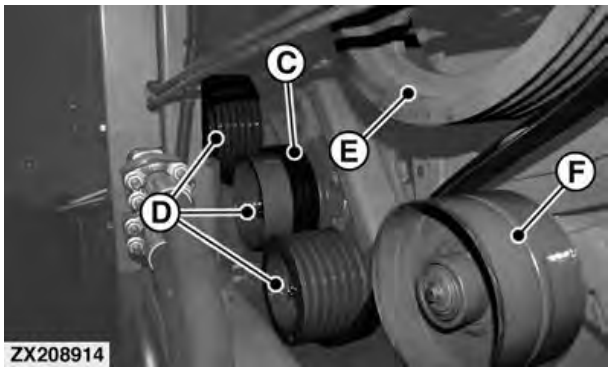
NOTE: Several shields have been removed for illustration purpose only.

14. On left and right-hand side of kernel processor frame, install bracket (G).

A—Attaching Screw
B—Bushing
C—Drive Belt
D—Pulley
E—Drive Pulley
F—Tensioner
G—Bracket



ZX208912 —UN—20DEC13



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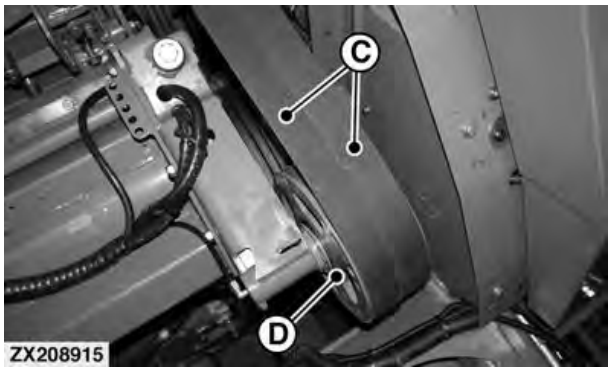
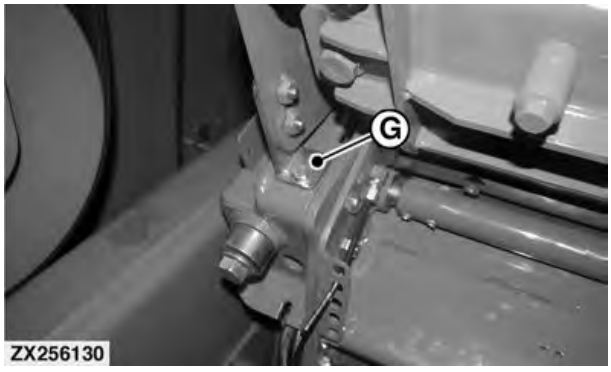


ZX208915 —UN—20DEC13



ZX256130 —UN—09SEP15

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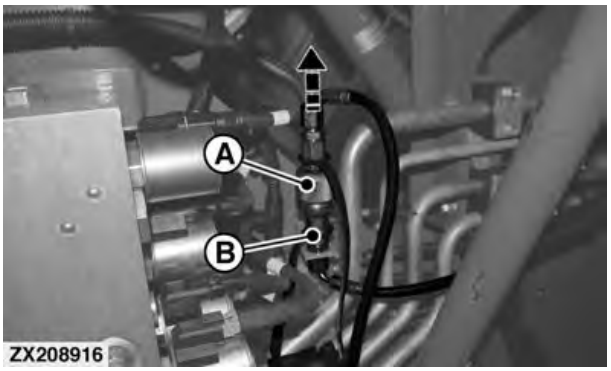
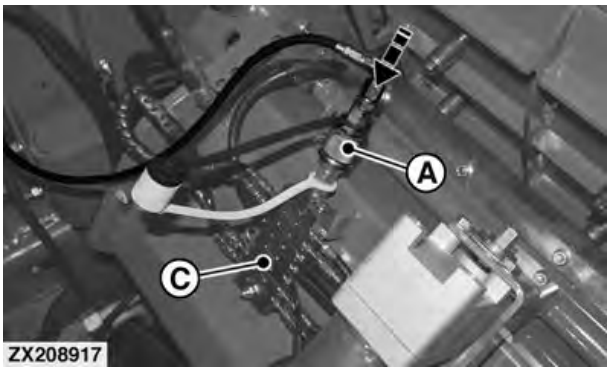


ZX208916 —UN—20DEC13



ZX208917 —UN—20DEC13

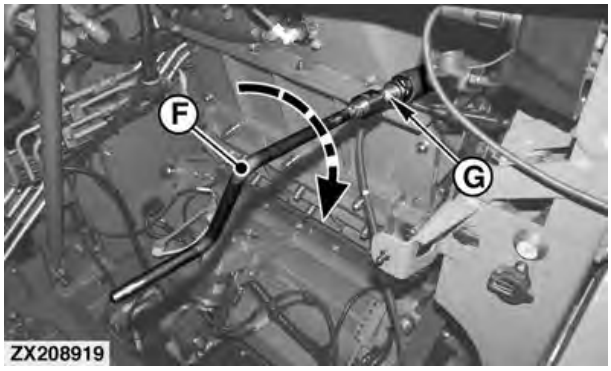
15. If equipped with, disconnect inlet line (A) of automatic lubrication system from its storage coupler (B) and connect it to the distributor (C).
16. If equipped, connect both connectors (D) to their relevant connectors of electrical motor (E).
17. Engage crank (F) into the swinging device adapter (G).
18. Turn crank (G) clockwise until the kernel processor touches stops (H).

IMPORTANT: Do not continue turning crank (G) once kernel processor frame touches the stops (H).

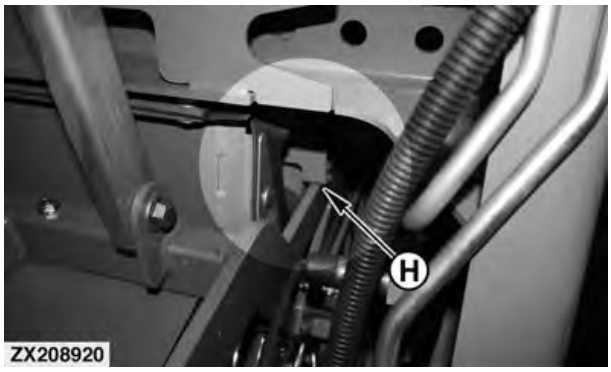
NOTE: Stops (H) are located on both sides, in front of the blower.

A—Inlet Line
B—Storage Coupler
C—Distributor
D—Connector
E—Electrical Motor
F—Crank
G—Swinging Device Adapter
H—Stop

ZX208918 —UN—20DEC13



ZX208919 —UN—20DEC13



ZX208920 —UN—20DEC13

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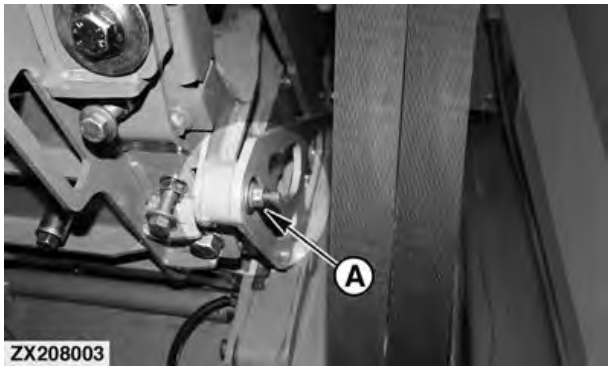
19. On each side of the blower, tighten pivoting frame lock nut (A).

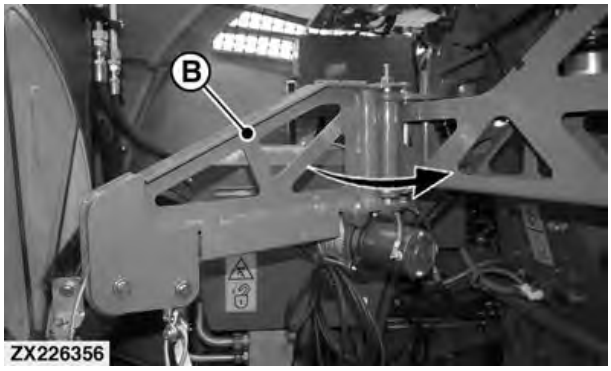
IMPORTANT: Do not operate the machine with loose lock nuts (A).

20. Fold winch (B), then pivot the winch into central service compartment.
21. Place stud (C) back in its storage position as shown.
22. Secure winch (B) with latch (D).

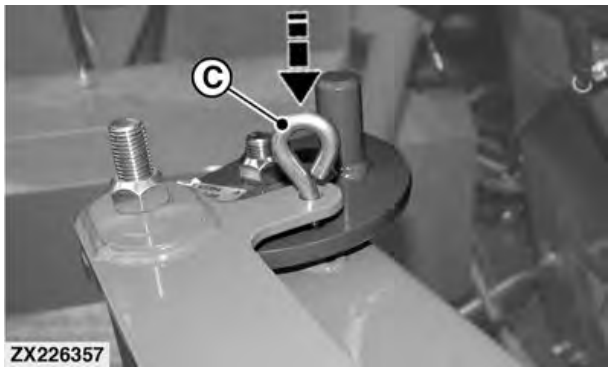
A—Lock Nut
B—Winch
C—Stud
D—Latch



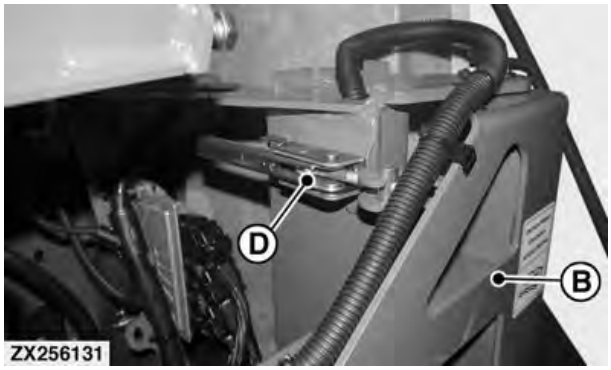
ZX208003 —UN—20DEC13



ZX226356 —UN—13NOV14



ZX226357 —UN—13NOV14



ZX256131 —UN—09SEP15

Continued on next page

23. While firmly holding the side door of the central service compartment, reconnect lower attaching point (A) of gas-filled strut (B), as shown.

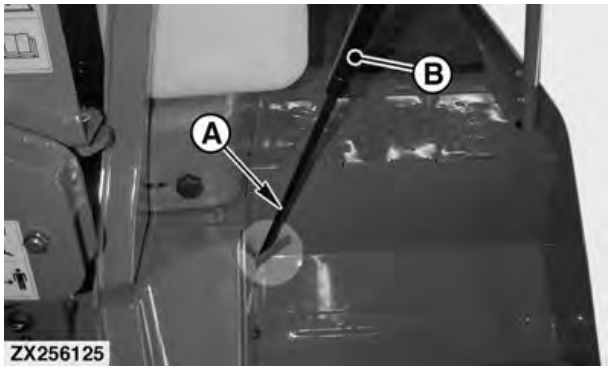
IMPORTANT: Side door handling might need two persons.

NOTE: Pull ring (C) to connect gas-filled strut (B).

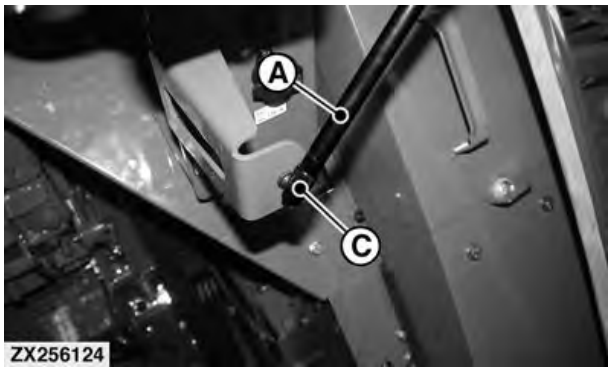
24. Attach shackle (D) to electrical motor (E) as shown.

25. Disconnect remote control cable (F) from control box (G).

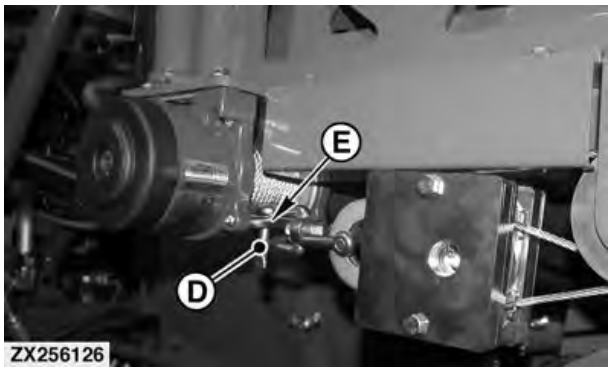
A—Attaching point
B—Gas-Filled Strut
C—Ring
D—Shackle
E—Bracket
F—Remote Control Cable
G—Control Box



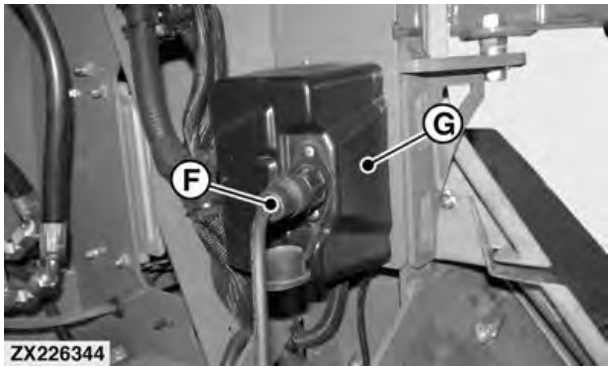
ZX256125 —UN—09SEP15



ZX256124 —UN—09SEP15



ZX256126 —UN—09SEP15



ZX226344 —UN—13NOV14

Continued on next page

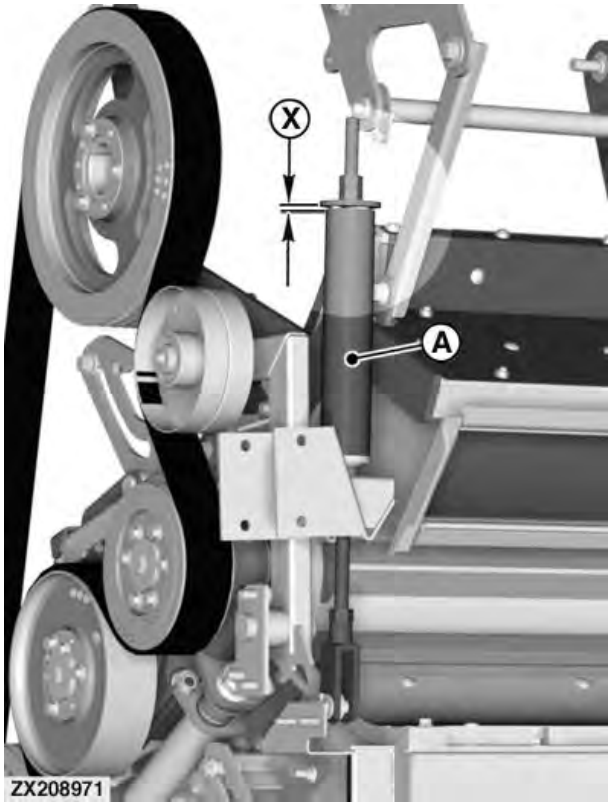
26. Before operating the kernel processor, check that distance (X) at the belt tensioner (A) is 10 mm (0.4 in) or less. If necessary adjust tensioner (A). See **Adjust Kernel Processor Drive Belt Tension** in Lubrication and Maintenance section.

IMPORTANT: Do not operate the kernel processor if distance (X) is above 10 mm (0.4 in).

27. Proceed to the kernel processor roll initial gap calibration. Refer to **Vehicle Settings Page** in Operating the Controls and Displays section or to **Interactive Calibration Procedures** in Lubrication and Maintenance section.

IMPORTANT: Every time the kernel processor is removed and installed back in place, the initial gap calibration MUST be carried out.

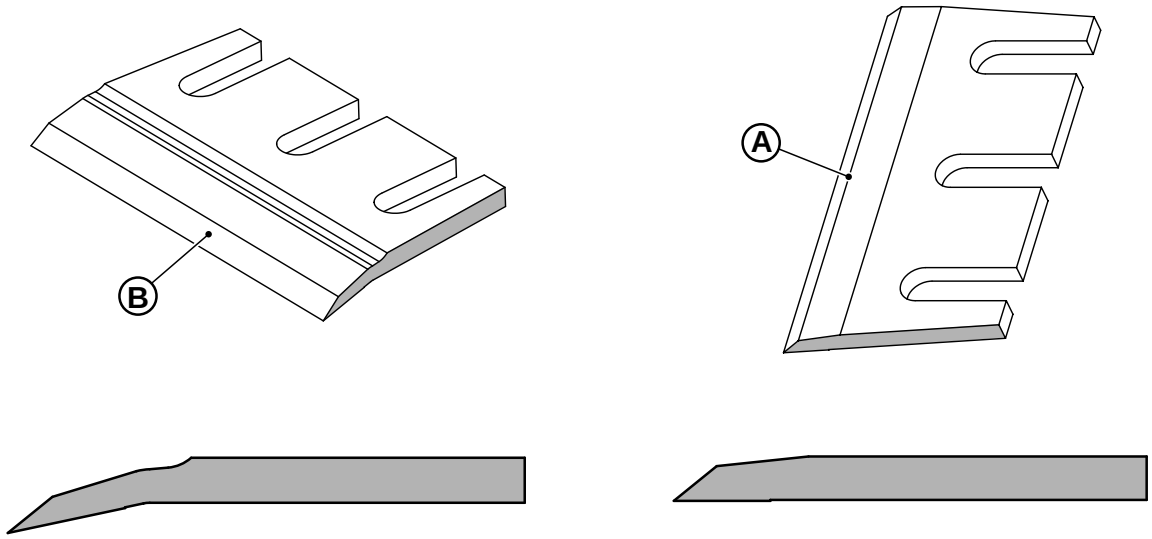
A—Belt Tensioner **X—10 mm (0.4 in.)**



ZX208971 —UN—03JAN14

OUCC002,0004203 -19-09SEP15-21/21

Cutterhead Knives



ZX205772 —UN—17OCT13

ZX205772

A—Straight Knife B—Curved Knife

IMPORTANT: Knife width for 8100—8500 Forage Harvesters is about 180 mm (7.09 in.).

Knife width for 8600 Forage Harvester is about 220 mm (8.66 in.).

IMPORTANT: To avoid cutterhead imbalance, NEVER install different types or sizes of knives (straight or curved) on the cutterhead.

Depending on the crop and the machine model, different types of cutterhead knives are available:

- Straight knives (A) for grass and whole plant silage.
- Curved knives (B) for corn.

To install or remove knives, see **Replace Cutterhead Knives** in Lubrication and Maintenance section.

Continued on next page

OUCC002,00041E1 -19-12NOV14-1/2

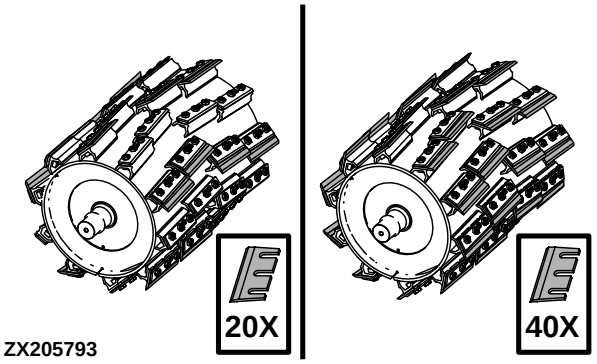
Number and Arrangement of Knives:

IMPORTANT: To avoid damage by cutterhead imbalance, make sure that number and arrangement of knives are correct.

A half set of knives can be used on each type of cutterhead. See **Replace Cutterhead Knives** in Lubrication and Maintenance section.

IMPORTANT: Remove half a set of knives ONLY if kernel processor is not used.

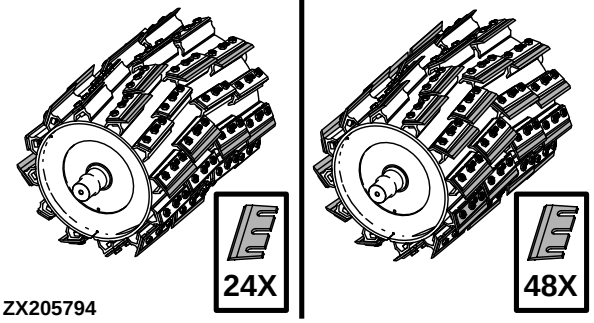
IMPORTANT: If removing a half set of knives, make sure to enter the correct number of knives as described under Cutterhead Assembly Setup Page in Operating the Controls and Displays section.



ZX205793

ZX205793 —UN—17OCT13

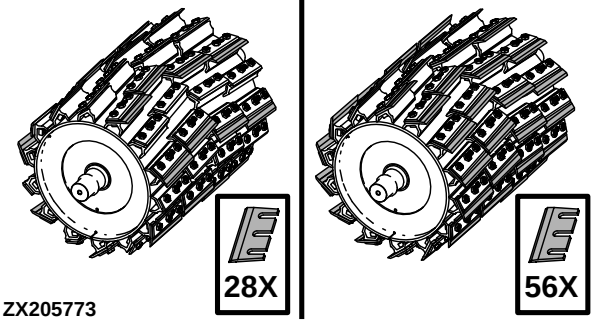
Number of Knives—20/40 Knives



ZX205794

ZX205794 —UN—17OCT13

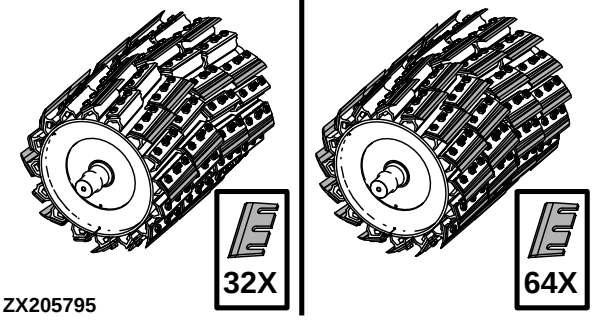
Number of Knives—24/48 Knives



ZX205773

ZX205773 —UN—17OCT13

Number of Knives—28/56 Knives



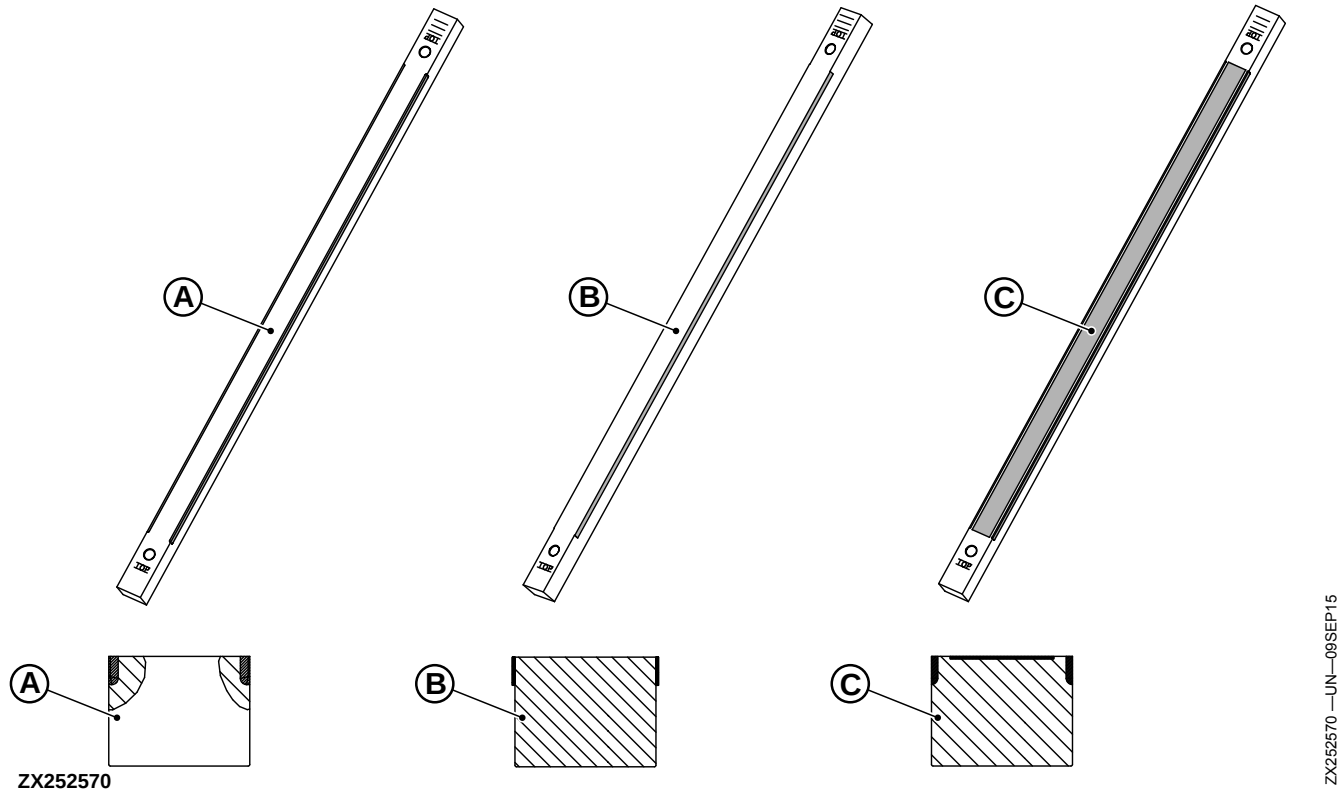
ZX205795

ZX205795 —UN—17OCT13

Number of Knives—32/64 Knives

OUCC002,00041E1 -19-12NOV14-2/2

Stationary Knife



ZX252570 —UN—09SEP15

A—Stationary Knife—Grass **B—Stationary Knife—Corn** **C—Stationary Knife—Universal**

Different types of stationary knives are available:

- Stationary knife for **Grass** (A).
- Stationary knife for **Corn** (B).
- Heavy-duty (Duraline™ Plus) stationary knife for **universal** use (C).

IMPORTANT: Readjust stationary knife after each knife sharpening process. Adjust stationary knife twice a day, even if cutterhead knives have not been sharpened. This will increase knife service life and reduce power requirements.

The stationary knife has two cutting edges. They can be identified by the word “TOP” stamped on the knife.

IMPORTANT: The stationary knife must be installed with the cutting edges in the up position.

When one cutting edge is worn, the stationary knife can be removed and turned end for end (see **Replace Stationary Knife** in Lubrication and Maintenance section).

To adjust stationary knife, see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section.

OUCC002,00041E2 -19-09SEP15-1/1

Kernel Processor Rolls

Different kernel processor rolls are available for use in different crop applications.

- 118 Corn Triangle Tooth rolls.
- 118 Corn Sawtooth rolls.
- 118 DuraLine Corn Sawtooth rolls.
- 178 Whole Crop Triangle tooth rolls.
- 238 Milo Triangle Tooth rolls.
- KernelStar™.

OUCC002,0003D0A -19-06NOV14-1/1

Feed Roll Paddles

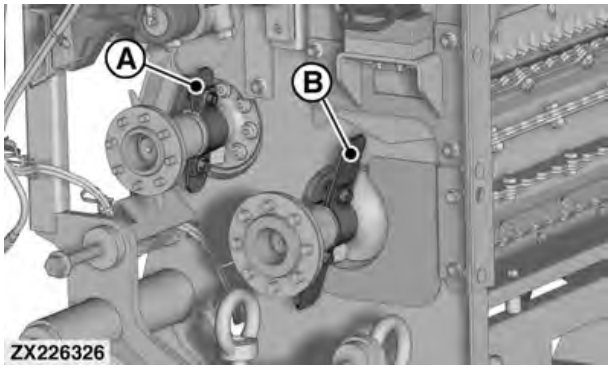
NOTE: Parts removed for illustration purpose only.

Lower front and rear feed rolls are equipped with paddles (A) and (B).

IMPORTANT: It is required to remove paddles (B) when harvesting ear corn silage.

A—Paddle—Rear Feed Roll

B—Paddle—Front Feed Roll



ZX226326 —UN—13NOV14

OUCC002,00041FF -19-13NOV14-1/1

Ear Corn Silage Machine Adaptation

A special adaptation kit is available when operating machine in ear corn silage. Contact your John Deere dealer.

It is composed of:

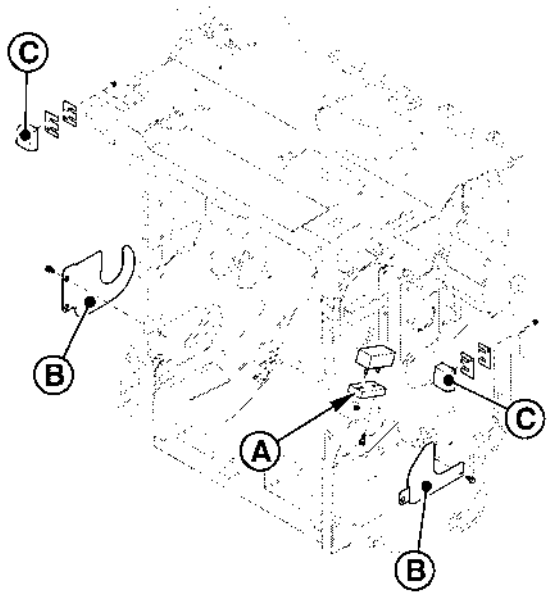
- Special upper front feed roll down stops shim (A).
- Side sealing plates (B) for lower front feed roll.
- Special upper rear feed roll down stops (C).

IMPORTANT: Perform the Mass Flow Sensor Zero Distance calibration after earn corn silage adaptation kit installation or removal. Refer to Interactive Calibration Procedures in Lubrication and Maintenance section.

A—Shim

B—Sealing Plate

C—Down Stop



ZX226327

ZX226327 —UN—13NOV14

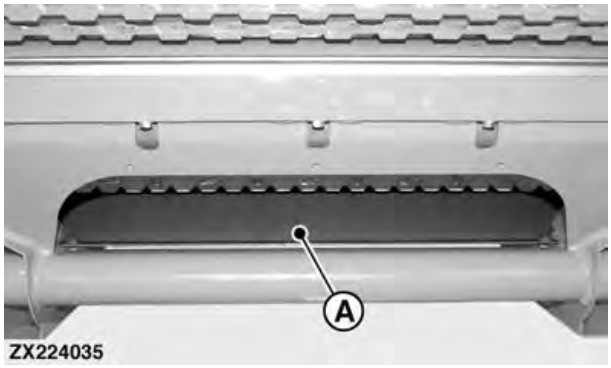
OUCC002,0004C82 -19-10JUN16-1/1

Grain Panels (Corn)

To prevent losses in corn, grain panels (A) and (B) can be installed underneath and at the rear of the lower feed rolls. Contact your John Deere dealer.

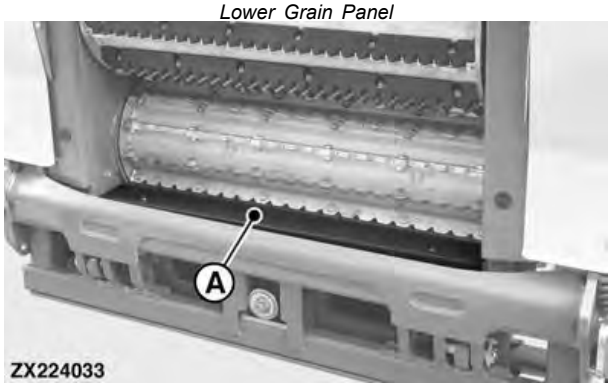
NOTE: If the machine is harvesting grass, the lower panel (A) must be removed. Rear panel (B) can stay in place.

A—Lower Panel **B—Rear Panel**



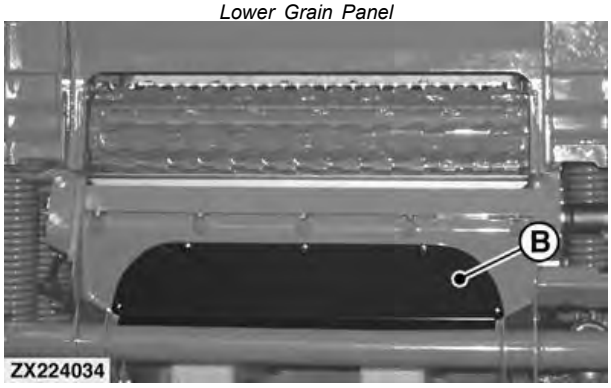
ZX224035 —UN—13NOV14

Lower Grain Panel



ZX224033 —UN—13NOV14

Lower Grain Panel



ZX224034 —UN—13NOV14

Rear Grain Panel

OUCC002,00041FD -19-14NOV14-1/1

Adjust Lateral Tilt Frame Balance Springs

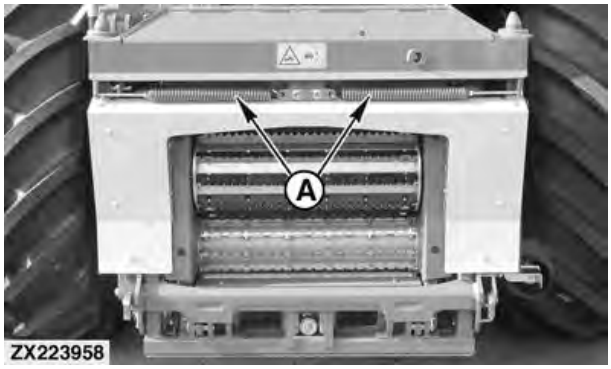
If a pickup or a rotary harvesting unit without height sensors is attached to the machine, it is necessary to adjust the lateral tilt frame balance springs (A) so that the header stays horizontal when the cutterhead is raised.

IMPORTANT: Depending on the header attached to the machine, the spring (A) length differs. Adjust the spring length so that the header tilts smoothly.

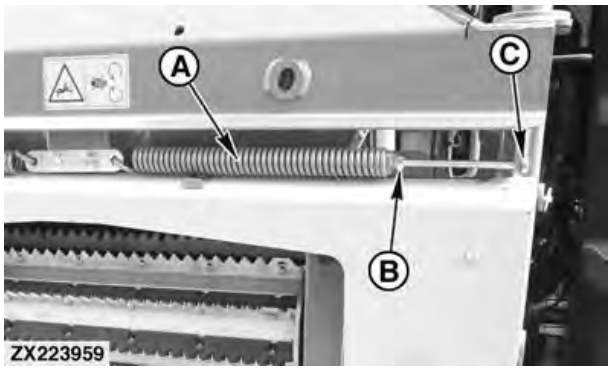
NOTE: Depending on the header attached to the machine, the left and right hand spring length may also differ.

At both sides, loosen lock nut (B) then adjust setting screw (C) to evenly adjust spring (A) length accordingly.

A—Spring
B—Lock Nut
C—Setting Screw



ZX223958 —UN—31OCT14



ZX223959 —UN—31OCT14

OUCC002,00041EB -19-03NOV14-1/1

Open/Close Discharge Chute

CAUTION: To avoid bodily injury, do not open or remove any doors, shields or covers until all rotating parts have stopped completely.

Discharge chute (A) is a heavy assembly. Pay extreme attention during opening and closing processes.

Open Discharge Chute

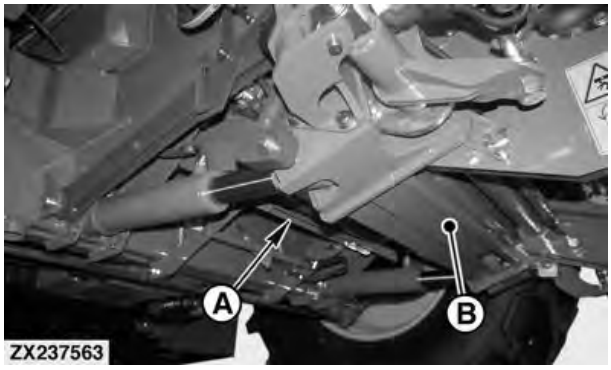
To open discharge chute (A), proceed as follows:

1. Fully raise cutterhead assembly (B).

CAUTION: Before working under raised cutterhead, secure cutterhead with locking beam (C) in lock position as shown.

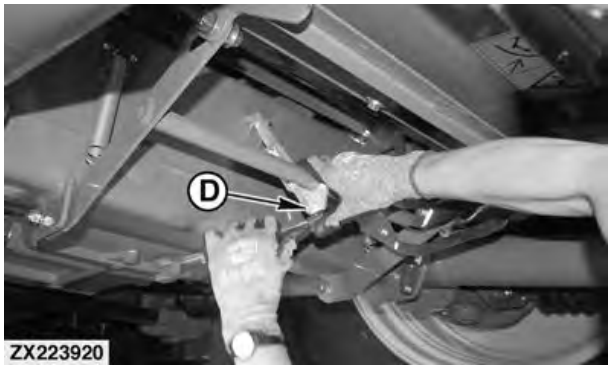
2. On the right-hand side of the cutterhead, place locking beam (C) in lock position as shown (see **Secure Cutterhead Lift Lock** in Lubrication and Maintenance section).
3. Slightly unscrew discharge chute locking device (D) and check that while discharge chute (A) is lowering the safety hook (E) has engaged on rod (F) as shown.

A—Discharge Chute
B—Cutterhead
C—Locking Beam
D—Locking Device
E—Safety Hook
F—Rod

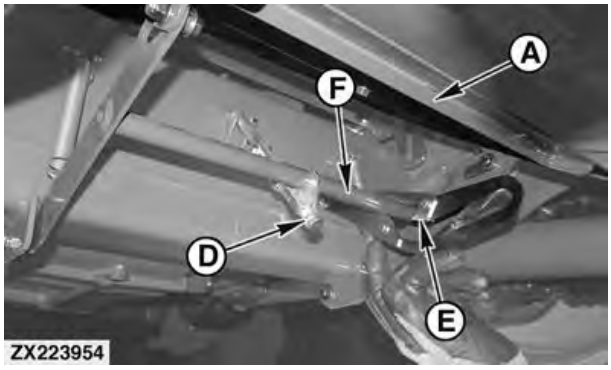


ZX237563 —UN—23MAR15

ZX237562 —UN—23MAR15



ZX223920 —UN—27OCT14



ZX223954 —UN—31OCT14

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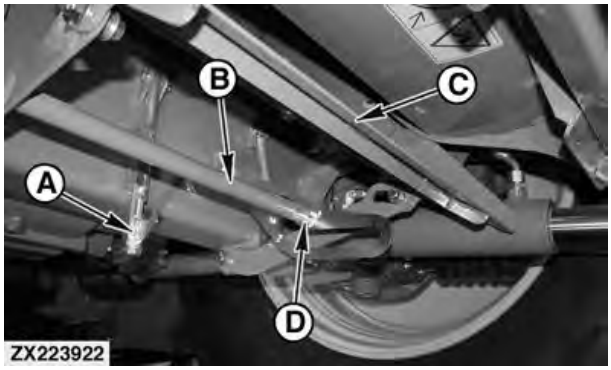
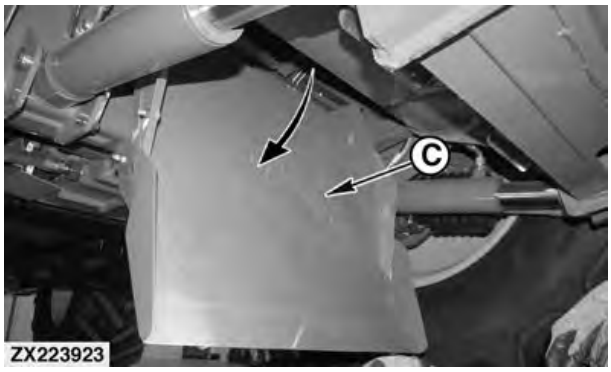
OUCC002,00044E0 -19-19MAR15-1/3

4. Continue unscrewing locking device (A) until it disengages from the rod (B).
5. Slowly raise discharge chute (C) until safety hook (D) can be unhooked from rod (B) then lower discharge chute (C).

A—Locking Device
B—Rod
C—Discharge Chute
D—Safety Hook



ZX223922 —UN—27OCT14



ZX223923 —UN—27OCT14

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OUCC002,00044E0 -19-19MAR15-2/3

Close Discharge Chute

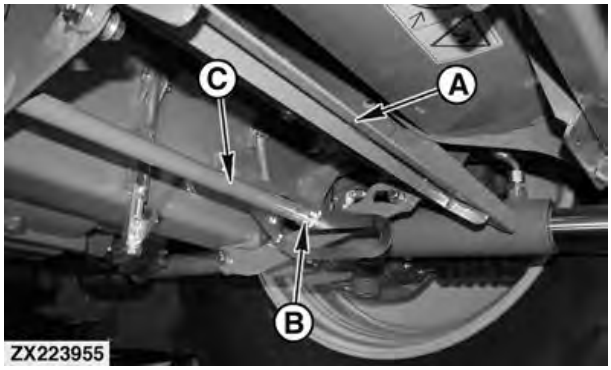
To close discharge chute (A), proceed as follows:

1. Close discharge chute (A) then engage safety hook (B) on rod (C) as shown.

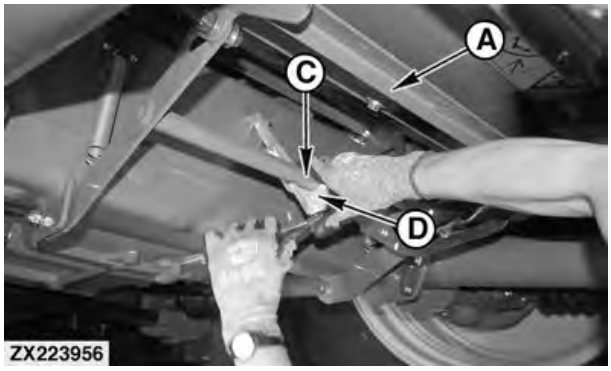
IMPORTANT: While closing the discharge chute (A), make sure that the side panels of the discharge chute (A) are inserted inside the upper part of transition chute.

2. Continue raising discharge chute (A) until locking device (D) can be engaged on rod (C) then fully tighten locking device screw.
3. Fully raise cutterhead.
4. On the right-hand side of the cutterhead, place locking beam (E) in unlock position as shown.
5. Lower cutterhead.

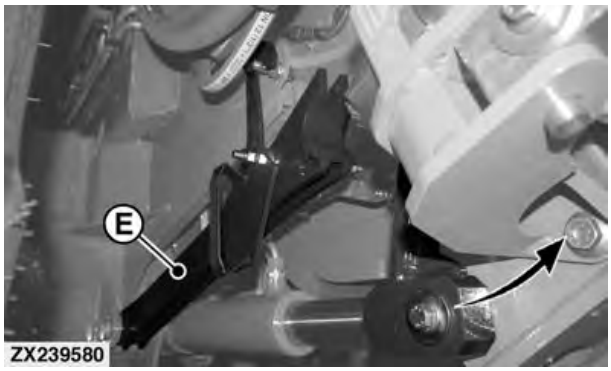
A—Discharge Chute
B—Safety Hook
C—Rod
D—Locking Device
E—Locking Beam



ZX223955 —UN—31OCT14



ZX223956 —UN—31OCT14



ZX239580 —UN—23MAR15

OUCC002,00044E0 -19-19MAR15-3/3

Adjust Kernel Processor Gap (Manual Adjustment)

Depending on kernel processor type installed on machine, the gap can be adjusted from:

- 0.5—4.5 mm (0.020—0.177 in) with roll-type kernel processor.
- 0.5—3 mm (0.020—0.118 in) with KernelStar™.

IMPORTANT: On machine with KernelStar™, it is recommended to reduce the kernel processor gap over its lifetime regularly thus ensuring similar processing quality and increasing lifetime of discs.

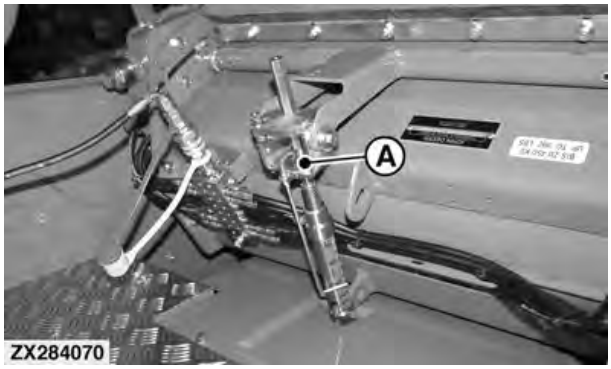
Adjust kernel processor gap using the adjusting device (A) as follows:

1. Slacken off lock nut (B).
2. Slide lock plate (C) away from adjusting spindle (D)—see arrow.
3. To **decrease** the kernel processor gap, turn the spindle (D) **clockwise**.

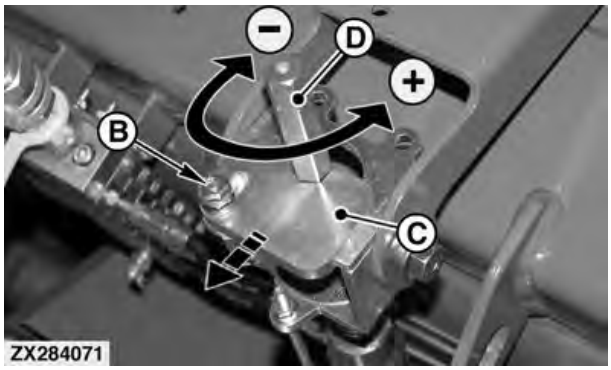
   To **increase** the kernel processor gap, turn the spindle (D) **counterclockwise**.

   Check the desired processor gap at tip of cursor (E) in regard to the scale (F) for roll-type kernel processor or (G) for KernelStar™.
4. Retain spindle (D) with the lock plate (C) then tighten lock nut (B).

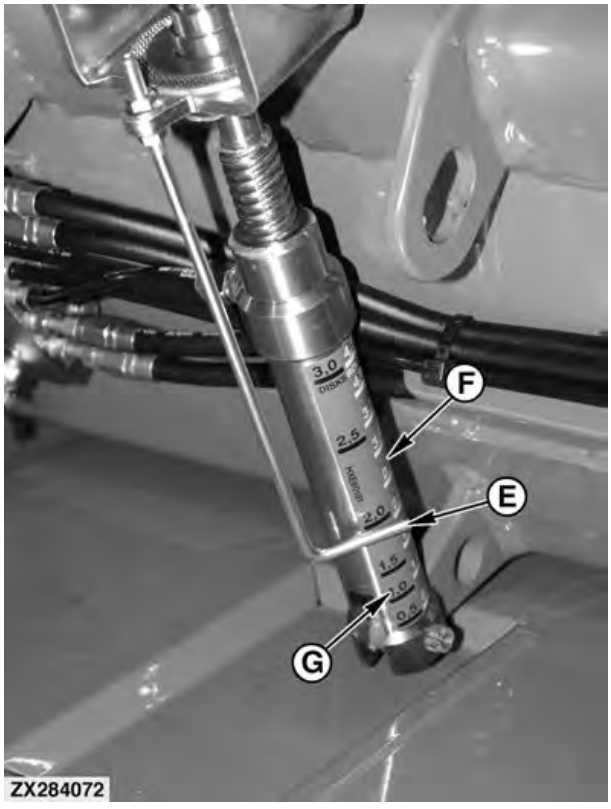
A—Adjusting Device
B—Lock Nut
C—Lock Plate
D—Adjusting Spindle
E—Cursor
F—Scale—For Roll-Type Kernel Processor
G—Scale—For KernelStar™



ZX284070 —UN—18JUN16



ZX284071 —UN—18JUN16



ZX284072 —UN—18JUN16

OUCC002,0004CA9 -19-18JUN16-1/1

Adjust Spiral/Recutter Floor

CAUTION: To avoid bodily injury, do not open or remove any doors, shields or covers until all rotating parts have stopped completely.

Adjust the spiral/recutter floor as soon as performance of the machine is impacted.

NOTE: Initial setting is one shim of 5 mm (0.20 in.) at both sides for 2-3 mm (0.08-0.12 in.) clearance between tip of knives and floor.

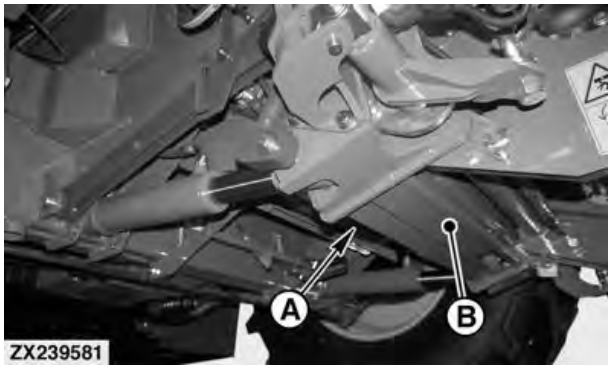
If necessary, adjust spiral/recutter floor (A) as follows:

1. Fully raise cutterhead assembly (B).

CAUTION: Before working under raised cutterhead, secure cutterhead with locking beam (C) in lock position as shown.

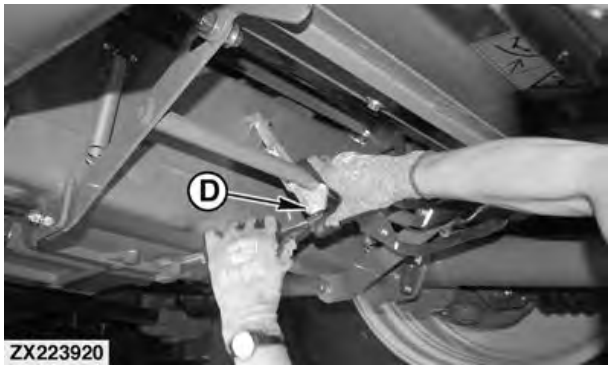
2. On the right-hand side of the cutterhead, place locking beam (C) in lock position as shown (see **Secure Cutterhead Lift Lock** in Lubrication and Maintenance section).
3. Slightly unscrew discharge chute locking device (D) and check that while discharge chute (E) is lowering the safety hook (F) has engaged on rod (G) as shown.

A—Spiral/Recutter Floor
B—Cutterhead
C—Locking Beam
D—Locking Device
E—Discharge Chute
F—Safety Hook
G—Rod

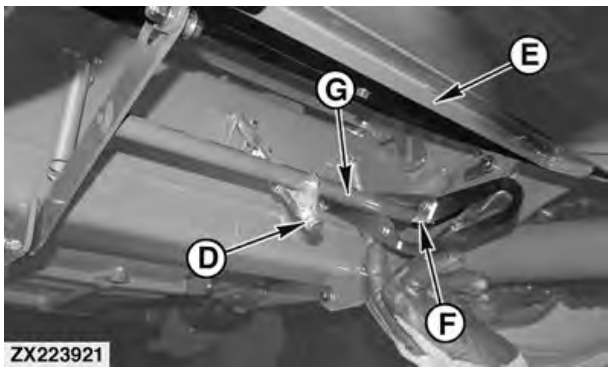


ZX239581 —UN—23MAR15

ZX237562 —UN—23MAR15



ZX223920 —UN—27OCT14



ZX223921 —UN—27OCT14

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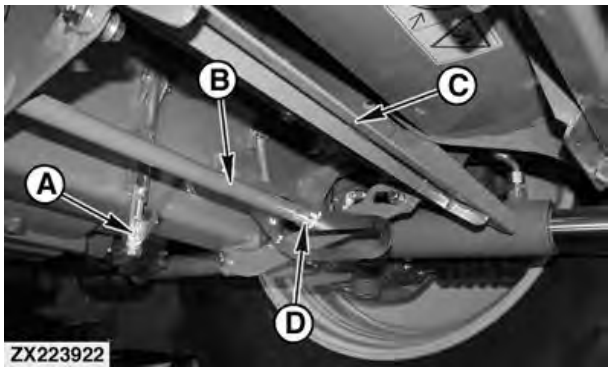
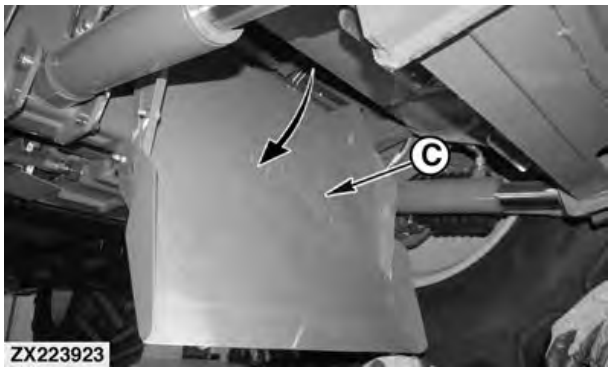


ZX223922 —UN—27OCT14



ZX223923 —UN—27OCT14

4. Continue unscrewing locking device (A) until it disengages from the rod (B).
5. Slowly raise discharge chute (C) until safety hook (D) can be unhooked from rod (B) then lower discharge chute (C).
6. On both sides of cutterhead frame, loosen screw (E).

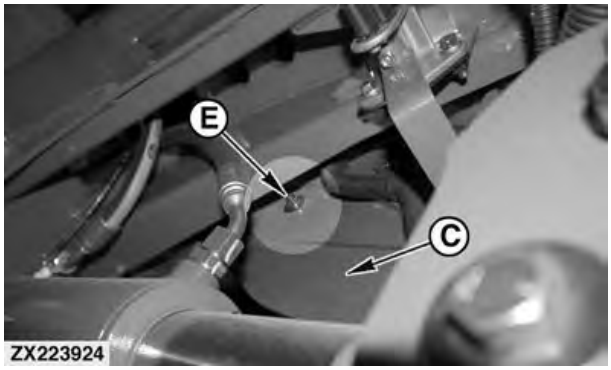
IMPORTANT: Do not remove screws (E).

7. Underneath the spiral/recutter floor (F), loosen the four screws (G).
8. Insert or remove the desired amount of shims (H).

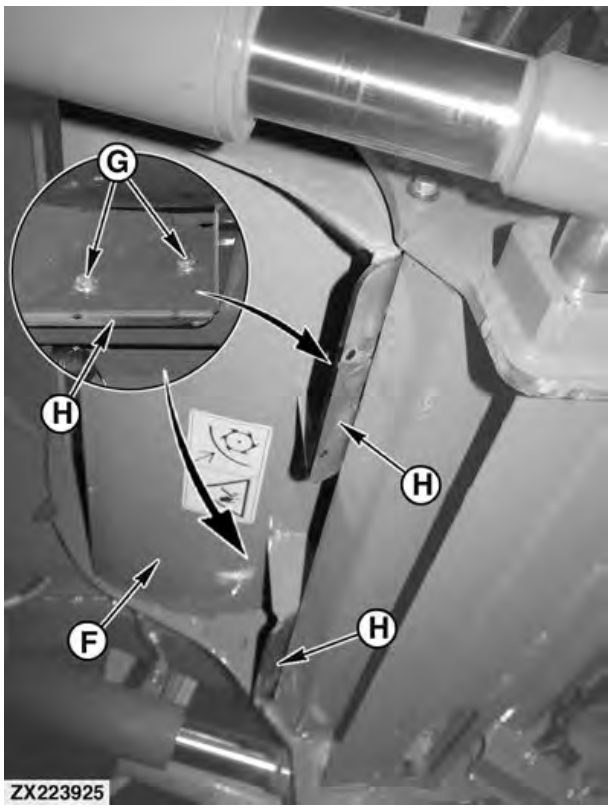
NOTE: Shims (H) with 1 mm and 5 mm (0.04 and 0.20 in.) thickness are stored in the tool box compartment.

9. Tighten attaching screws (G) to 140 N·m (103 lb.-ft.).
10. Tighten attaching screws (E) to 30 N·m (22 lb.-ft.).

A—Locking Device
B—Rod
C—Discharge Chute
D—Safety Hook
E—Screw (2 used)
F—Spiral/Recutter Floor
G—Screw (4 used)
H—Shim



ZX223924 —UN—27OCT14



ZX223925 —UN—27OCT14

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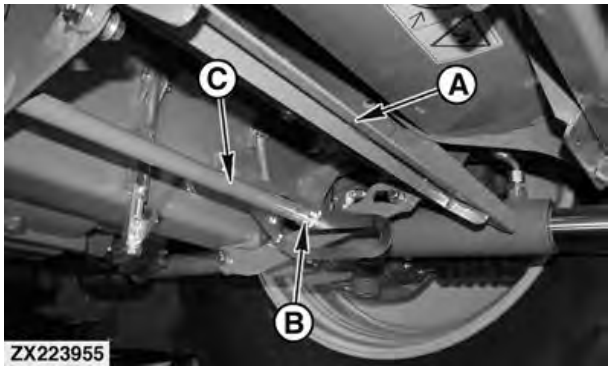
OUCC002,00044E1 -19-19MAR15-2/3

11. Close discharge chute (A) then engage safety hook (B) on rod (C) as shown.

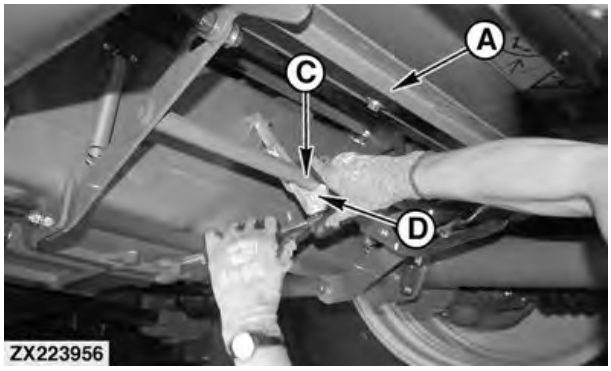
IMPORTANT: While closing the discharge chute (A), make sure that the side panels of the discharge chute (A) are inserted inside the upper part of transition chute.

12. Continue raising discharge chute (A) until locking device (D) can be engaged on rod (C) then fully tighten locking device screw.
13. Fully raise cutterhead.
14. On the right-hand side of the cutterhead, place locking beam (E) in unlock position as shown.
15. Lower cutterhead.

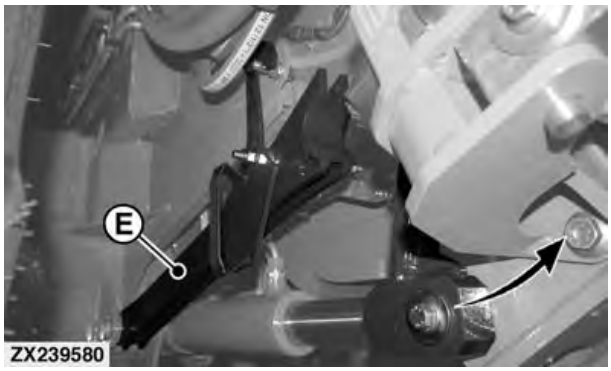
A—Discharge Chute
B—Safety Hook
C—Rod
D—Locking Device
E—Locking Beam



ZX223955 —UN—31OCT14



ZX223956 —UN—31OCT14



ZX239580 —UN—23MAR15

OUCC002,00044E1 -19-19MAR15-3/3

Adjust Smooth Roll Scraper

CAUTION: Before servicing or adjusting the machine, always disengage all drives, shut off engine and wait until all moving parts have stopped.

While opening or closing the feed roll housing, make sure that no one stays at vicinity until feed roll housing is latched in opened or closed position.

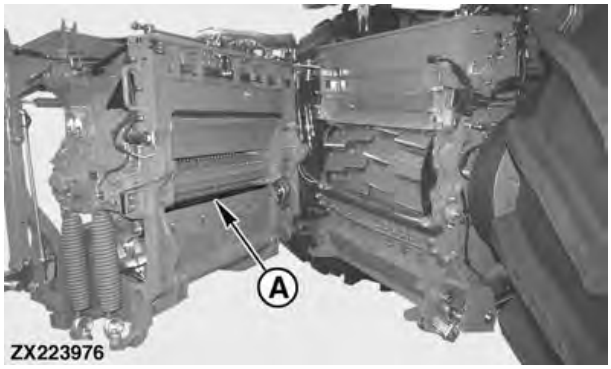
IMPORTANT: Keep the scraper (A) as sharp as possible. Replace scraper if worn out.

If the scraper (A) is replaced, pay attention to its orientation when installing new scraper. Spike shape of scraper must be oriented toward the smooth feed roll (see arrow).

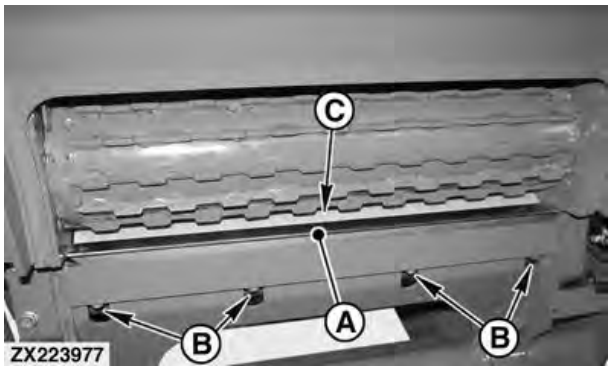
To adjust smooth roll scraper (A), proceed as follows:

1. Open feed roll housing horizontally (see **Open/Close Feed Roll Housing** in Lubrication and Maintenance section).
2. Loosen all fixing screws (B).
3. Adjust distance between tip of scraper (A) and smooth roll (C) to 0.5—0.8 mm (0.02—0.03 in.).
4. Tighten all fixing screws (B) paying attention not to modify the adjustment.
5. Close feed roll housing.

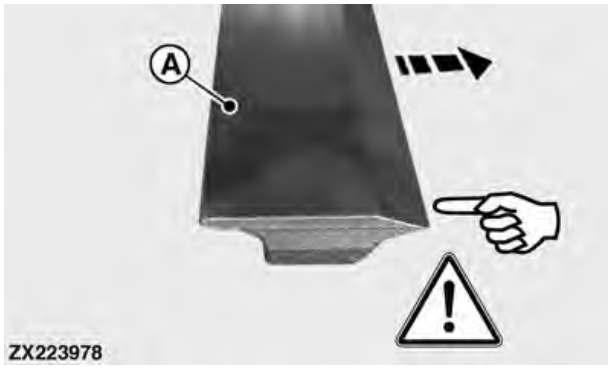
A—Scraper
B—Screw (4 used)
C—Smooth Roll



ZX223976 —UN—03NOV14



ZX223977 —UN—03NOV14



ZX223978 —UN—03NOV14

OUCC002,0003D12 -19-04NOV14-1/1

Adjust Feed Roll Springs

The feed roll springs (A) preload can be adjusted by repositioning the adjusting washers (B) between the screw (C) and frame (E) or between the eyebolt (D) and frame (E).

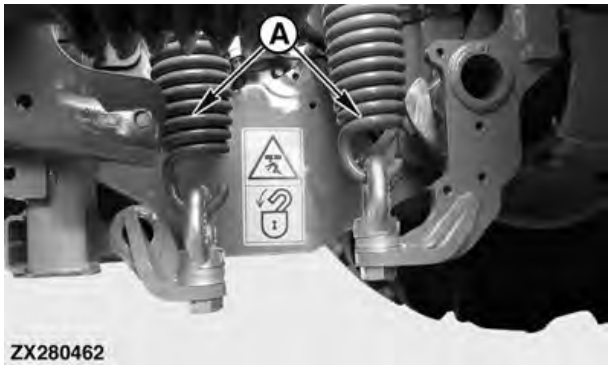
IMPORTANT: When adjusting the feed roll spring tension, always make sure that eyebolts (D) are oriented at 90° to the side wall of the feed roll housing, as shown.

NOTE: Factory setting: All washers (B) are located between the eyebolt (D) and frame (E) as shown.

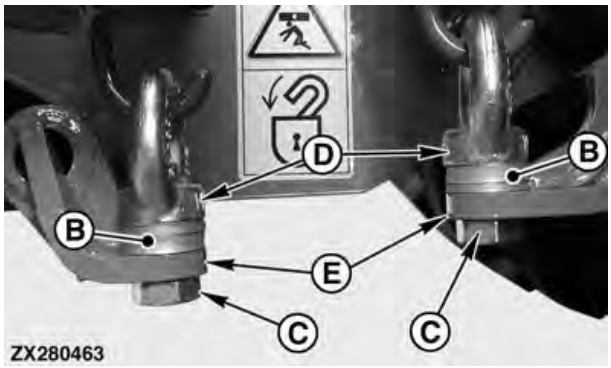
Recommendation:

- Adjust spring tension according to field conditions and length of cut.
- In longer length of cut, it is advisable to increase rear spring tension to reduce rear feed roll movements.

A—Spring (4 used)
B—Washer
C—Screw
D—Eyebolt
E—Frame



ZX280462 —UN—18JUN16



ZX280463 —UN—18JUN16

OUCC002,0004C90 -19-13JUN16-1/1

Adjust Feed Roll Bars

Adjust Upper Feed Roll Bars:

The upper front feed roll (A) is equipped with reversible bars (B) and plastic bars (C).

If necessary, bar (B) can be installed with serrated pattern oriented in or out of feed roll.

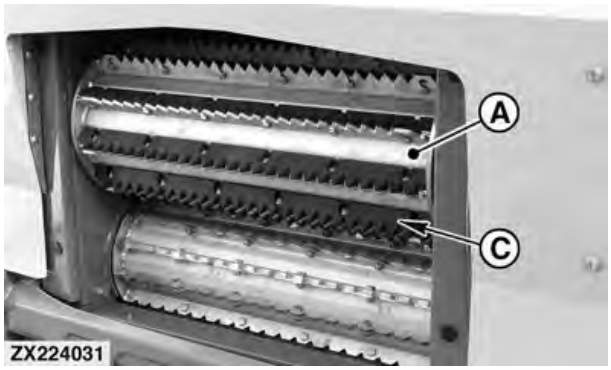
Plastic bars can be removed in corn if more aggressiveness is required on upper front feed roll (10 rows and up).

IMPORTANT: Plastic bar (C) cannot be reversed.

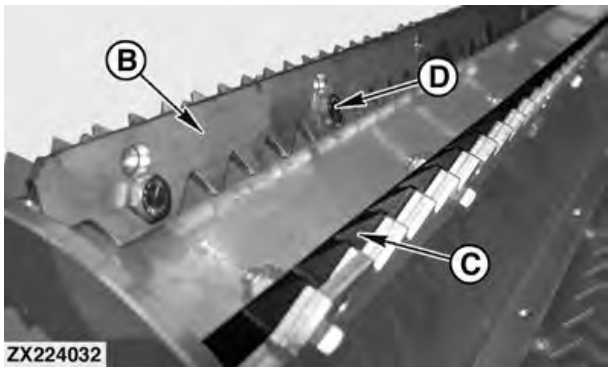
Tighten fixing screws (D) to 46—62 N·m (34—46 lb·ft).

Ensure feed roll bars and plastic bars are aligned during installation.

A—Feed Roll
B—Reversible Bar
C—Plastic Bar
D—Fixing Screw



ZX224031 —UN—13NOV14



ZX224032 —UN—13NOV14

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OUCC002,0004C52 -19-31MAY16-1/2

Adjust Lower Feed Roll Bars:

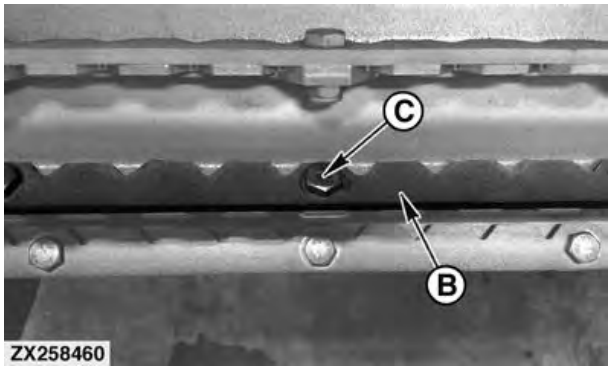
The lower front feed roll (A) is equipped with reversible bars (B).

If necessary, bar (B) can be installed with serrated pattern oriented in or out of feed roll.

IMPORTANT: Tighten fixing screws (C) to 46—62 N·m (34—46 lb·ft).

A—Feed Roll
B—Reversible Bar
C—Fixing Screw

ZX280459 —UN—18JUN16



ZX280460 —UN—18JUN16

OUCC002,0004C52 -19-31MAY16-2/2

Air Compressor (Option)

Air Compressor System Description:

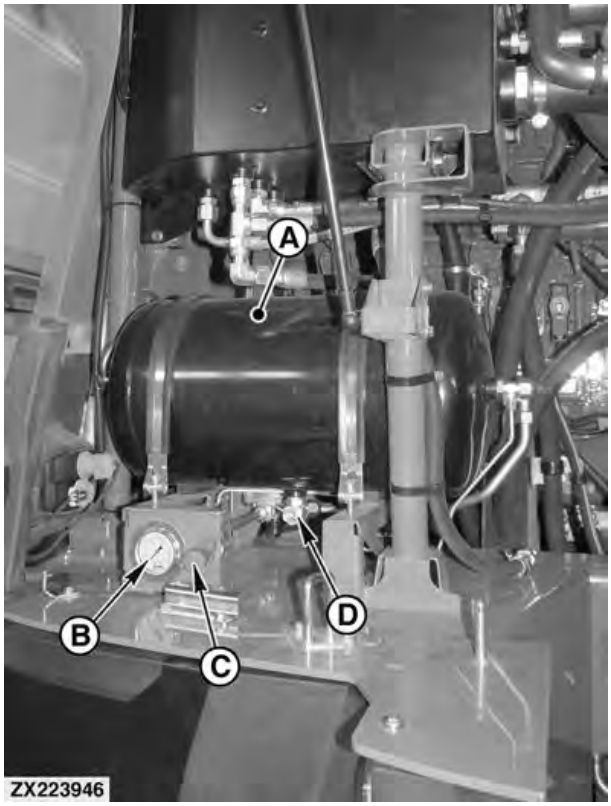
The air compressor system features the following main components:

- Compressed air reservoir (A) with a capacity of 40 L (10.5 gal.)
- Pressure gauge (B). **Working pressure:** 8 bar (800 kPa; 116 psi).
- Quick coupler (C) for compressed air.
- Drain valve (D).
- Pressure control valve (E) with a muffler (F).
- Air filter (G).

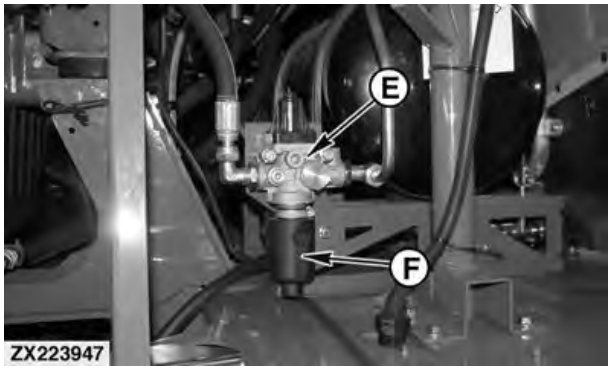
The air compressor motor being continuously driven by the engine, the muffler (F) allows the compressed air to escape while the system is not operated.

To operate the air compressor system, an activation is required.

A—Reservoir
B—Pressure Gauge
C—Quick Coupler
D—Drain Valve
E—Pressure Control valve
F—Muffler
G—Air Filter



ZX223946 —UN—30OCT14



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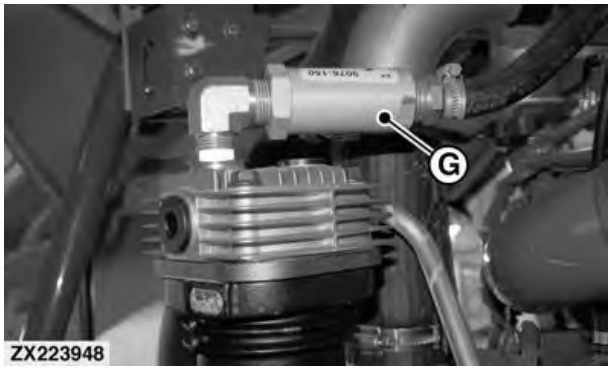

ZX223948 —UN—30OCT14

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OUCC002,00041A8 -19-30OCT14-1/2

Activate/Operate Air Compressor System:

The air compressor system is activated from the cab. Activating air compressor is only possible if the following conditions are met (see **CommandTouch™ Armrest Console** in Operating the Controls and Displays section):

- Engine running at low idle
- Road safety mode button in road mode
- Park brake engaged
- Multi-function lever in neutral position

Press the air compressor button (A) once to activate the air compressor control valve (B). Indicator light (C) turns ON when air compressor is ready to use.

Attach suitable air hose on the quick coupler (D) and use gauge (E) to check pressure.

If necessary, relieve the system air pressure as follows:

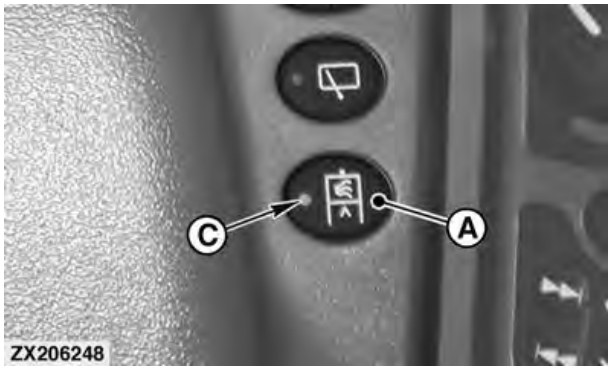
IMPORTANT: Do not relieve system air pressure with system activated.

NOTE: Daily drain water from air reservoir. Use drain valve (F).

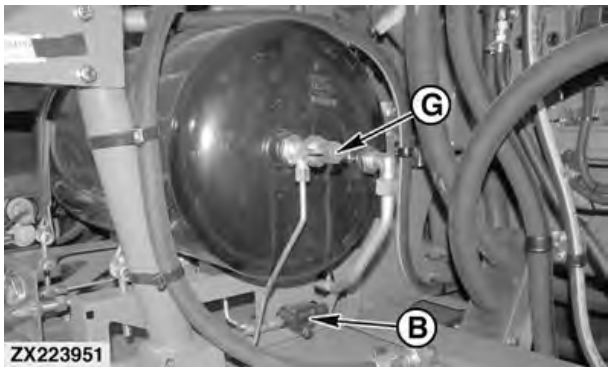
1. De-activate system. Press air compressor button (A) and check that indicator light (C) turns off.
2. Shut off engine.
3. Open the drain valve (F) underneath the air reservoir.

NOTE: In normal operation, do not use receptacle (G). Receptacle (G) is for diagnostic purpose only (contact your John Deere dealer).

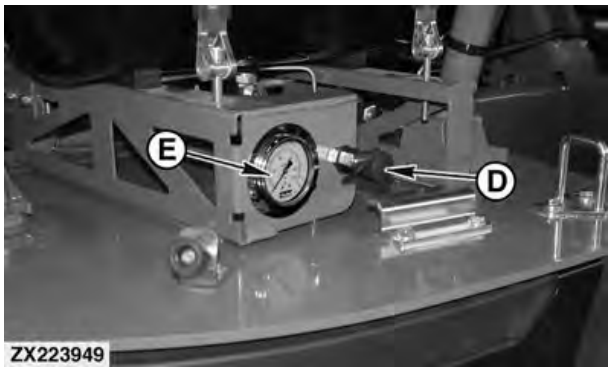
A—Air Compressor Button
B—Control Valve
C—Indicator Light
D—Quick Coupler
E—Pressure Gauge
F—Drain Valve
G—Receptacle



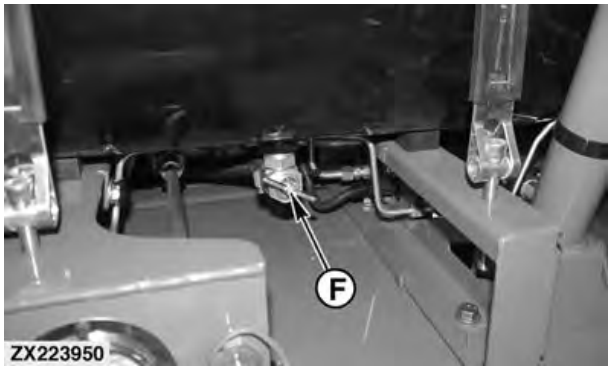
ZX206248 —UN—22NOV13



ZX223951 —UN—30OCT14



ZX223949 —UN—30OCT14

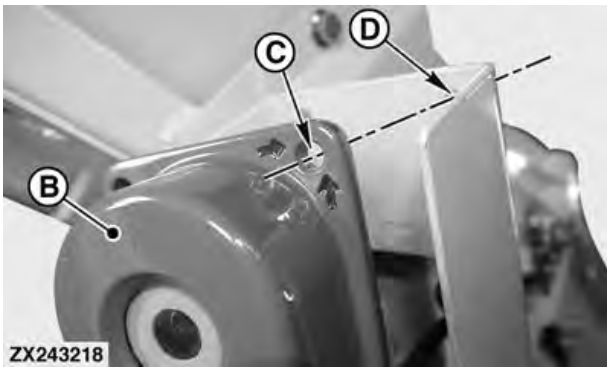


ZX223950 —UN—30OCT14

OUCC002,00041A8 -19-30OCT14-2/2

Transfer Stereo Camera From Machine-to-Machine (If Equipped)

ZX243217 —UN—30JUN15



ZX243218 —UN—30JUN15

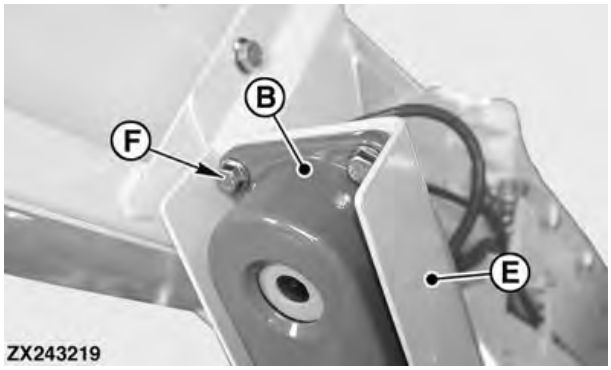
Whenever the stereo camera must be transferred from one machine spout to another one, install camera as follows:

1. Disconnect and remove camera from the spout.
2. Connect spout camera cable (A) to brown receptacle of camera (B), as shown.
3. Align upper right camera fixing hole (C) with camera bracket relevant hole (D), as shown.

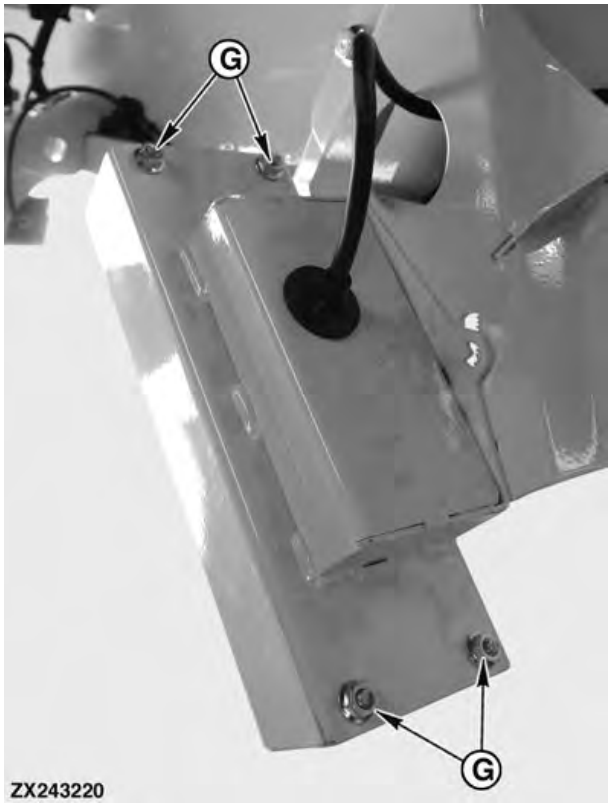
NOTE: See arrows stamped on camera housing.

4. Attach camera (B) to bracket (E) using four flange screws (F) and four flange nuts (G).
5. Access the Calibration Procedure Page and perform the Active Fill Control System calibration (see **Interactive Calibration Procedures** in Lubrication and Maintenance section).

A—Camera Cable
B—Camera
C—Camera Fixing Hole
D—Hole
E—Bracket
F—Flange Screw (M8X25)
G—Flange Nut (M8)



ZX243219 —UN—30JUN15



ZX243220 —UN—30JUN15

OUCC002,0004CF5 -19-29JUN16-1/1

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 -19-12JUN15-1/1

Engine Compartment Access Ladder (8100—8600 Only)

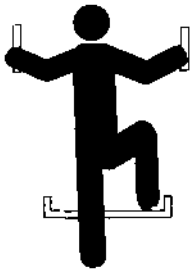
CAUTION: Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

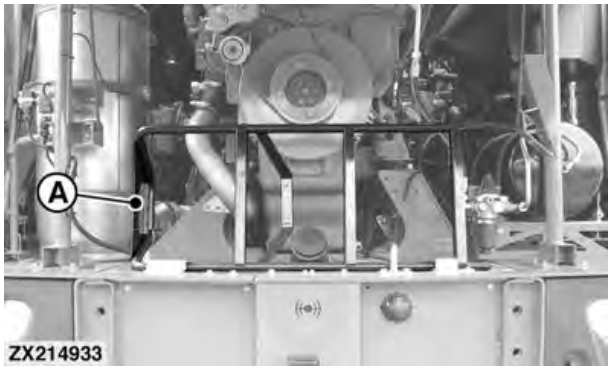
To access engine compartment, use ladder (A) as follows:

1. Remove quick-lock pin (B) from holder (C).
2. Slide ladder (A) away from holder (D).

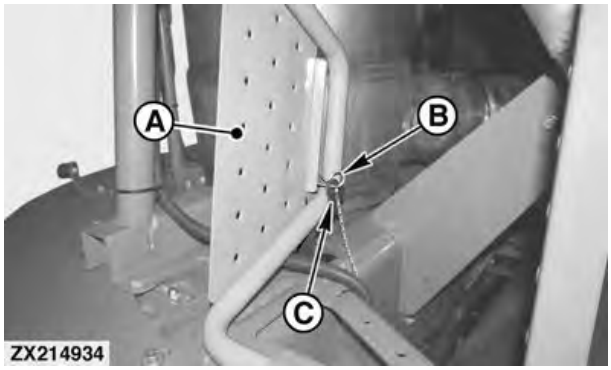
A—Ladder
B—Quick-Lock Pin
C—Holder
D—Holder



T133468 —UN—15APR13



ZX214933 —UN—06OCT14



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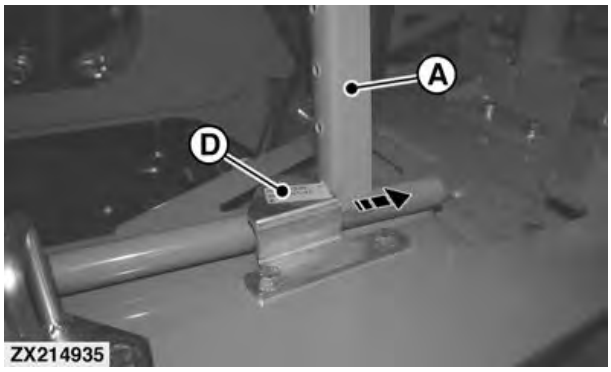

ZX214935 —UN—06OCT14

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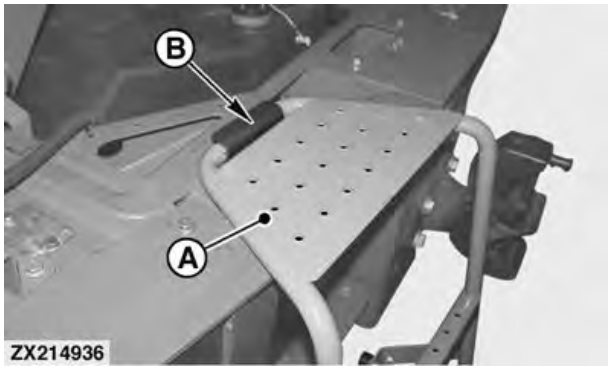
OUCC002,00046CB -19-04SEP15-1/3

3. Insert top of ladder (A) into one of the three brackets (B) to access left, right or rear side of the engine compartment, as shown.

A—Ladder **B—Bracket**



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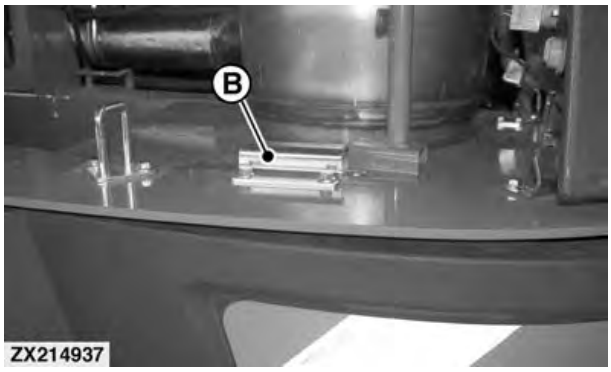

ZX214937 —UN—06OCT14

Left-hand Side Bracket

ZX214938 —UN—06OCT14

Ladder on Left-hand Side Bracket

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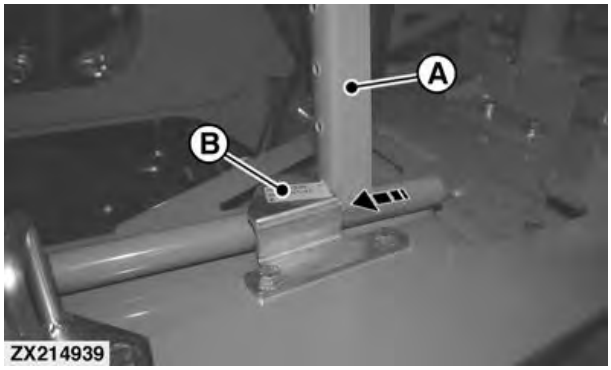
Store ladder (A) back in holders (B) and (C) then secure with quick-lock pin (D), as shown.

A—Ladder
B—Holder
C—Holder
D—Quick-Lock Pin



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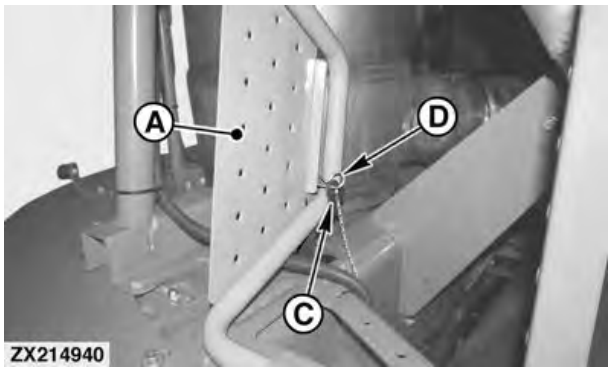
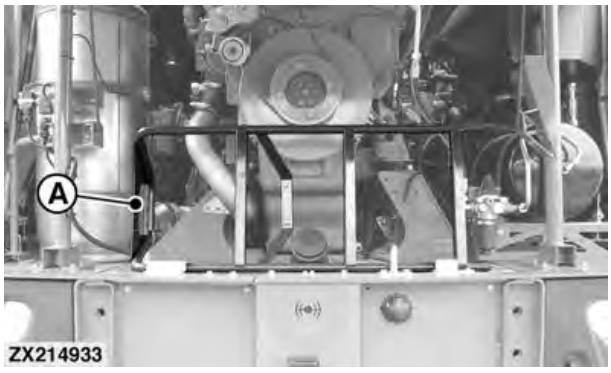


ZX214940 —UN—06OCT14



ZX214933 —UN—06OCT14

OUCC002,00046CB -19-04SEP15-3/3

Engine Compartment Access Ladder (8700 and 8800 Only)

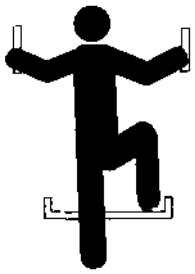
CAUTION: Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

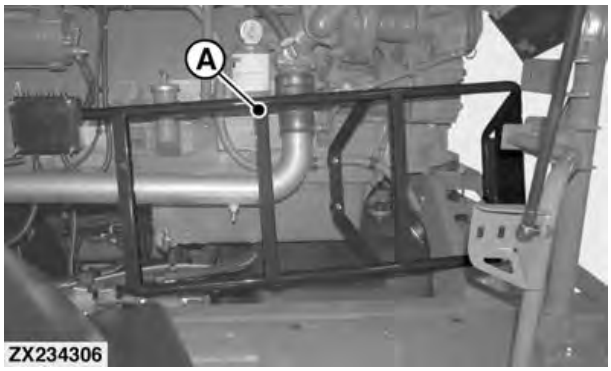
To access engine compartment, use ladder (A) as follows:

1. Unlatch ladder (A) from clamps (B).
2. Slide ladder (A) away from holder (C).

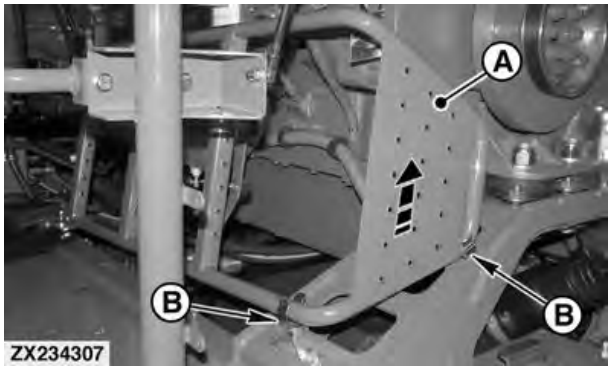
A—Ladder
B—Clamp
C—Holder



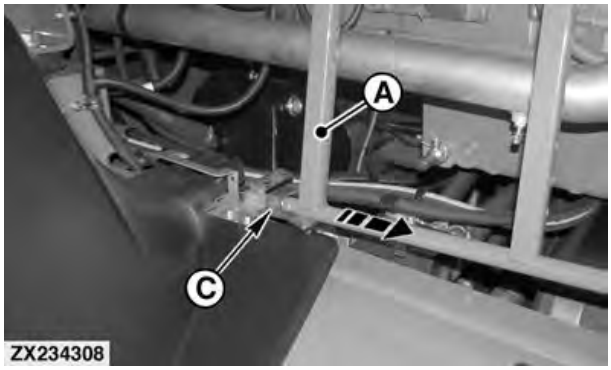
T133468 —UN—15APR13



ZX234306 —UN—23MAR15



ZX234307 —UN—23MAR15



ZX234308 —UN—23MAR15

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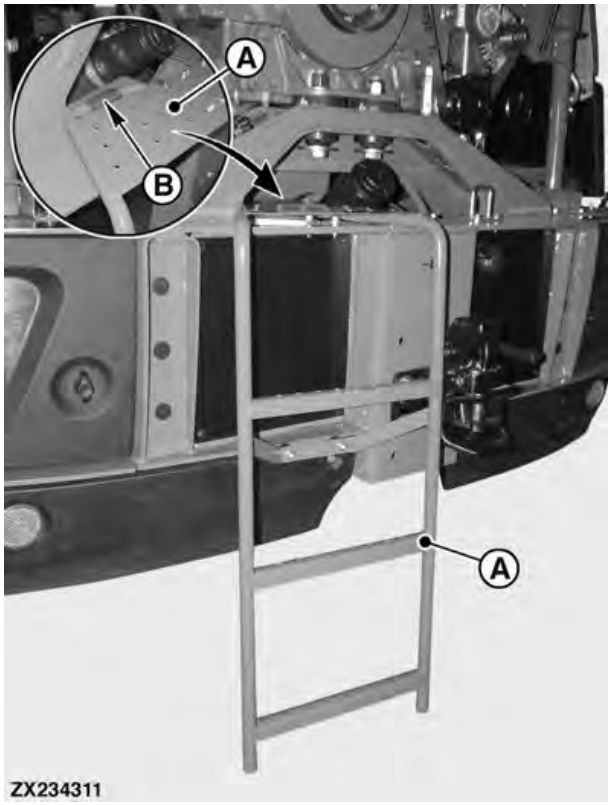
OUCC002,00044FB -19-20MAR15-1/3

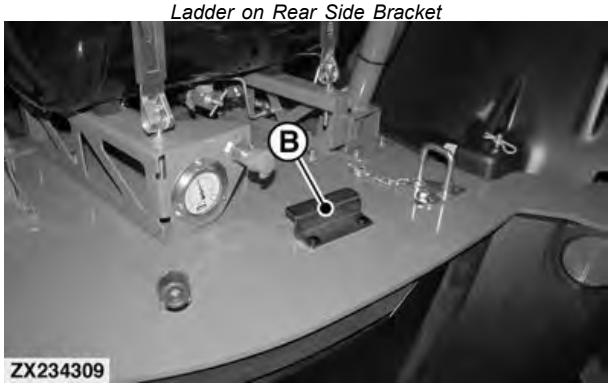
3. Insert top of ladder (A) into one of the three brackets (B) to access left, right or rear side of the engine compartment, as shown.

A—Ladder **B—Bracket**



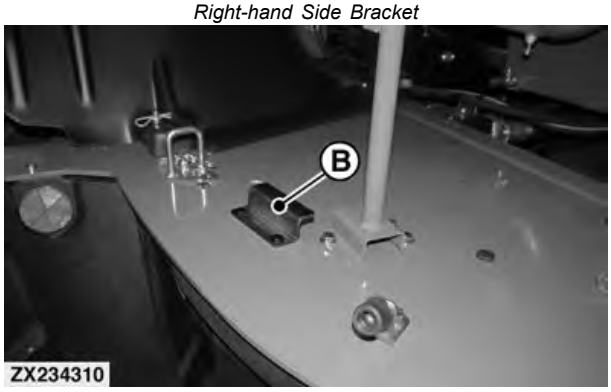
ZX234311 —UN—23MAR15

Ladder on Rear Side Bracket



ZX234309 —UN—23MAR15

Right-hand Side Bracket



ZX234310 —UN—23MAR15

Left-hand Side Bracket

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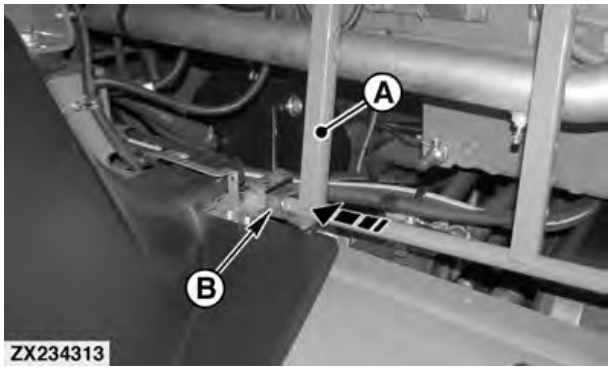
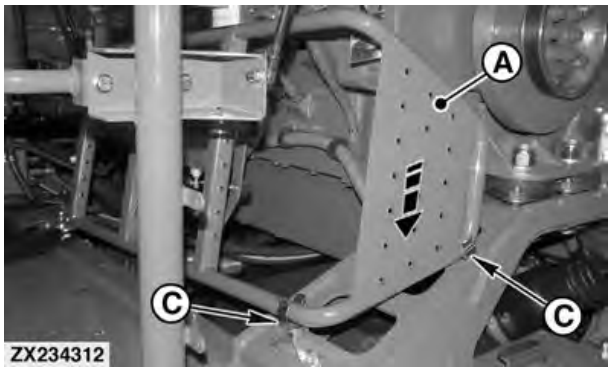
Store ladder (A) back in holder (B) then secure with clamps (C), as shown.

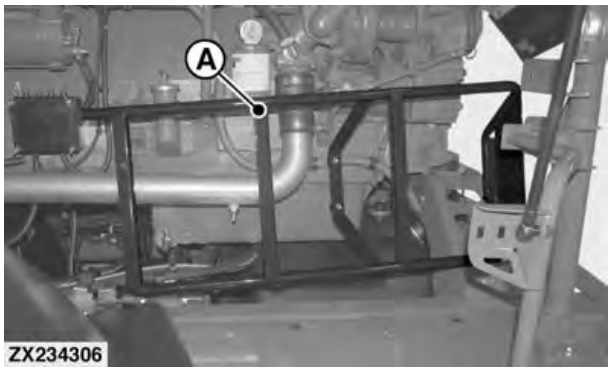
A—Ladder
B—Holder
C—Clamp



ZX234313 —UN—23MAR15



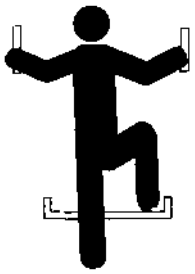
ZX234312 —UN—23MAR15



ZX234306 —UN—23MAR15

OUCC002,00044FB -19-20MAR15-3/3

Central Service Compartment Access



T133468 —UN—15APR13

CAUTION: Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps, handholds, and handrails.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.

Central service compartment is accessible from the right-hand side of the machine and provides an easy access to the following machine components:

- Cooling elements
- Air cleaner elements
- Hydraulic system
- Additive dosing system (if equipped)
- Blower
- Grass chute
- Kernel processor (if equipped)
- Spout motor elements
- Fuse center
- Fuel tank elements
- ProDrive™ or PBST Transmission elements

ZX214911 —UN—06OCT14

To access the desired element, open central service compartment access door (A).

IMPORTANT: Keep slip resistant platforms (B) clean and free of grease or oil. Never operate the machine without platforms (B) or covers (C) and (D) at their respective locations.

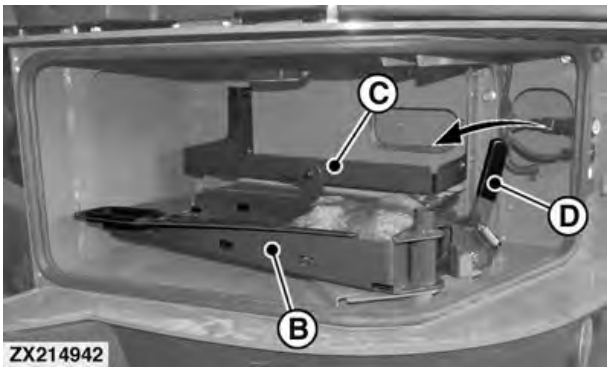
ZX284039 —UN—18JUN16

A—Access Door
B—Slip Resistant Platform
C—Cover
D—Cover

OUCC002,0004C63 -19-18JUN16-1/1

Tool Box Compartment

ZX214941 —UN—06OCT14



ZX214942 —UN—06OCT14

To access tool box compartment, open left-hand rear cover (A).

Two boxes are available. The lower tool box (B) is swingable whereas the upper box (C) is fixed.

Push lever (D) in direction of arrow to unlatch then swing out tool box (B) as shown.

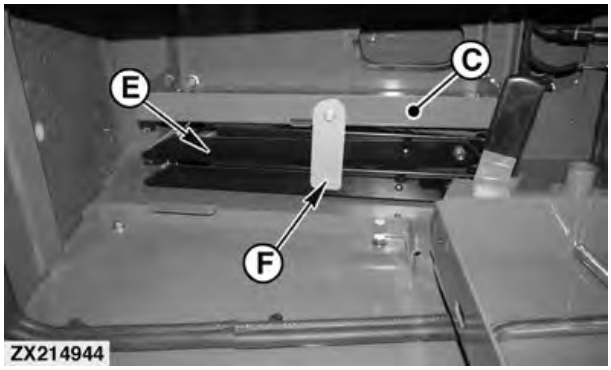
NOTE: Lever (D) will latch again once tool box (B) is swung out. Swing in tool box (B) in reverse order.

Wheel chocks (E) can be stored underneath upper tool box (C) and locked with latch (F), as shown.

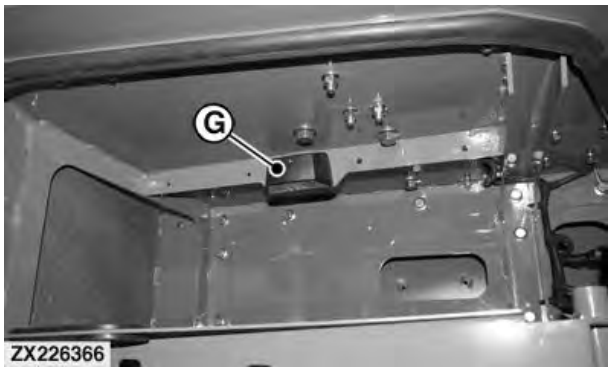
When tool box compartment cover (A) is opened, light (G) is activated.

A—Cover
B—Tool Box—Swingable
C—Tool Box—Fixed
D—Latching Lever
E—Wheel Chock
F—Latch
G—Tool Box Light

ZX214943 —UN—06OCT14



ZX214944 —UN—06OCT14



ZX226366 —UN—15NOV14

OUCC002,0004209 -19-15NOV14-1/1

Service Lights (If Equipped)

If equipped with, the engine compartment, the central service compartment, the feed roll housing, and the left-hand side cab access ladder lights are actuated with their relevant switches:

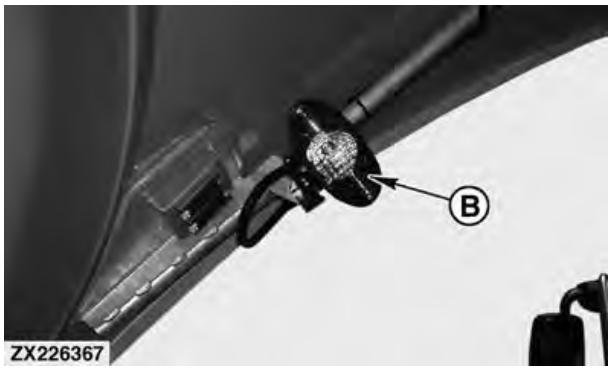
Engine Compartment Lights

Service light switch (A) is located in tool box compartment.

- A short press on switch (A) actuates the left and right side doors lights (B), and the rear door light (C).
- A long press on switch (A) actuates all service lights at once.

A—Engine Compartment Service Light Switch
B—Side Door Light
C—Rear Door Light

ZX226365 —UN—15NOV14



ZX226367 —UN—15NOV14

ZX226368 —UN—15NOV14

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Central Service Compartment Light

Service light switch (A) is located in central service compartment.

- A short press on switch (A) actuates the relevant light (B).
- A long press on switch (A) actuates all service lights at once.

A—Central Service Compartment Service Light Switch

B—Service Light

ZX226369 —UN—17JUN16

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Continued on next page

OUCC002,0004C8C -19-13JUN16-2/3

Feed Roll Housing and Left-Hand Access Ladder Lights

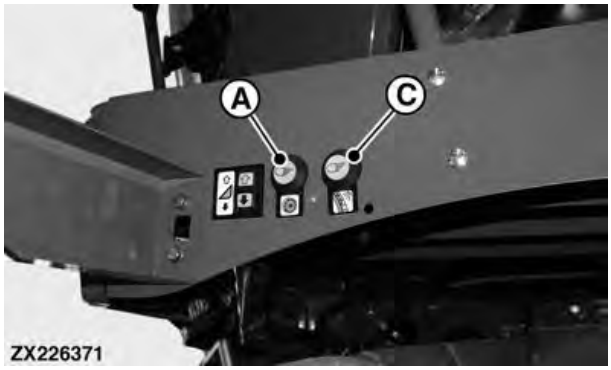
Feed roll housing service light switch (A) is located above left-hand front wheel.

- A short press on switch (A) actuates the relevant light (B).
- A long press on switch (A) actuates all service lights at once.

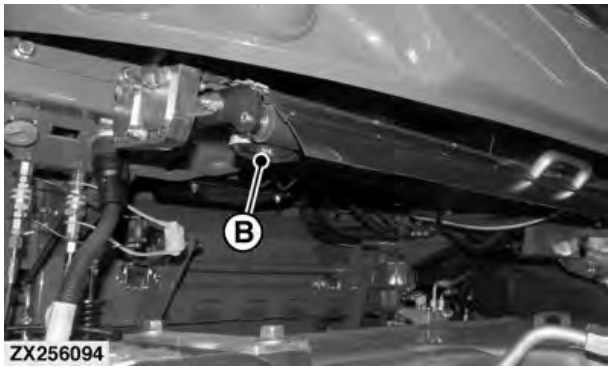
Access ladder light switch (C) actuates the relevant light (D).

NOTE: Light (D) is also actuated during entrance/exit lighting process (see Lighting Setup Page in Operating the Controls and Displays section).

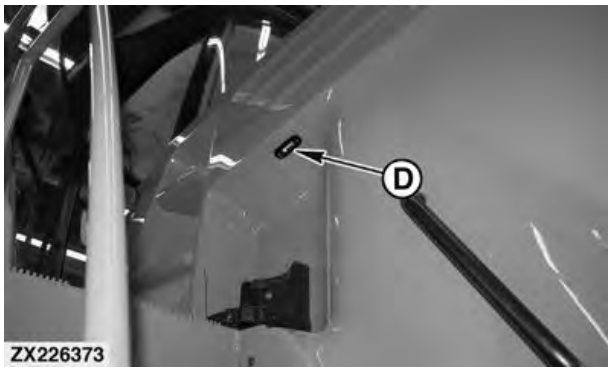
A—Feed Roll Housing Service Light Switch
B—Feed Roll Housing Service Light
C—Access Ladder Light Switch
D—Access Ladder Light



ZX226371 —UN—15NOV14



ZX256094 —UN—18JUN16



ZX226373 —UN—15NOV14

OUCC002,0004C8C -19-13JUN16-3/3

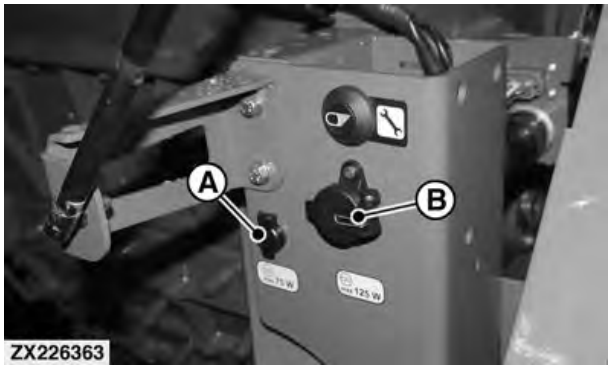
12 V Power Outlets

Machine is equipped with:

- One power outlet (A) **12 V—75 W** in central service compartment.
- One power outlet (B) **12 V—125 W** in central service compartment.
- One power outlet (C) **12 V—75 W** in tool box compartment.

IMPORTANT: Do not operate electrical tool that exceeds relevant outlet specifications. Refer to decals.

A—Power Outlet (12 V—75 W)
B—Power Outlet (12 V—125 W)
C—Power Outlet (12 V—75 W)



ZX226363 —UN—17JUN16

ZX226364 —UN—15NOV14

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Secure Cutterhead Lift Lock

CAUTION: Before carrying out any adjustment or service work always disengage all drives, shut off the engine, set the park brake, remove the key, and wait until all moving parts have stopped.

CAUTION: To ensure that locking beam (A) is securely engaged, always keep area around the locking beam (A) and stop block (B) clear of debris.

CAUTION: Risk of crushing injury. Unsecured cutterhead assembly can fall and cause serious injury or death.

Before working under raised cutterhead, always lower the locking beam (A) into lock position (1) to secure the cutterhead assembly in raised position.

IMPORTANT: Ensure that cutterhead assembly is fully raised. Failure to do so prevents engagement and disengagement of the locking beam (A).

Prior to field operation, place the locking beam (A) in storage position (2).

NOTE: Locking beam (A) is on the right-hand side of the cutterhead assembly.

To Place Locking Beam (A) in Lock Position (1):

1. Fully raise the cutterhead assembly.
2. Remove the hook (C) from screw (D) then lower locking beam (A) into lock position (1) as shown.

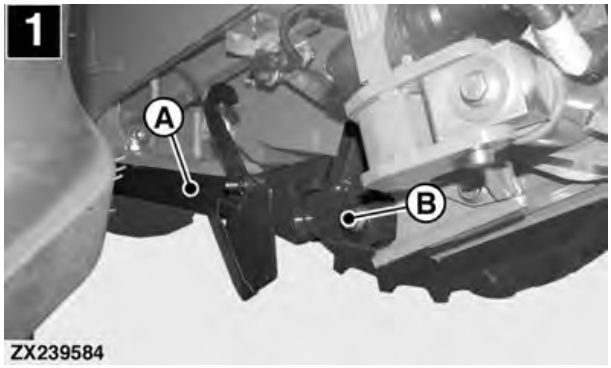
IMPORTANT: Check that tip of locking beam (A) rests on stop block (B).

3. Slowly lower cutterhead assembly until locking beam (A) is engaged onto stop block (B) as shown.

To Place Locking Beam (A) in Storage Position (2):

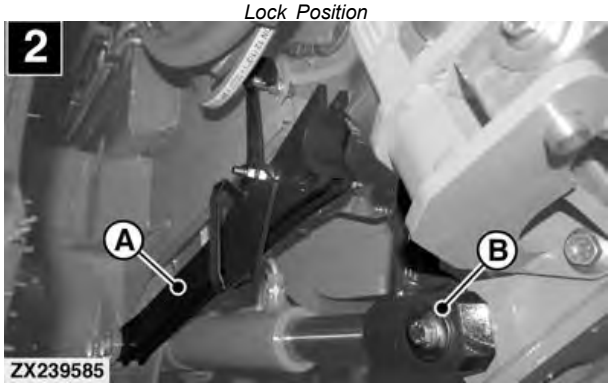
1. Fully raise the cutterhead assembly.
2. Raise locking beam (A) then engage hook (C) on screw (D).
3. Slowly lower cutterhead assembly.

A—Locking Beam
B—Stop Block
C—Hook
D—Screw
1— Lock Position
2— Storage Position



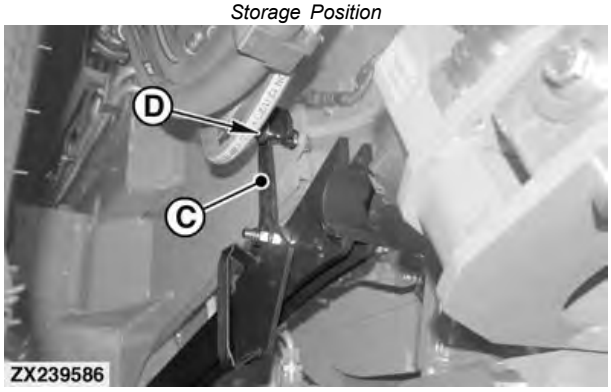
ZX239584 —UN—23MAR15

Lock Position

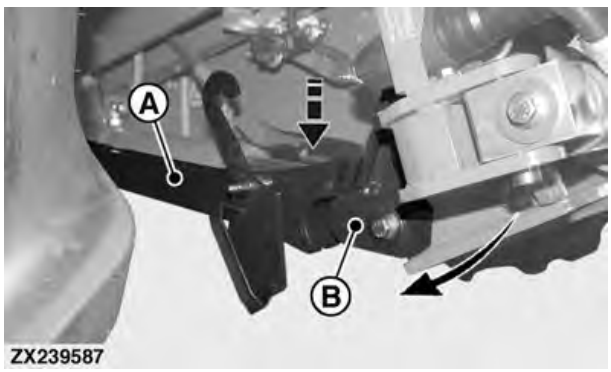


ZX239585 —UN—23MAR15

Storage Position



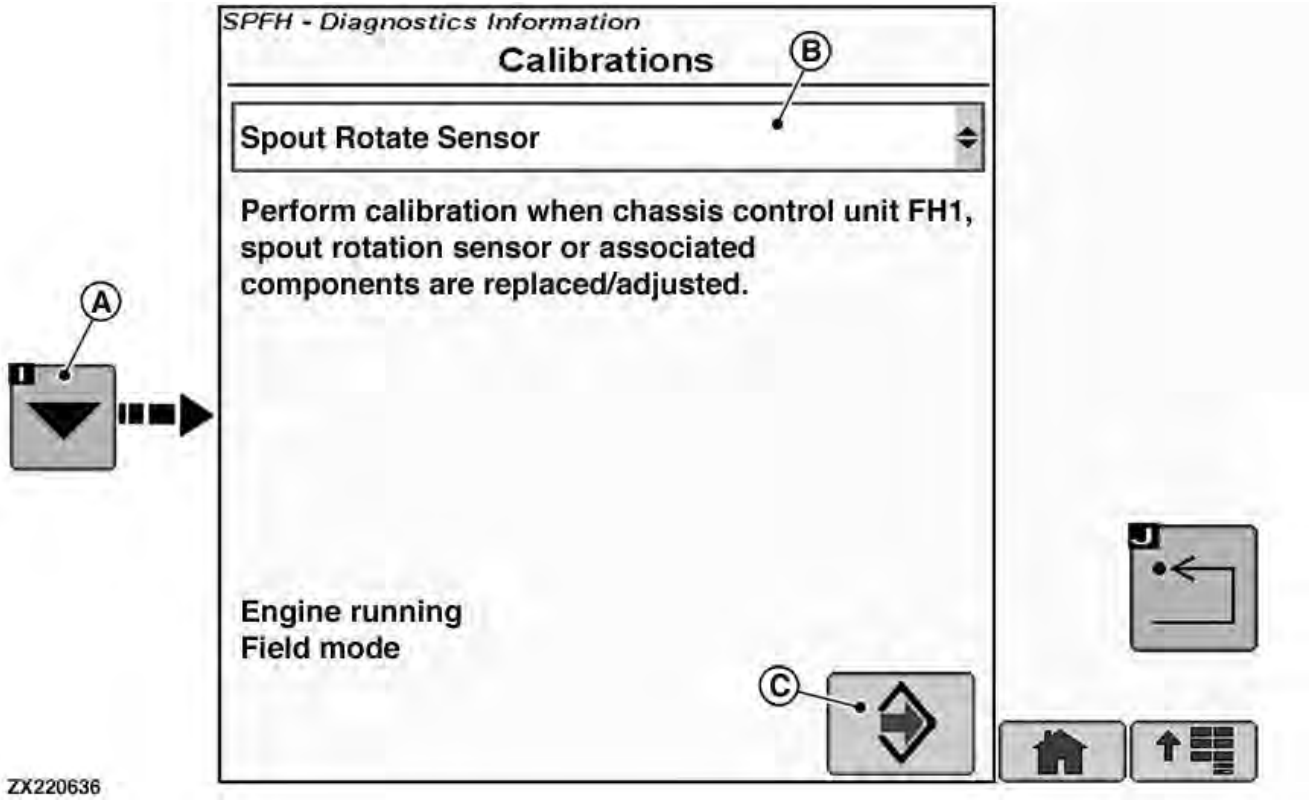
ZX239586 —UN—23MAR15



ZX239587 —UN—23MAR15

OUCC002,00044FC -19-20MAR15-1/1

Interactive Calibration Procedures



A—Diagnostics Information Page Access Button
B—Drop-Down Menu
C—Enter Button

Access the Calibration Procedure Page

On the Vehicle Settings Page (see **Vehicle Settings Page** in Operating the Controls and Displays section) press the diagnostics information page access button (A) to perform desired interactive component calibration as follows:

1. Use drop-down menu (B) to select the desired component to calibrate.
2. Follow the instructions provided for each calibration step.

IMPORTANT: Make sure each condition is met so the calibration steps are carried out.

3. Press enter button (C) to start calibration procedure.

When to Calibrate

This list shows all possible interactive calibrations. Depending on machine options and header types, listing shown might not match calibration menu shown on display.

IMPORTANT: Error codes show on display if a problem exists during a calibration procedure. Conditions causing error must be corrected before continuing calibration.

- **Header Lift Range -** Perform calibration when control unit FH1 or header position sensor or associated components are replaced or adjusted.
- **Header Tilt Range -** Perform calibration when control unit FH1, header lateral tilt sensor or associated components are replaced or adjusted.
- **Header Tilt Speed -** Perform calibration when control unit FH1, header lateral tilt sensor or associated components are replaced or adjusted.
- **Header Lift Speed -** Perform calibration:
  - If control unit FH1 has been replaced.
  - Each time a header is connected to the machine for the first time.
- **Header -** Perform calibration:
  - If control unit FH1 has been replaced.
  - If a header height control sensor or associated components are replaced or adjusted.
  - Each time a header is connected to the machine for the first time.
- **SCV Sensor -** Perform calibration:
  - If control unit FH1 has been replaced.

Continued on next page
OUCC002,0004C7F -19-10JUN16-1/2

- If a SCV sensor or associated components are replaced or adjusted.
- When a grass pickup is connected to the machine for the first time.

- **Mass Flow Sensor Zero Distance (If Equipped) -** Perform calibration when control unit CHC or mass flow sensors or associated feedroll components are replaced or adjusted.

- **Sharpening Stone Position Sensor -** Perform calibration when cutterhead control unit CHC, sharpening stone position sensor or associated components are replaced or adjusted.

- **Sharpening Door Position Sensor -** Perform calibration when cutterhead control unit CHC, sharpening door position sensor or associated components are replaced or adjusted.

- **Kernel Processor Gap -** Perform calibration:
  - If control unit FH1 has been replaced.
  - If the kernel processor motor or associated components are replaced or adjusted.
  - Every time kernel processor is installed on the machine.

- **Spout Rotate Sensor -** Perform calibration when chassis control unit FH1, spout rotation sensor or associated components are replaced or adjusted.

- **Spout Tilt And Flap Sensor -** Perform calibration after machine is equipped with spout sensors or chassis control unit FH1, spout tilt position sensor, flap position sensor or associated components are replaced or adjusted.

  IMPORTANT: Perform this calibration each time a spout extension has been added or removed.

- **Active Fill Control System -** Perform calibration:
  - If the control unit IPM has been replaced.
  - If the camera has been replaced.
  - If the camera orientation or tilt is changed.
  - If the spout is modified (from 8 to 12 rows, for instance).

- **ProDrive™ Multi-Function Lever -** Perform calibration when control unit PTP or multi-function lever are replaced or adjusted.

- **ProDrive™ Solenoid -** Perform calibration when control unit PTP or hydrostatic drive components are replaced or adjusted.

- **ProDrive™ Hydrostatic Pump -** Perform calibration when control unit PTP or hydrostatic drive components are replaced or adjusted.

- **ProDrive™ Front Hydrostatic Motor -** Perform calibration when control unit PTP or hydrostatic drive components are replaced or adjusted.

- **ProDrive™ Transmission -** Perform calibration when control unit PTP or hydrostatic drive components are replaced or adjusted.

- **ProDrive™ Rear Motor -** Perform calibration when control unit PTP or hydrostatic drive components are replaced or adjusted.

- **ProDrive™ Steering Angle and Ratio -** Perform calibration when control unit PTP or hydrostatic drive components are replaced or adjusted.

- **Push-Button Shift Transmission -** Perform calibration when control unit FH2, PBST or associated components are replaced or adjusted.

- **Chassis Turn Lights -** Perform calibration when control unit FH1, chassis turn lights or associated components are replaced or adjusted.

- **AutoTrac™ Valve -** Perform calibration when control unit SBBC or AutoTrac™ associated components are replaced or adjusted.

- **AutoTrac™ Rear Wheel Angle Sensor -** Perform calibration when control unit SBBC or AutoTrac™ associated components are replaced or adjusted.

- **Deck Plate Sensor -** Perform calibration:
  - If the control unit FH1 has been replaced.
  - If a deck plate sensor or associated components are replaced or adjusted.
  - When a corn head is connected to the machine for the first time.

- **Additive Dosing Low Volume Calibration -** Perform calibration:
  - To improve the accuracy.
  - If a different nozzle is installed.
  - If the control unit IDS has been replaced.

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Break-in Service

During first 100 hours of operation:

- Perform daily or 10-hour service (refer to **Every 10 Operating Hours** in this section).
- Avoid unnecessary engine idling.
- Monitor coolant temperature closely.
- Check engine oil level and coolant level more frequently. Watch for any signs of leaks.
- If engine oil must be added during break-in, use seasonal viscosity grade oil, meeting specifications given in this section.
- Check engine air intake system hoses and hose clamps for tightness.
- Check drive belts for proper tension and adjust, if necessary.

OUCC002,0003DD5 -19-13AUG13-1/1

After the First 10 Operating Hours

Retighten steering cylinder bracket attaching screws at rear axle to 240 N·m (170 lb·ft).

Check and adjust drive belt tension.

OUCC002,0004C45 -19-31MAY16-1/1

During the First 50 Operating Hours

After the first hour of operation and then every ten hours during the first 50 hours of operation, check the hardware and tighten to the specified torque:

Retighten front wheel bolts to 710 N·m (524 lb·ft).

Retighten rear wheel nuts to 550 N·m (405 lb·ft).

Retighten attaching screws at rear axle pivots to 310 N·m (228 lb·ft).

Retighten ProDrive™ or Push-Button Shift transmission attaching screws to 320 N·m (235 lb·ft).

Retighten final drive attaching screws (see **Check Final Drive Attaching Screws** in this section for relevant torque values).

OUCC002,0004C42 -19-31MAY16-1/1

After the First 100 Operating Hours

Perform all work shown under Every 10 Operating Hours.

Change engine oil and filter.

IMPORTANT: Do not operate engine with oil level below low mark on dipstick.

Change oil and filter of power distribution gear oil reservoir, and clean suction screen.

Change oil of final drives.

Change oil of header drive gearbox.

Change oil of left and right feedroll gearboxes.

Change transmission oil (ProDrive™ or Push-Button Shift transmission).

Clean suction screen (Push-Button Shift and ProDrive™ transmission).

Change hydraulic oil filter (ProDrive™ transmission).

Change oil of rear axle differential (four-wheel drive).

Change oil of rear axle reduction gears (four-wheel drive).

Change oil of rear axle wheel hubs (two-wheel drive).

Check and adjust drive belt tension.

Check engine air intake and cooling system hoses and hose clamps for tightness.

Check fuel injection lines for loose connections.

OUCC002,000410D -19-08SEP15-1/1

John Deere Break-In™ Plus Engine Oil (8100—8600 Final Tier 4/Stage IV Engine Only)

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.

Change the oil and filter after 100 operating hours during the initial operation of a new or rebuilt engine.

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 a 10W-30 diesel engine oil meeting one of the following during the initial 250 hours of operation:

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

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.

OUCC002,00046C2 -19-03SEP15-1/1

John Deere Break-In™ Engine Oil (8100—8600 Tier 3/Stage III A Engine Only)

New engines are filled at the factory with either John 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 250 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 CJ-4	**ACEA E9**
API CI-4 PLUS	**ACEA E7**
API CI-4	**ACEA E6**
API CH-4	**ACEA E5**
API CG-4	**ACEA E4**
API CF-4	**ACEA E3**
API CF-2	
API CF	

These oils will 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.

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John Deere Break-In™ Engine Oil (8100—8600 Tier 2/Stage II Engine Only)

New engines are filled at the factory with either John 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 250 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 CJ-4	**ACEA E9**
API CI-4 PLUS	**ACEA E7**
API CI-4	**ACEA E6**
API CH-4	**ACEA E5**
API CG-4	**ACEA E4**
API CF-4	**ACEA E3**
API CF-2	
API CF	

These oils will 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.

OUCC002,00044EE -19-20MAR15-1/1

Diesel Engine Oil (8100—8600 Final Tier 4/Stage IV Engine Only)

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:

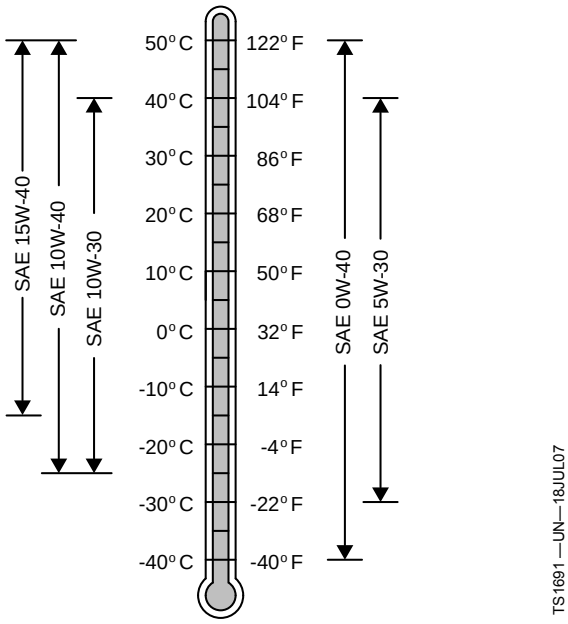
- API Service Category CJ-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E6

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 emission regulations for the area in which the engine operates.

IMPORTANT: Use only ultra low sulfur diesel (ULSD) fuel with a maximum sulfur content of 0.0015% (15 mg/kg).



Oil Viscosities for Air Temperature Ranges

OUCC002,00046C3 -19-03SEP15-1/1

Diesel Engine Oil (8100—8600 Tier 3/Stage III A Engine Only)

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ oil is preferred.

Oils meeting one of the following specifications are also recommended:

- ACEA Oil Sequence E7
- ACEA Oil Sequence E6

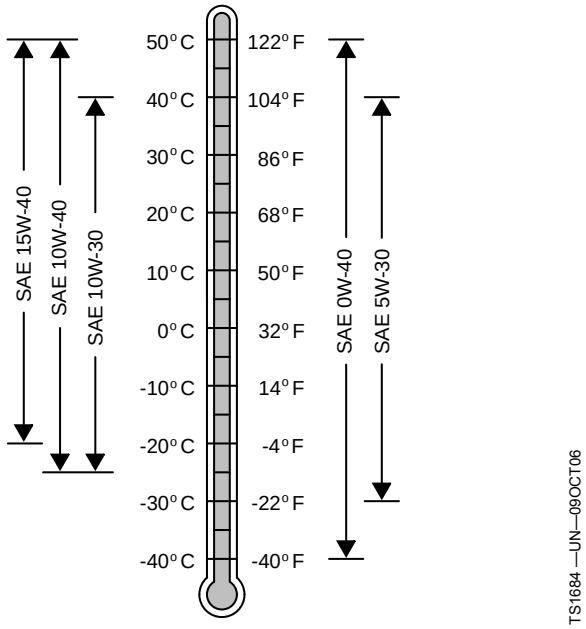
Extended service intervals may apply when John Deere Plus-50™, ACEA E7, or ACEA E6 engine oils are used. Consult your John Deere dealer for more information.

Other oils may be used if they meet one or more of the following:

- John Deere Torq-Gard Supreme™
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- 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 emission regulations for the area in which the engine operates.



Oil Viscosities for Air Temperature Ranges

DO NOT use diesel fuel with sulfur content greater than 1.0% (10000 ppm).

OUCC002,0004C66 -19-08JUN16-1/1

Diesel Engine Oil (8100—8600 Tier 2/Stage II Engine Only)

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ oil is preferred.

Oils meeting one of the following specifications are also recommended:

- ACEA Oil Sequence E7
- ACEA Oil Sequence E6

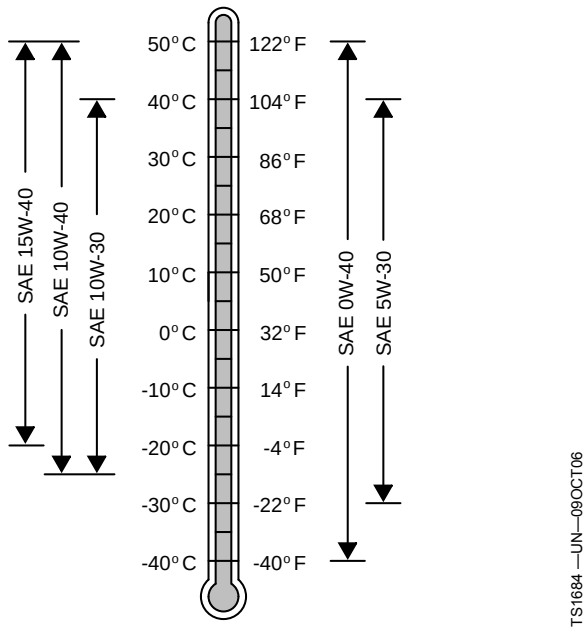
Extended service intervals may apply when John Deere Plus-50™, ACEA E7, or ACEA E6 engine oils are used. Consult your John Deere dealer for more information.

Other oils may be used if they meet one or more of the following:

- John Deere Torq-Gard Supreme™
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- 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 emission regulations for the area in which the engine operates.



Oil Viscosities for Air Temperature Ranges

DO NOT use diesel fuel with sulfur content greater than 1.0% (10000 ppm).

OUCC002,00044EF -19-20MAR15-1/1

Diesel Engine Oil (8700 and 8800 Only)

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ or Valvoline®, Cummins Premium Blue® oil are preferred.

Oil meeting one of the following specifications are also recommended:

- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4

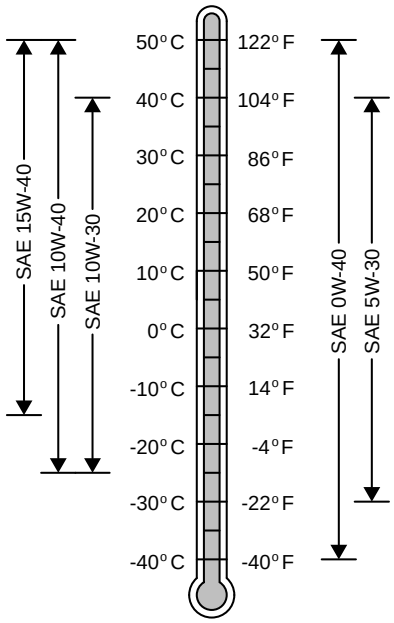
Other oils may be used if they meet one or more of the following:

- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- API Service Category CH-4
- ACEA Oil Sequence E3

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.

DO NOT use diesel fuel with sulfur content greater than 1.0% (10000 ppm).



Oil viscosities for air temperature ranges

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OUCC002,00044FD -19-20MAR15-1/1

Engine Oil and Filter Service Intervals (8100—8600 Final Tier 4/Stage IV Engine Only)

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.

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 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.

IMPORTANT: The engine is not compatible with 100% biodiesel or B100 (EN14214). 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.**

Engine Oil and Filter Service Intervals	
John Deere Plus-50™ II	500 hours
Other Oils	250 hours

OUCC002,00046C4 -19-03SEP15-1/1

Engine Oil and Filter Service Intervals (8100—8600 Tier 3/Stage III A Engine Only)

The oil and filter service intervals in the table below should be used as guidelines. Actual service intervals also depend on operation and maintenance practices. It is suggested to use oil analysis to determine the actual useful life of the oil and to ease selection of the proper oil and filter service interval.

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.

Diesel fuel sulfur level will affect engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals as shown in the table:

- Use of diesel fuel with sulfur content less than 0.10% (1000 ppm) is strongly recommended.
- Use of diesel fuel with sulfur content 0.10% (1000 ppm) to 0.50% (5000 ppm) may result in REDUCED oil and filter change intervals as shown in the table.
- BEFORE using diesel fuel with sulfur content greater than 0.50% (5000 ppm), contact your John Deere dealer.
- DO NOT use diesel fuel with sulfur content greater than 1.00% (10000 ppm).

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.**

Oil types (premium or standard) in the table include:

- ”Premium Oils” include John Deere Plus-50™, ACEA E7 and ACEA E6 oils.
- ”Standard Oils” include John Deere Torq-Gard Supreme™, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E5 and ACEA E4 oils.

Use of lower specification oils in non-EGR engines may result in premature engine failure.

NOTE: The 500 hour extended oil and filter service interval is only allowed if all of the following conditions are met:

- *Engine equipped with an extended drain interval oil pan*
- *Use of diesel fuel with sulfur content less than 0.50% (5000 ppm)*
- *Use of premium oil: John Deere Plus-50™, ACEA E7 or ACEA E6*
- *Perform engine oil analysis to determine the actual extended service life of ACEA E7 and ACEA E6 oils*
- *Use of an approved John Deere oil filter*

	Engine Oil and Filter Service Intervals		
	Oil Pan Size (L/kW)		
Oil pan capacity	Greater than or equal to 0.12	Greater than or equal to 0.14	Greater than or equal to 0.22
Fuel Sulfur	Less than 0.10% (1000 ppm)		
Standard Oil	250 hours	250 hours	250 hours
Premium Oil	500 hours	500 hours	500 hours
Fuel Sulfur	0.10 to 0.20% (1000 to 2000 ppm)		
Standard Oil	200 hours	250 hours	250 hours
Premium Oil	300 hours	500 hours	500 hours
Fuel Sulfur	0.20 to 0.50% (2000 to 5000 ppm)		
Standard Oil	150 hours	200 hours	250 hours
Premium Oil	250 hours	300 hours	500 hours
Fuel Sulfur	0.50% to 1.00% (5000 ppm to 10000 ppm)		
Standard Oil	Contact John Deere dealer (dealer refers to DTAC solutions)		
Premium Oil	Contact John Deere dealer (dealer refers to DTAC solutions)		
Engine oil analysis is required to determine the actual extended service life of premium oils ACEA E7 and ACEA E6.			

Oil pan size/Engine power Ratio (L/kW—ECE R120):

- **8100** Forage Harvester—**0.13**
- **8200** Forage Harvester—**0.12**
- **8300** Forage Harvester—**0.16**
- **8400** Forage Harvester—**0.15**
- **8500** Forage Harvester—**0.13**
- **8600** Forage Harvester—**0.13**

OUCC002,0004C67 -19-08JUN16-1/1

Engine Oil and Filter Service Intervals (8100—8600 Tier 2/Stage II Engine Only)

The oil and filter service intervals in the table below should be used as guidelines. Actual service intervals also depend on operation and maintenance practices. It is suggested to use oil analysis to determine the actual useful life of the oil and to ease selection of the proper oil and filter service interval.

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.

Diesel fuel sulfur level will affect engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals as shown in the table:

- Use of diesel fuel with sulfur content less than 0.10% (1000 ppm) is strongly recommended.
- Use of diesel fuel with sulfur content 0.10% (1000 ppm) to 0.50% (5000 ppm) may result in REDUCED oil and filter change intervals as shown in the table.
- BEFORE using diesel fuel with sulfur content greater than 0.50% (5000 ppm), contact your John Deere dealer.
- DO NOT use diesel fuel with sulfur content greater than 1.00% (10000 ppm).

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.**

Oil types (premium or standard) in the table include:

- ”Premium Oils” include John Deere Plus-50™, ACEA E7 and ACEA E6 oils.
- ”Standard Oils” include John Deere Torq-Gard Supreme™, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E5 and ACEA E4 oils.

Use of lower specification oils in non-EGR engines may result in premature engine failure.

NOTE: The 500 hour extended oil and filter service interval is only allowed if all of the following conditions are met:

- *Engine equipped with an extended drain interval oil pan*
- *Use of diesel fuel with sulfur content less than 0.50% (5000 ppm)*
- *Use of premium oil: John Deere Plus-50™, ACEA E7 or ACEA E6*
- *Perform engine oil analysis to determine the actual extended service life of ACEA E7 and ACEA E6 oils*
- *Use of an approved John Deere oil filter*

	Engine Oil and Filter Service Intervals		
	Oil Pan Size (L/kW)		
Oil pan capacity	Greater than or equal to 0.12	Greater than or equal to 0.14	Greater than or equal to 0.22
Fuel Sulfur	Less than 0.10% (1000 ppm)		
Standard Oil	250 hours	250 hours	250 hours
Premium Oil	500 hours	500 hours	500 hours
Fuel Sulfur	0.10 to 0.20% (1000 to 2000 ppm)		
Standard Oil	200 hours	250 hours	250 hours
Premium Oil	300 hours	500 hours	500 hours
Fuel Sulfur	0.20 to 0.50% (2000 to 5000 ppm)		
Standard Oil	150 hours	200 hours	250 hours
Premium Oil	250 hours	300 hours	500 hours
Fuel Sulfur	0.50% to 1.00% (5000 ppm to 10000 ppm)		
Standard Oil	Contact John Deere dealer (dealer refers to DTAC solutions)		
Premium Oil	Contact John Deere dealer (dealer refers to DTAC solutions)		
Engine oil analysis is required to determine the actual extended service life of premium oils ACEA E7 and ACEA E6.			

Oil pan size/Engine power Ratio (L/kW—ECE R120):

- **8100** Forage Harvester—**0.13**
- **8200** Forage Harvester—**0.12**
- **8300** Forage Harvester—**0.16**
- **8400** Forage Harvester—**0.15**
- **8500** Forage Harvester—**0.13**
- **8600** Forage Harvester—**0.13**

OUCC002,00046C5 -19-03SEP15-1/1

Engine Oil and Filter Service Intervals (8700 and 8800 Only)

The oil and filter service intervals of 250 hours depend on operation and maintenance practices. Use oil analysis to determine the actual useful life of the oil and to aid in selection of the proper oil and filter service interval.

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.

Diesel fuel sulfur level will affect engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals as shown in the table:

- Use of diesel fuel with sulfur content less than 0.05% (500 ppm) is strongly recommended.
- Use of diesel fuel with sulfur content 0.05% (500 ppm) to 0.50% (5000 ppm) may result in REDUCED oil and filter change intervals.
- BEFORE using diesel fuel with sulfur content greater than 0.50% (5000 ppm), contact your John Deere dealer.

Recommended oil types

- John Deere Plus-50™
- Valvoline®, Cummins Premium Blue®

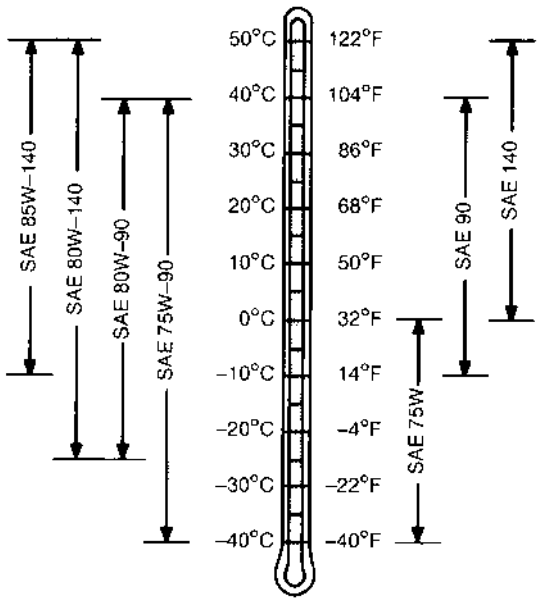
OUCC002,00044FE -19-20MAR15-1/1

Transmission Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:
- John Deere EXTREME-GARD
- John Deere GL-5 Gear Lubricant

Other oils may be used if they meet the following:
- API Service Classification GL-5



OUCC002,0003D33 -19-28JUL13-1/1

Hydraulic Oil

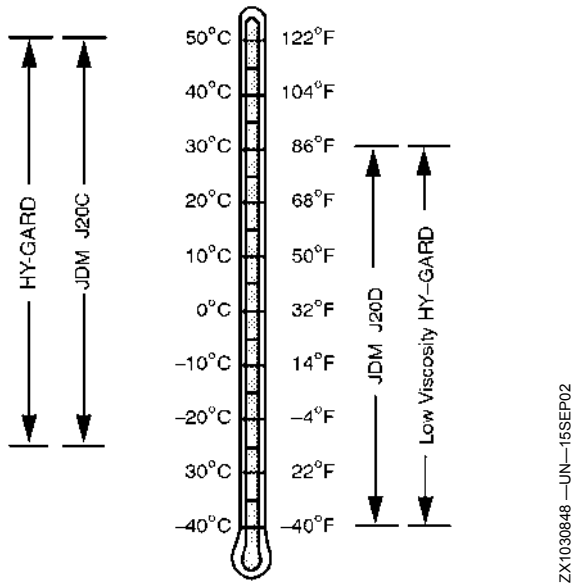
Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere Hy-Gard™
- John Deere Low Viscosity Hy-Gard™

Other oils may be used if they meet one of the following:

- John Deere Standard JDM J20C
- John Deere Standard JDM J20D



OUCC002,0003D32 -19-28JUL13-1/1

Brake Fluid (Push Button Shift Transmission Only)

IMPORTANT: When removing reservoir cap, keep contaminants from entering the reservoir.

Fill reservoir with SAE J1703d, DOT-3 or DOT-4 hydraulic brake fluid.

OUCC002,0003D31 -19-28JUL13-1/1

Grease

IMPORTANT: Do not use this type of grease for the automatic lubrication system.

Use grease based on the expected air temperature range during the service interval.

The following grease is preferred:

- John Deere Grease-Gard™ Premium Plus

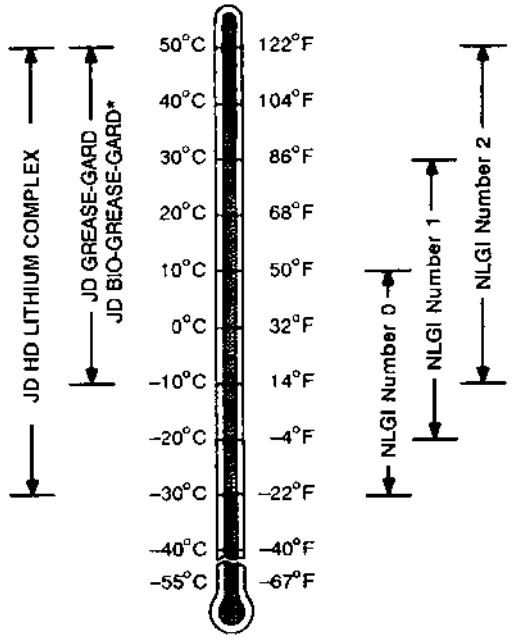
The following greases are also recommended:

- John Deere Grease-Gard™
- John Deere Bio Grease-Gard™[1]

Other greases may be used if they meet one of the following:

- SAE Multipurpose EP Grease with a maximum of 5% molybdenum disulfide
- SAE Multipurpose EP Grease

Greases meeting Military Specification MIL-G-10924F may be used at temperatures below -30°C (-22°F).



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[1]This grease meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC L-33-T-82 test method.

OUCC002,000416B -19-27AUG14-1/1

Multiluber Grease

John Deere Multiluber Grease is recommended.

The system is designed for commercially available multi-purpose grease lubricants up to NLGI Class 2 for use in summer and wintertime.

Use grease with high-pressure additives (EP greases).

Use only greases of same specification.

NOTE: Grease lubricants containing solid lubricants must not be used. Moly and graphite grease will plug the distributors and must not be used!

The grease specifications for the automatic lubrication system are shown in the following table:

- Grease and Oil Specification

Automatic Lubrication System	
Content	Specification
Grease	NLGI 1-2, DIN 51818 Lithium

OUCC002,000416A -19-27AUG14-1/1

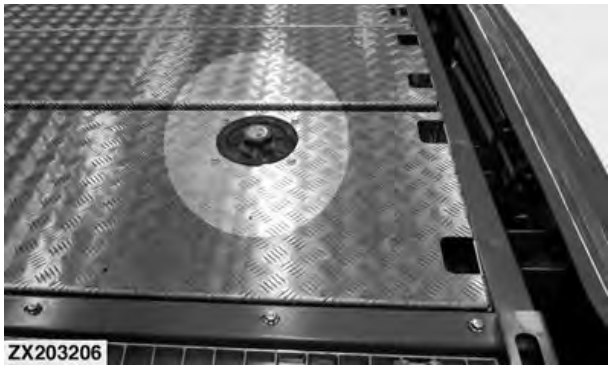
Capacities

Cooling System Capacity

CAUTION: Danger of scalding! Remove radiator filler cap only when coolant temperature is below boiling point (wait a few minutes). Then loosen cap slightly to the stop to relieve pressure before removing cap.

Always use handhold on left-hand side of the discharge spout to add coolant to expansion tank.

- 8100, 8200 (Final Tier 4/Stage IV) complete system: 82 L (21.7 gal)
- 8100, 8200 (Tier 2/Stage II) complete system: 78 L (21.7 gal)
- 8300-8600 (Final Tier 4/Stage IV) complete system: 113 L (29.9 gal)



ZX203206 —UN—13JUL13

- 8300-8500 (Tier 3/Stage III A) complete system: 99 L (26.2 gal)
- 8300-8600 (Tier 2/Stage II) complete system: 100 L (26.4 gal)
- 8700, 8800 complete system: 110 L (29 gal)

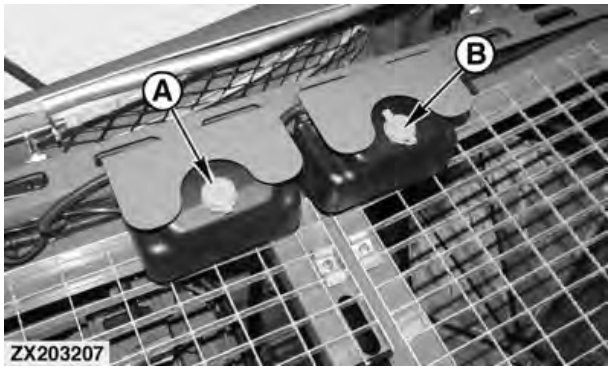
OUCC002,0004C83 -19-09JUL16-1/18

Window Washer System Capacity

- Windshield washer reservoir (A): About 3 L (0.8 gal)
- Rear and side window washer reservoir (B): About 3 L (0.8 gal)

A—Windshield Washer Reservoir

B—Rear and Side Window Washer Reservoir (Optional)



ZX203207 —UN—17JUN16

OUCC002,0004C83 -19-09JUL16-2/18

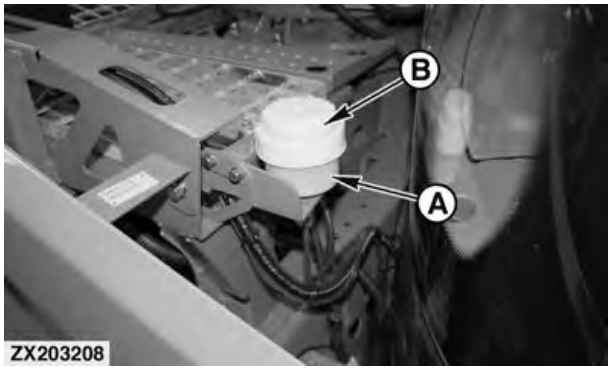
Brake System Capacity (Push-Button Shift Transmission Only):

IMPORTANT: Use only brake fluid meeting SAE Standard J 1703 (DOT 3 or DOT 4).

- Complete system: 1.0 L (0.26 gal)
- Reservoir: 0.5 L (0.13 gal)

A—Brake Fluid Reservoir

B—Reservoir Cap



ZX203208 —UN—13JUL13

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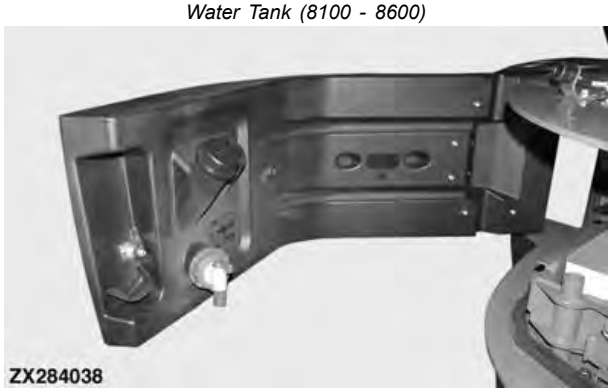
OUCC002,0004C83 -19-09JUL16-3/18

Water Tank Capacity:

- Reservoir (8100 - 8600): 20 L (5.29 gal)
- Reservoir (8700, 8800): 16 L (4.2 gal)

ZX214880 —UN—06OCT14

Water Tank (8100 - 8600)



ZX284038 —UN—18JUN16

Water Tank (8700, 8800)

OUCC002,0004C83 -19-09JUL16-4/18

Diesel Exhaust Fluid (DEF) Tank Capacity (Final Tier 4/Stage IV Engine Only):

IMPORTANT: Always use recommended diesel exhaust fluid (see Diesel Exhaust Fluid (DEF) in this section).

- Reservoir: 43 L (11.4 gal)

ZX214879 —UN—06OCT14

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OUCC002,0004C83 -19-09JUL16-5/18

Fuel Tank Capacity:

IMPORTANT: Use only ultra low sulfur diesel (see Diesel Fuel in this section).

- 8100—8600: 1100 L (290 gal)
- 8700, 8800: 1500 L (386 gal)

ZX203210 —UN—25MAR14

OUCC002,0004C83 -19-09JUL16-6/18

Capacity of Power Distribution Gear Lubrication System:

IMPORTANT: Always use recommended hydraulic oil (see Hydraulic Oil in this section).

The following oils are preferred:

- **John Deere Hy-Gard™**
- **John Deere Low Viscosity Hy-Gard™**

- Reservoir: 33 L (8.72 gal)

ZX214881 —UN—06OCT14

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OUCC002,0004C83 -19-09JUL16-7/18

Hydraulic System Capacity:

IMPORTANT: Always use recommended hydraulic oil (see Hydraulic Oil in this section).

The following oils are preferred:

- **John Deere Hy-Gard™**
- **John Deere Low Viscosity Hy-Gard™**

Machines with High-Flow Wagon Dump or Dual Drive Header Drive option:
- Reservoir: 70 L (18.5 gal)

Machines without High-Flow Wagon Dump and without Dual Drive Header Drive option:
- Reservoir: 50 L (13.2 gal)

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OUCC002,0004C83 -19-09JUL16-8/18

Central Lubrication System Capacity:

IMPORTANT: Always use recommended grease (see Multiluber Grease in this section).

The following greases are preferred:

- **John Deere Multiluber grease**
- **NLGI 1-2, DIN 51818 Lithium**

- Reservoir: 8 kg (17.6 lb)
- Working pressure: 280 bar (28 000 kPa; 4061 psi)

ZX252558 —UN—09SEP15

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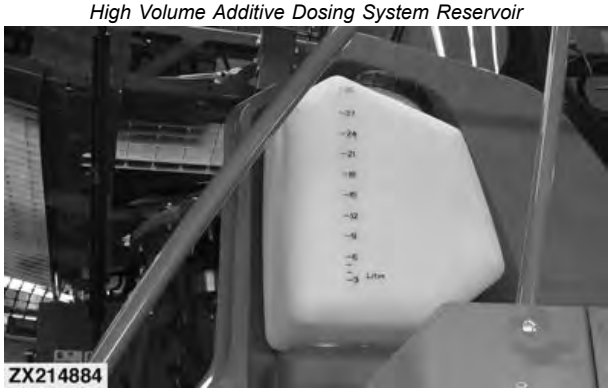
OUCC002,0004C83 -19-09JUL16-9/18

Additive Dosing System Capacity:

- Reservoir (High volume): 360 L (95 gal)
- Reservoir (Low volume): 30 L (8 gal)

ZX214885 —UN—06OCT14

High Volume Additive Dosing System Reservoir



ZX214884 —UN—06OCT14

Low Volume Additive Dosing System Reservoir

OUCC002,0004C83 -19-09JUL16-10/18

Air Compressor System Capacity (Optional):

- Reservoir: 40 L (10.6 gal)
- Working pressure: 8 bar (800 kPa; 116 psi)

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OUCC002,0004C83 -19-09JUL16-11/18

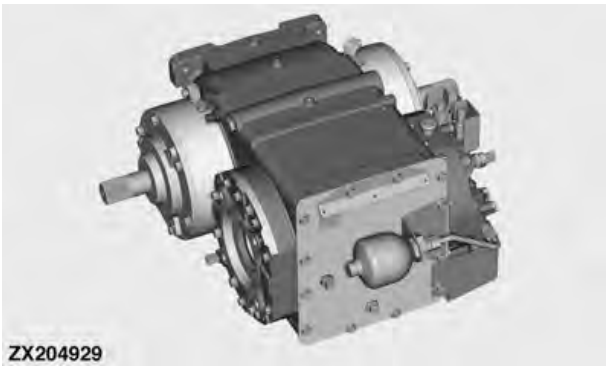
ProDrive™ Transmission:

IMPORTANT: Always use recommended hydraulic oil (see Hydraulic Oil in this section).

The following oils are preferred:

- **John Deere Hy-Gard™**
- **John Deere Low Viscosity Hy-Gard™**

- Capacity: 13 L (3.43 gal)



ZX204929 —UN—20AUG13

OUCC002,0004C83 -19-09JUL16-12/18

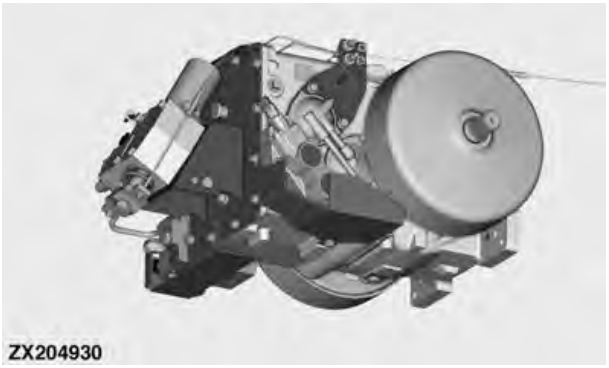
Push-Button Shift Transmission:

IMPORTANT: Always use recommended transmission oil (see Transmission Oil in this section).

The following oils are preferred:

- **John Deere Extreme-Gard™**
- **John Deere GL-5 Gear Lubricant**

- Capacity: 9.6 L (2.53 gal)



ZX204930 —UN—20AUG13

OUCC002,0004C83 -19-09JUL16-13/18

Final Drives:

IMPORTANT: Always use recommended transmission oil (see Transmission Oil in this section).

The following oils are preferred:

- **John Deere Extreme-Gard™**
- **John Deere GL-5 Gear · Lubricant**

- Capacity (each final drive): 7 L (1.85 gal)

ZX204934 —UN—20AUG13

Continued on next page

OUCC002,0004C83 -19-09JUL16-14/18

Rear Axle:

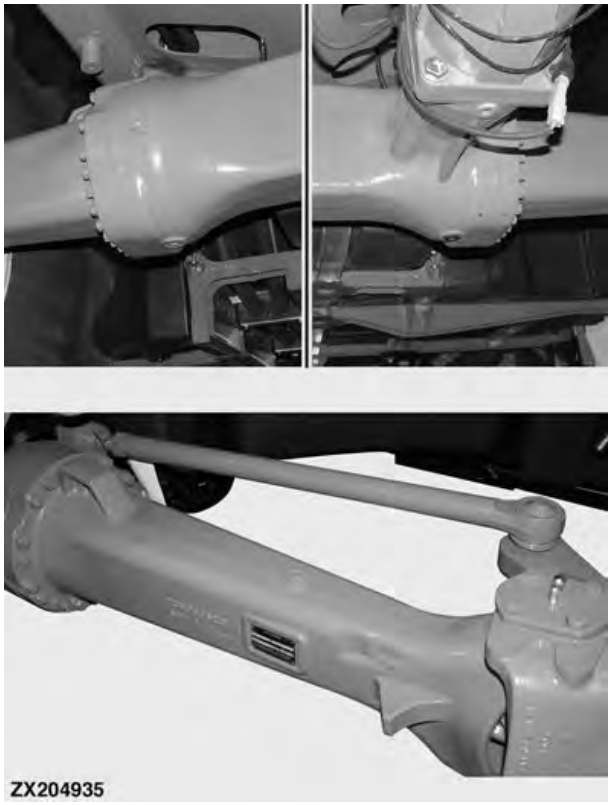
IMPORTANT: Always use recommended transmission oil (see Transmission Oil in this section).

The following oils are preferred:

- **John Deere Extreme-Gard™**
- **John Deere GL-5 Gear·Lubricant**

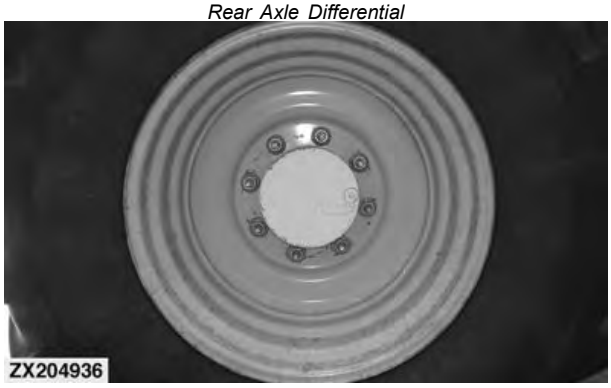
8.5 t - Medium Duty Axle (8100—8600)
- In Differential—Capacity (powered axle only): 15.5 L (4.09 gal)
- In Reduction Gear—Capacity (powered axle only): 0.7 L (0.19 gal)
- In Wheel Hub—Capacity (non-powered axle only): 0.5 L (0.13 gal)
- In Motor Housing—Capacity (powered axle only): 1 L (0.26 gal)

11.5 t - Heavy-Duty Axle (8700, 8800)
- In Differential—Capacity (powered axle only): 17.0 L (4.49 gal)
- In Reduction Gear—Capacity (powered axle only): 0.7 L (0.19 gal)
- In Wheel Hub—Capacity (non-powered axle only): 0.5 L (0.13 gal)
- In Motor Housing—Capacity (powered axle only): 1 L (0.26 gal)



ZX204935 —UN—20AUG13

Rear Axle Differential



ZX204936 —UN—20AUG13

Rear Axle Reduction Gear

ZX204937 —UN—25MAR14

Rear Axle Motor Housing

Continued on next page

Header Gearbox:

IMPORTANT: Always use recommended hydraulic oil (see Hydraulic Oil in this section).

The following oils are preferred:

- **John Deere Hy-Gard™**
- **John Deere Low Viscosity Hy-Gard™**

- Capacity (Medium Duty 8100, 8200): 0.87 L (0.92 qt)
- Capacity (Heavy-Duty 8300-8800): 1.33 L (1.40 qt)

ZX204931 —UN—20AUG13

OUCC002,0004C83 -19-09JUL16-16/18

Left Feed Roll Gearbox:

IMPORTANT: Always use recommended hydraulic oil (see Hydraulic Oil in this section).

The following oils are preferred:

- **John Deere Hy-Gard™**
- **John Deere Low Viscosity Hy-Gard™**

- Capacity: 1.2 L (0.32 gal)

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Continued on next page

OUCC002,0004C83 -19-09JUL16-17/18

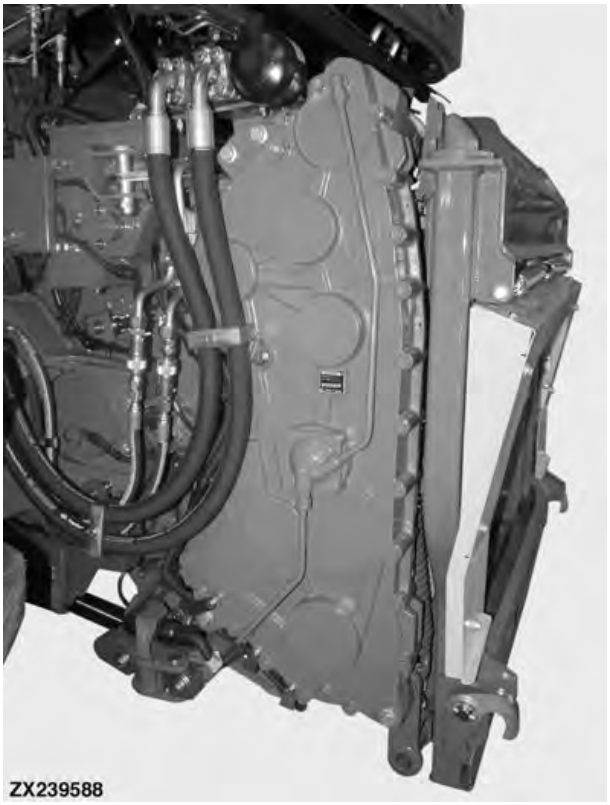
Right Feed Roll Gearbox:

IMPORTANT: Always use recommended hydraulic oil (see Hydraulic Oil in this section).

The following oils are preferred:

- **John Deere Hy-Gard™**
- **John Deere Low Viscosity Hy-Gard™**

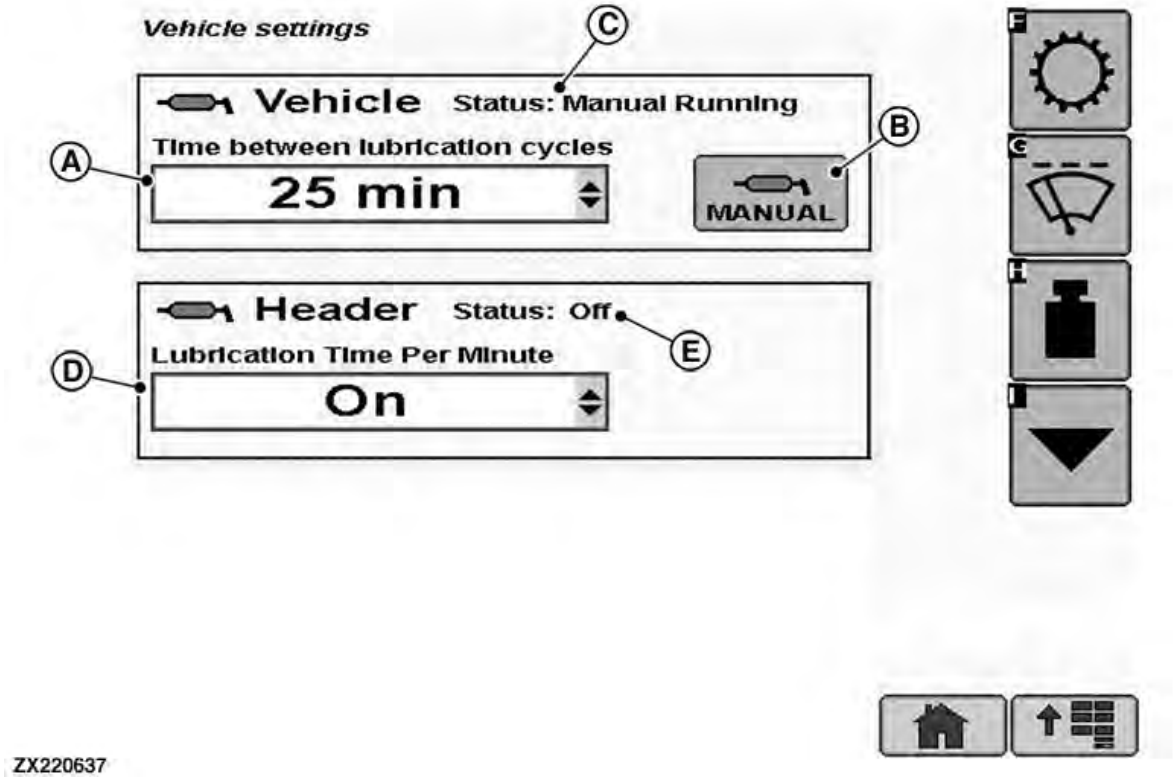
- Capacity: 6.7 L (1.77 gal)



ZX239588 —UN—23MAR15

OUCC002,0004C83 -19-09JUL16-18/18

Important Lubrication Instructions



ZX220637

ZX220637 —UN—25NOV14

A—Vehicle Lubrication Interval Setting
B—Vehicle Lubrication Mode Button
C—Vehicle Lubrication Status Indicator
D—Header Lubrication Setting
E—Header Lubrication Status Indicator

CAUTION: Do not perform any manual lubrication work while the engine is running.

IMPORTANT: Perform the lubrication instructions listed in this section carefully and observe the lube intervals.

Damaged and overheated bearings are a fire hazard. Proper lubrication at the correct intervals helps to reduce bearing damage and overheating.

Crop debris and dirt can build up around the bearings and shafts. Check and clean these areas periodically throughout the harvest day.

IMPORTANT: After lubricating, reinstall any safety guards or shields before operating the machine again.

Apply grease manually (with a grease gun) to all fittings that are not lubricated centrally at the intervals shown in the following lube charts.

Refer to **Vehicle Settings Page** in Operating the Controls and Displays section to setup the vehicle lubrication (A, B, C) and header lubrication (D, E). Refer to the relevant header Operator's Manual for proper header lubrication.

OUCC002,00041A3 -19-24SEP14-1/1

Central Lubrication System

Central Lubrication Function:

IMPORTANT: Depending on machine equipment, some greasing points are not connected to central lubrication system. See Greasing Points (Manually Lubricated) in this section to know which greasing points are not connected to central lubrication system.

System provides a grease pump driven by an electric motor, greasing lines, grease distributors, and operated through the CommandCenter™ Display. Once the cutterhead is engaged, grease pump turns at regular ON and OFF intervals according to operator settings. To enable, disable, or set central lubrication system, see Important Lubrication Instructions in this section.

Many greasing points of machine are lubricated fully automatically.

ZX256095 —UN—09SEP15

Continued on next page

OUCC002,00046D7 -19-07SEP15-1/3

Check System for Proper Operation:

Manually initiate automatic greasing cycle during 2 minutes to determine whether grease is supplied to all greasing points. See Important Lubrication Instructions in this section to manually activate central lubrication system.

If blockage occurs at a lube fitting or in a lube line, grease escapes from relief valve (A). This valve is a safety feature which allows system checks.

IMPORTANT: When blockage is detected by pressure sensor (B), the Diagnostic Trouble Code FH1 005526.0 - Central Lubrication Fault (No lubricant flow) is generated.

If Diagnostic Trouble Code FH1 005526.0 appears, see Blockage of Central Lubrication System to find a blockage in divider blocks.

Intermediate Greasing:

Manually initiate automatic greasing cycle with monitor:

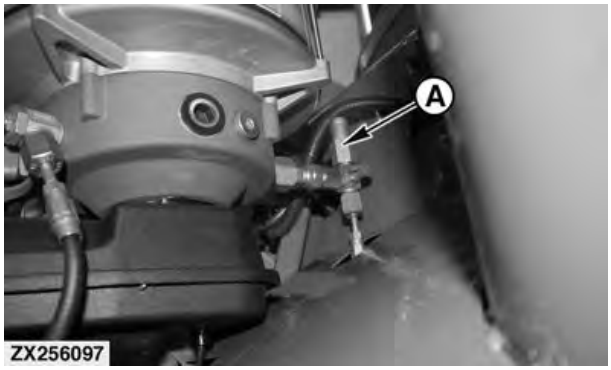
- During first 2 minutes at start of each harvesting season.
- During first 2 minutes after cleaning with a high-pressure washer, steam cleaning, or cleaning with compressed air.
- During last 3 minutes at end of season.

Service:

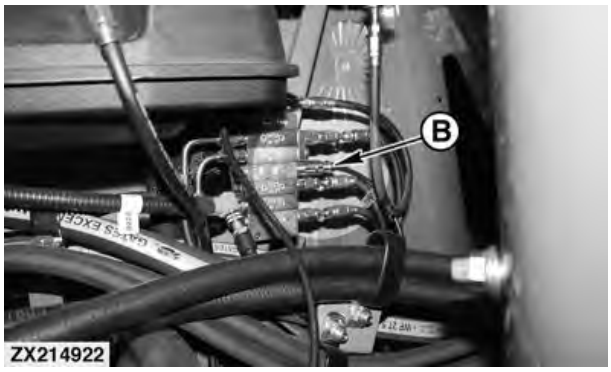
NOTE: All system components are maintenance-free.

During first few weeks of operation, periodically check system and following points:

- Sufficient grease at bearing points.
- Broken or leaking lines.



ZX256097 —UN—09SEP15



ZX214922 —UN—06OCT14

A—Relief Valve **B—Pressure Sensor**

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Blockage of Central Lubrication System:

A pressure which is higher than normal indicates a blockage of central lubrication system.

Indications of a blockage are:

- Diagnostic Trouble Code **FH1 005526.0** appears on display.
- There is grease coming out of pressure relief valve.

Probably causes of a blockage:

- A flattened or clogged grease line.
- A bearing that is overfilled with grease or blocked.
- Not recommended grease.
- A clogged divider block.

To find a blockage in central lubrication system divider blocks, proceed as follows:

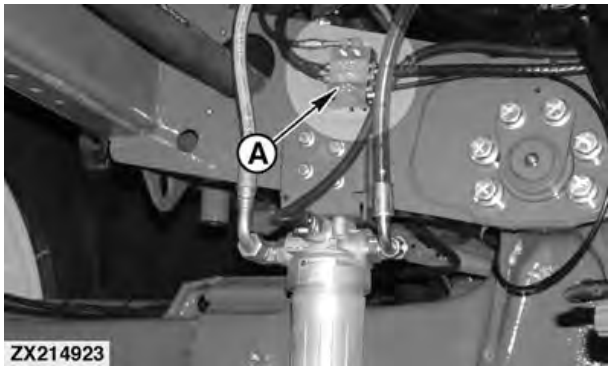
1. Connect a manual grease gun (B) to lubrication points on different divider blocks (A), as shown.
2. Inject grease, by slowly operating grease gun.
   - If it is not possible to inject grease in a particular divider block, it indicates that this divider block is clogged. Contact your John Deere dealer.
   - If it is possible to inject grease in divider block but with resistance, it indicates that one of the outputs of divider block is clogged. It can also be that the line connected to particular output is clogged. Clean or replace line.

If after checking that system divider blocks blockage still persists, check main divider for blockage as follows:

1. Disconnect lines from outputs of main divider block (C) .
2. Initiate a manual greasing cycle.
3. Check if grease is coming out of all outputs of main divider block (C).

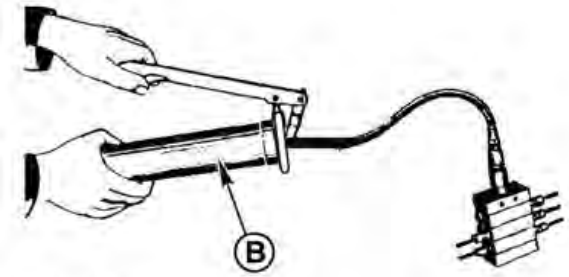
   If no grease is coming out, it means that main divider block (C) is blocked. Contact your John Deere dealer.

After checking reconnect lines back to main divider block (C).



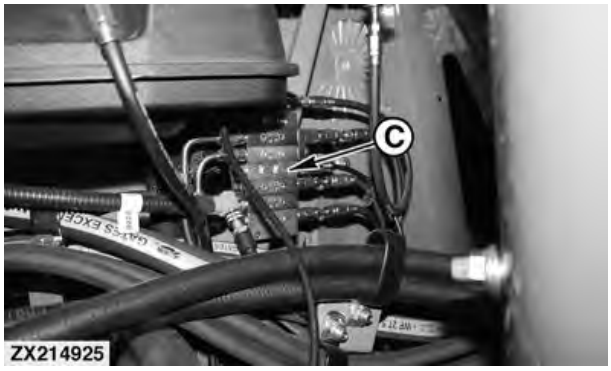
ZX214923 —UN—06OCT14

Divider Block - Rear Axle Block Shown



ZX214924

ZX214924 —UN—06OCT14



ZX214925 —UN—06OCT14

Main Divider Block

A—Divider Block
B—Manual Grease Gun
C—Main Divider Block

OUCC002,00046D7 -19-07SEP15-3/3

Refill/Bleed Central Lubrication System Reservoir

System can be refilled using:

- Standard manual grease gun.
- Grease gun or volume filler (air driven) using different connectors.
- Standard cartridge using a refill press.

Fill grease container of pump to a maximum as indicated on outside of grease container.

Refill Central Lubrication System Reservoir:

IMPORTANT: Cleanliness is a must when filling system.

Use only John Deere multiluber grease or equivalent as specified in this section.

Depending on central lubrication system settings or if Diagnostic Trouble Code **FH1 005526.1 - Central Lubrication Fault (Lubricant level low)** appears on display, refill reservoir as required.

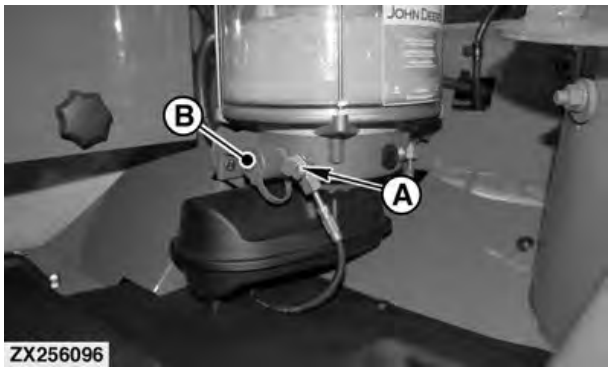
ZX256095 —UN—09SEP15

OUCC002,00046D8 -19-07SEP15-1/5

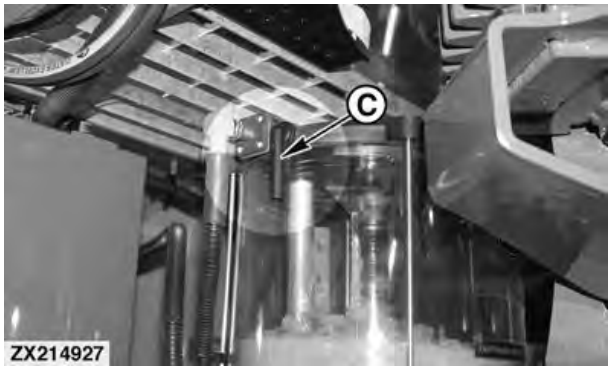
Standard filling using lubrication nipple (A) with manual or pneumatic grease gun

1. Remove cover of filling nipple (A).
2. Fill system using manual or pneumatic grease gun. Do not fill reservoir beyond maximum fullness level.
3. Make sure that vent tube (C) on outside of reservoir is not plugged.
4. Dispose of greasy cleaning rags according to local and national regulations.

A—Filling Nipple
B—Filling Socket
C—Vent Tube



ZX256096 —UN—09SEP15



ZX214927 —UN—06OCT14

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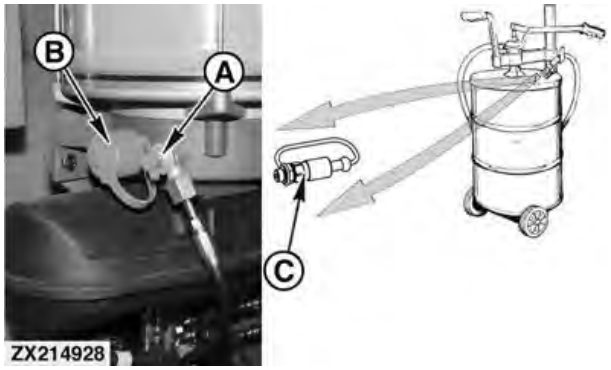
OUCC002,00046D8 -19-07SEP15-2/5

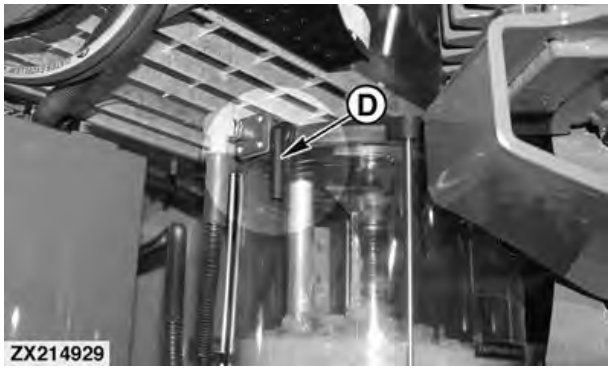
Filling using filling socket and high-flow filling press

1. Remove filling nipple (A) and replace with filling socket (C) for grease or connect to filling socket (B).
2. Fill system using a high-flow filling press. Do not fill reservoir beyond maximum fullness level.
3. Make sure that vent tube (D) on outside of reservoir is not plugged.
4. Dispose of greasy cleaning rags according to local and national regulations.

A—Filling Nipple
B—Filling Socket
C—Filling Socket for Grease
D—Vent Tube



ZX214928 —UN—06OCT14



ZX214929 —UN—06OCT14

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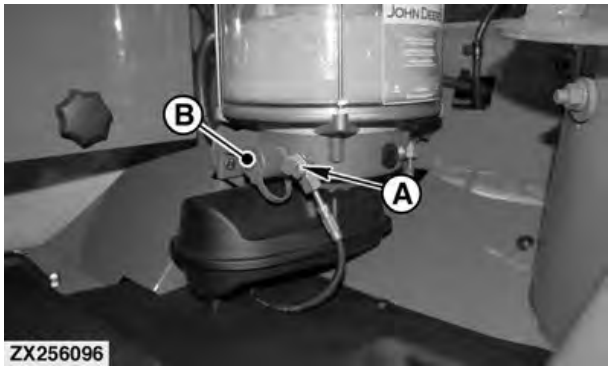
OUCC002,00046D8 -19-07SEP15-3/5

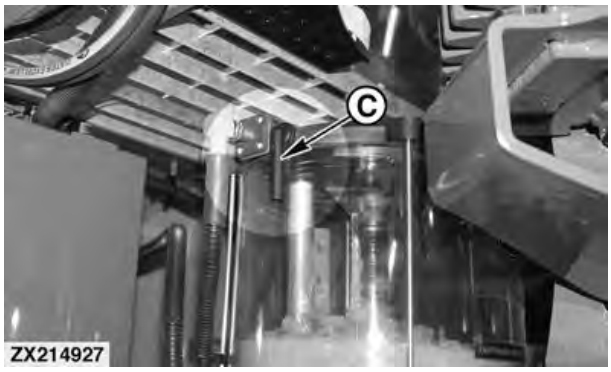
Filling using a quick refill kit

1. Remove cover of filling socket (B).
2. Fill system using a quick refill kit (D). Do not fill reservoir beyond maximum fullness level.
3. Make sure that vent tube (C) on the outside of reservoir is not plugged.
4. Dispose of greasy cleaning rags according to local and national regulations.

A—Filling Nipple
B—Filling Socket
C—Vent Tube
D—Quick Refill Kit



ZX256096 —UN—09SEP15



ZX214927 —UN—06OCT14

ZX214931 —UN—06OCT14

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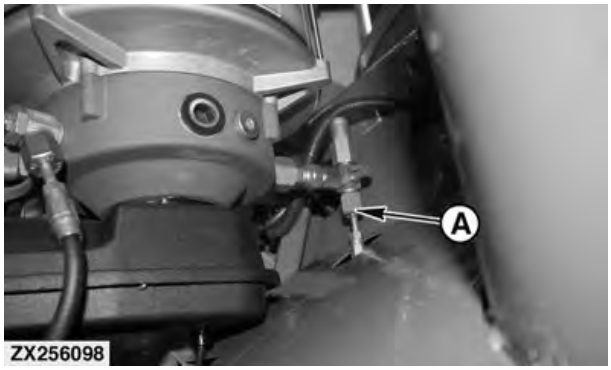
OUCC002,00046D8 -19-07SEP15-4/5

Bleeding Central Lubrication System:

In case grease reservoir ran empty or pump element got replaced, it is necessary to bleed pump system to get it free of air. Proceed as follows:

1. Disconnect main line (A) from pump.
2. Initiate a manual greasing cycle.
3. Let grease come out until there is no air in pump system.
4. Stop greasing cycle.
5. Reconnect main line (A) to pump.
6. Run an extra grease cycle.



ZX256098 —UN—09SEP15

A—Main Line

OUCC002,00046D8 -19-07SEP15-5/5

Greasing Points (Manually Lubricated)

IMPORTANT: The greasing points listed below must be lubricated with a grease gun, as they are moving or rotating points (not connected to Central Lubrication System).

Apply grease at fittings (A) until grease becomes visible around housing. Apply several strokes of grease gun.

Use John Deere multi-purpose grease.

50 Hour Interval
- 1 point on sharpening stone guide rod
- 1 point on sharpening stone block
- 4 points on final drive shaft couplers

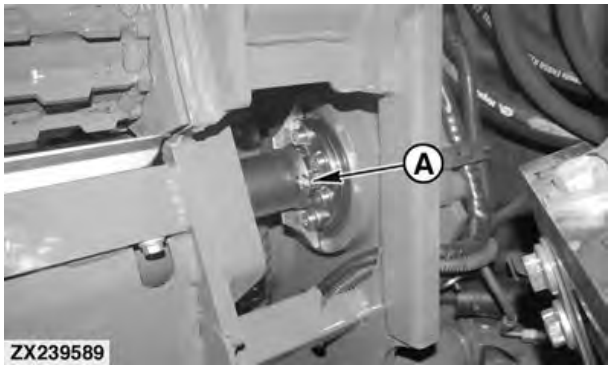
100 Hour Interval
- 4 points on shield of header driveline

IMPORTANT: To access the two grease fittings of the outer telescopic shaft, rotate the header driveline shield 180°.

- 4 points on shield of feed roll driveline

IMPORTANT: To access the two grease fittings of the outer telescopic shaft, rotate the feed roll driveline shield 180°.

250 Hour Interval
- 1 point on back of lateral tilt frame lower pin
- 1 point on cutterhead lift cylinder locking beam
- 1 point on right end of lower front feed roll
- 1 point on right end of lower rear feed roll (smooth roll)
- 2 points on feed roll housing upper locking device
- 1 point on feed roll housing right end lower locking hook
- 2 points on feed roll housing left end lower locking hook



ZX239589 —UN—23MAR15

A—Grease Fitting

- 1 point on trailer hitch (if equipped)
- 1 point on both u.j. shafts of powered rear axle (if equipped)
- 2 points on both u.j. shafts of header driveline
- 2 points on both u.j. shafts of feed roll driveline
- 1 point on both stationary knife pivoting brackets
- 1 point on automatic driveline coupler (if equipped)
- 2 points on left feed roll gearbox hydraulic cylinder (if equipped)

500 Hour Interval (or at least once a year)
- 1 point on main drive tensioning roll
- 1 point on fan drive tensioning roll
- 1 point on both final drives
- 1 point on grass chute/kernel processor swing device rod
- 4 points on grass chute/kernel processor swing frame

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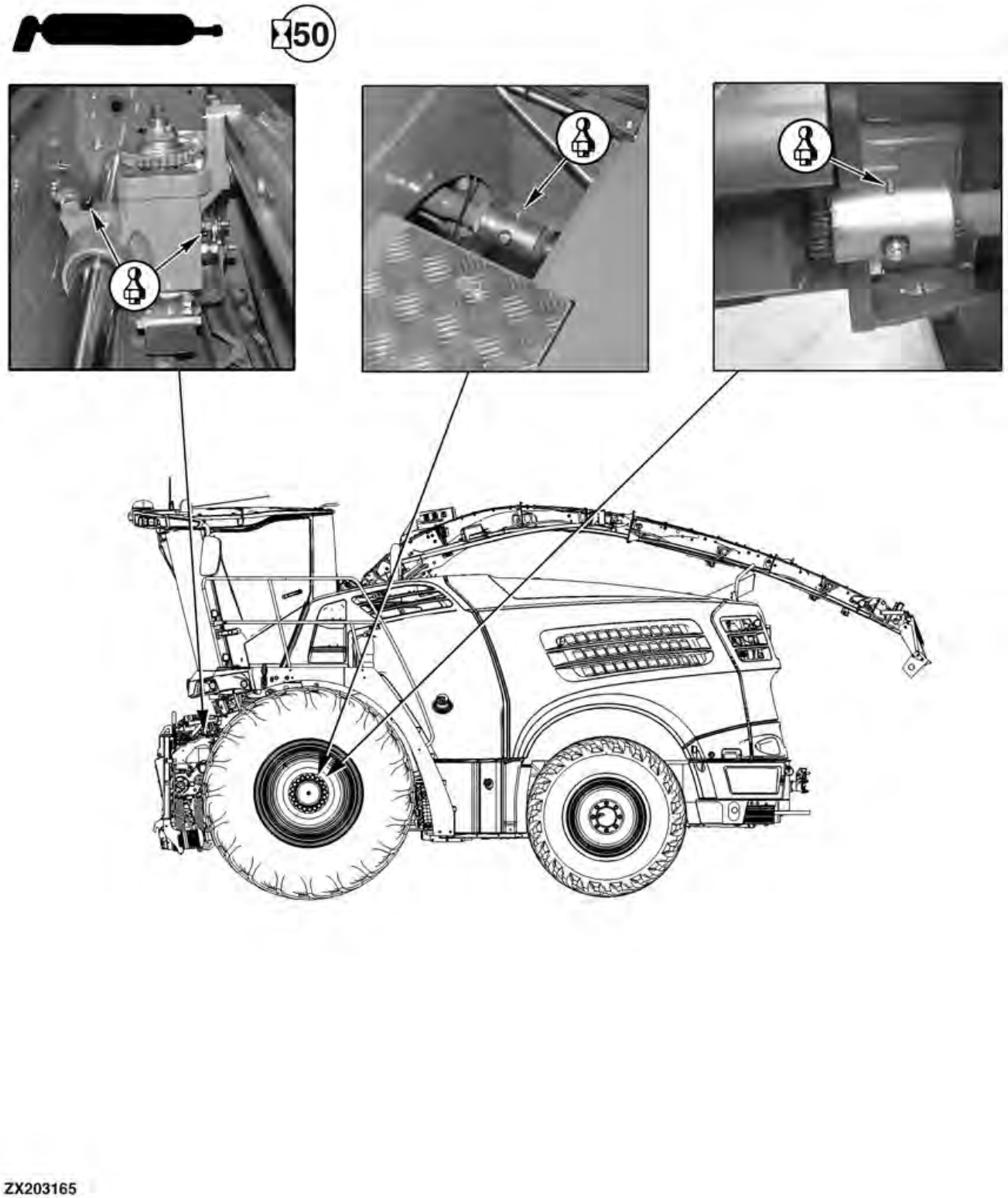
OUCC002,0004C84 -19-29JUN16-1/9



Greasing Points (50 Hours) - Part 1

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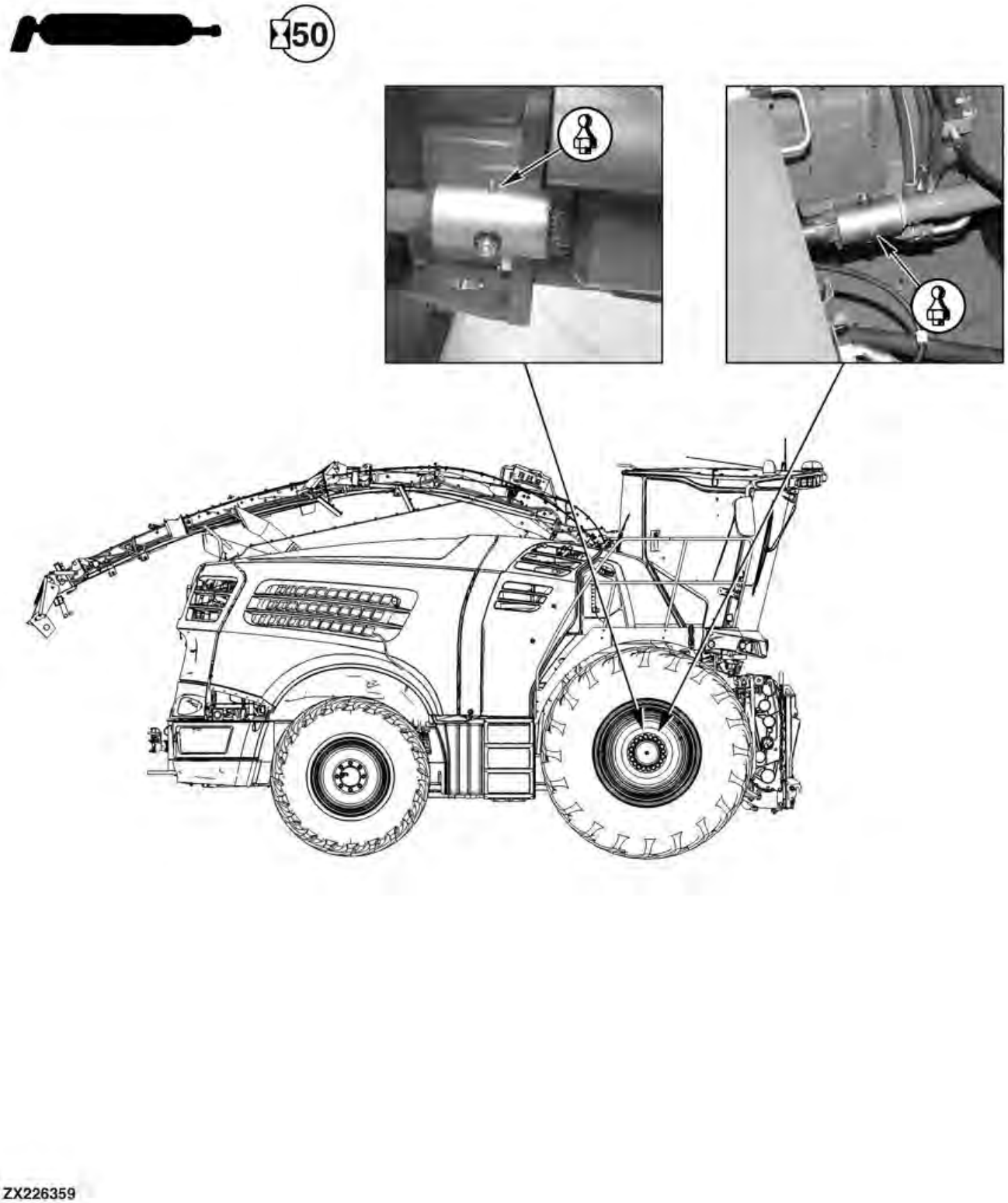

Greasing Points (50 Hours) - Part 2

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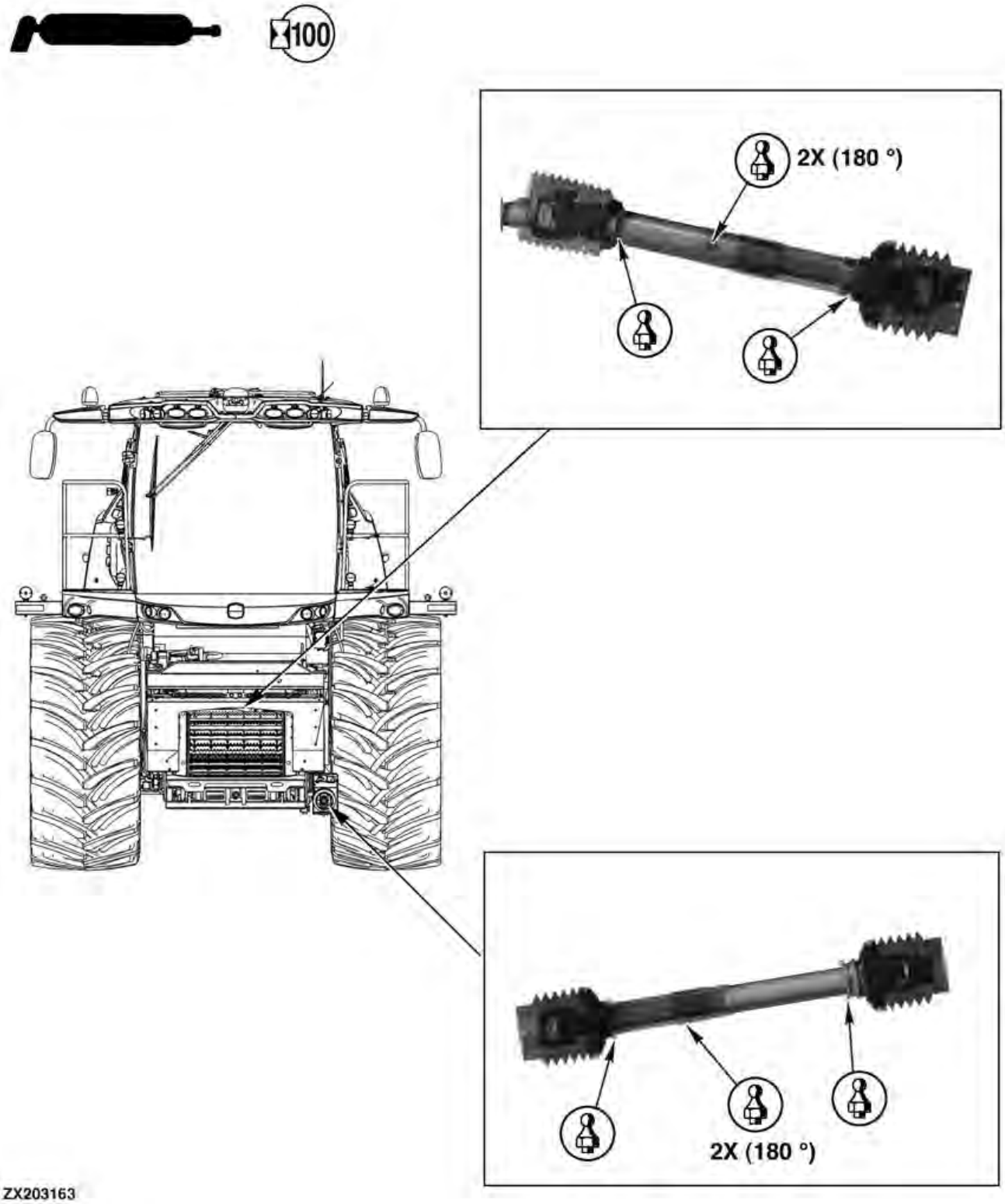

Greasing Points (100 Hours)

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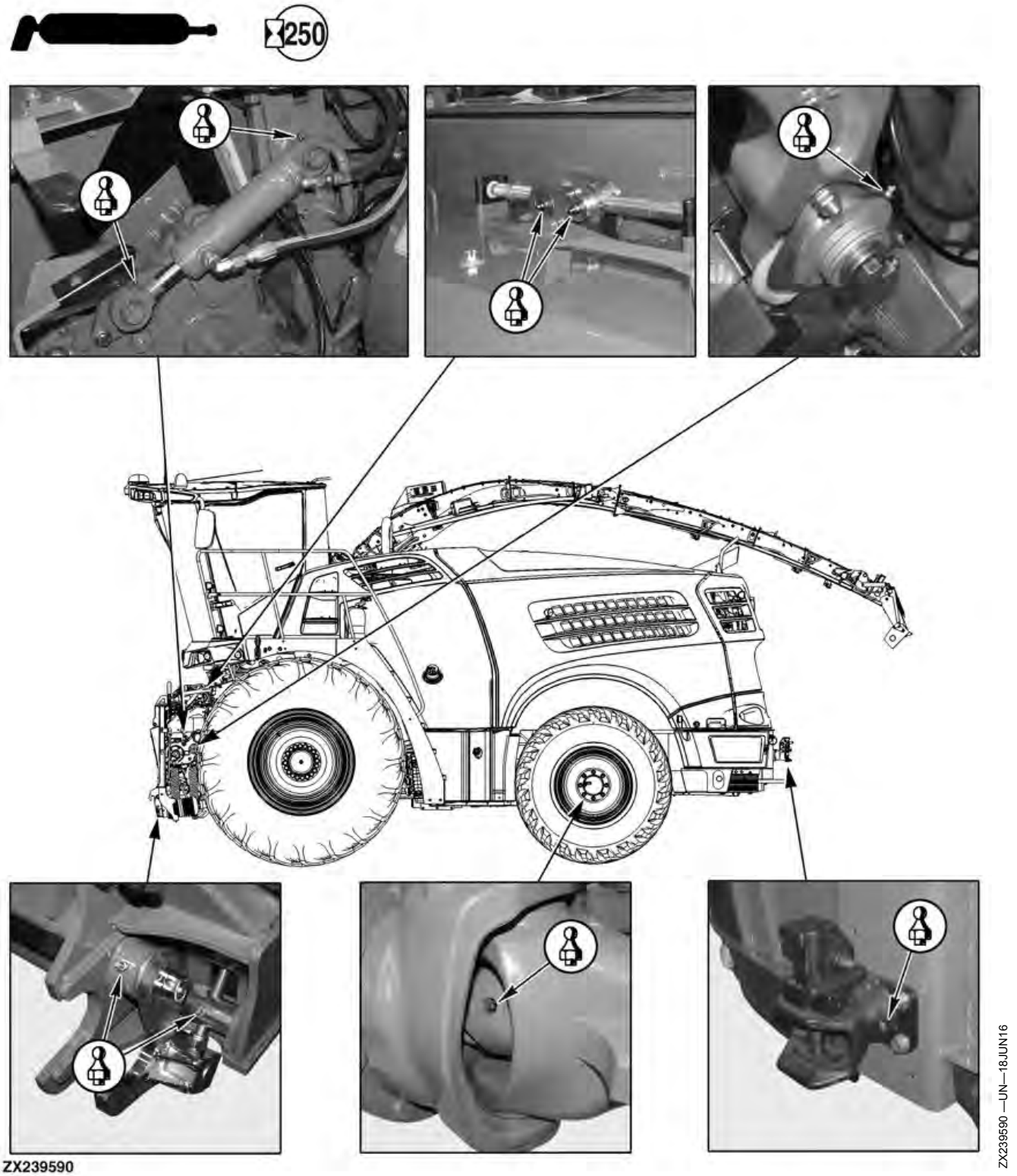

Greasing Points (250 Hours) - Part 1

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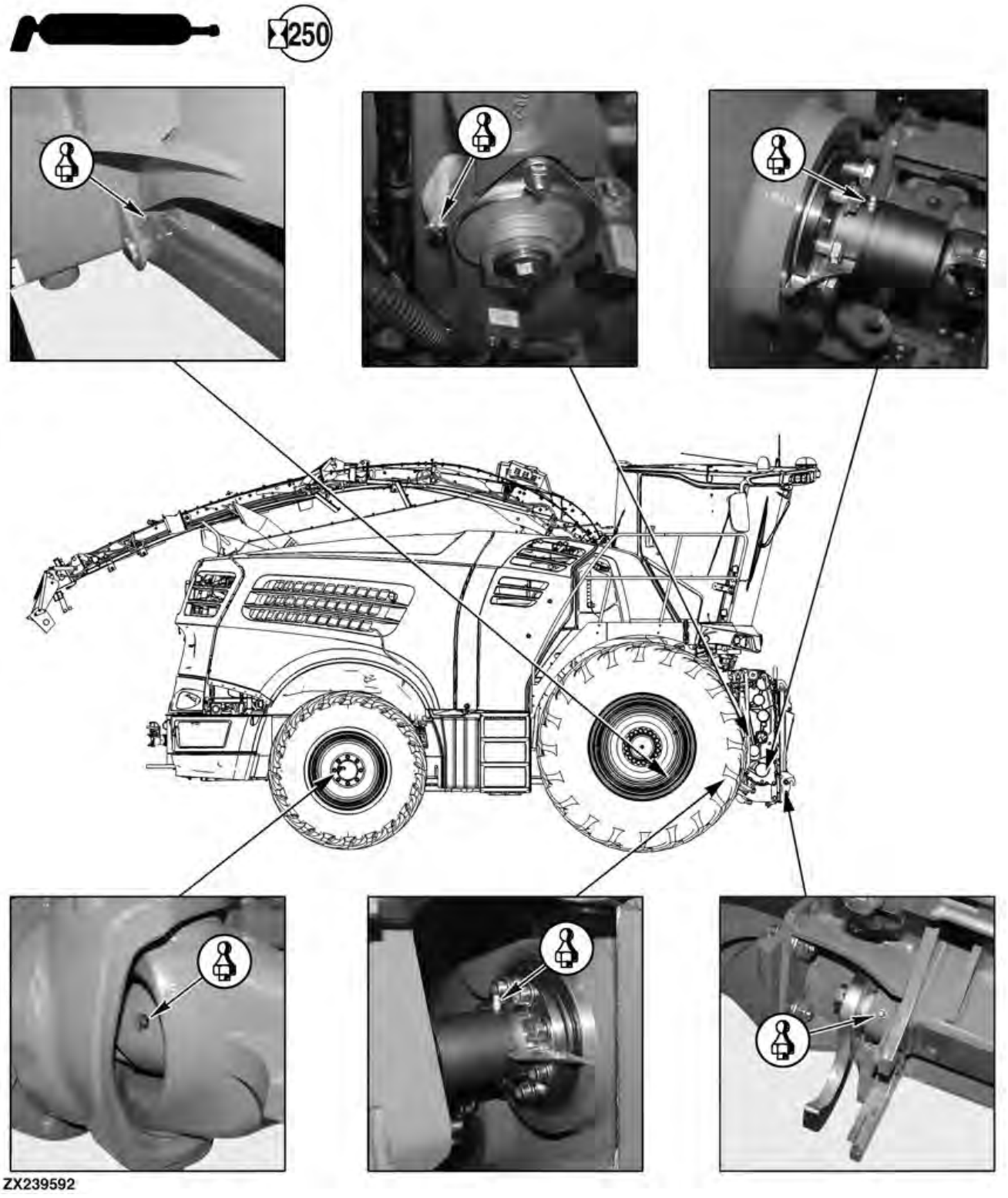

Greasing Points (250 Hours) - Part 2

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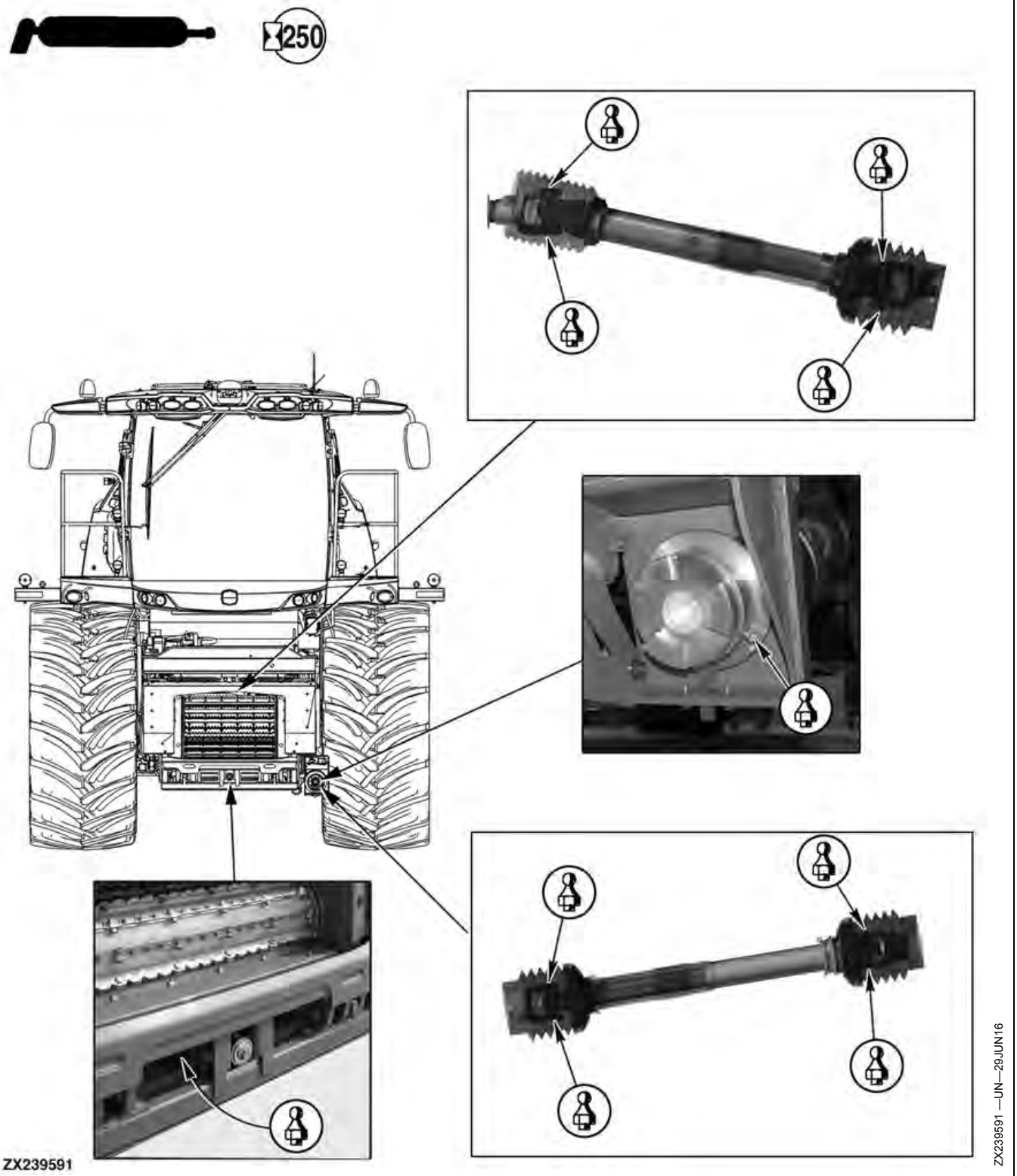

Greasing Points (250 Hours) - Part 3

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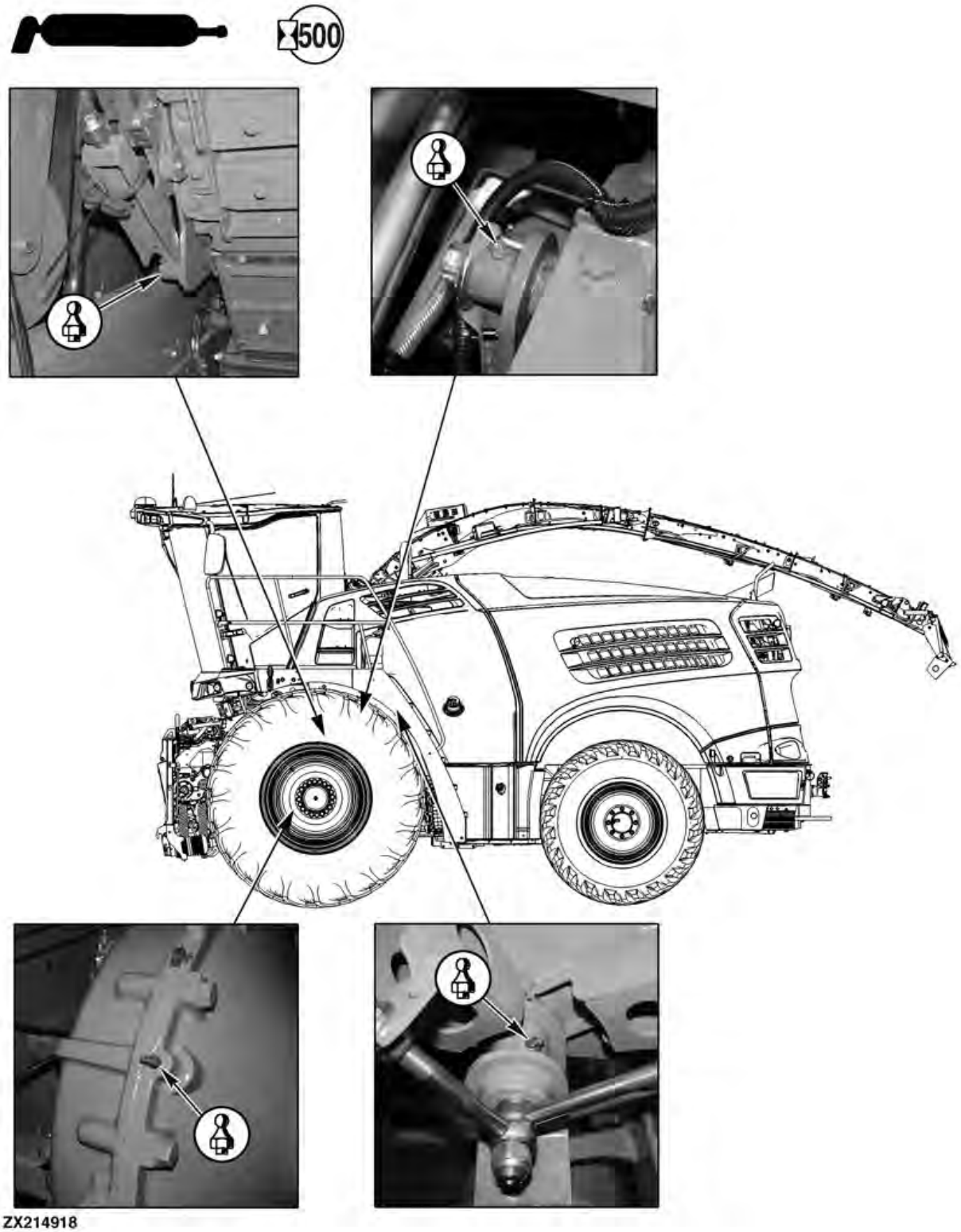

Greasing Points (500 Hours) - Part 1

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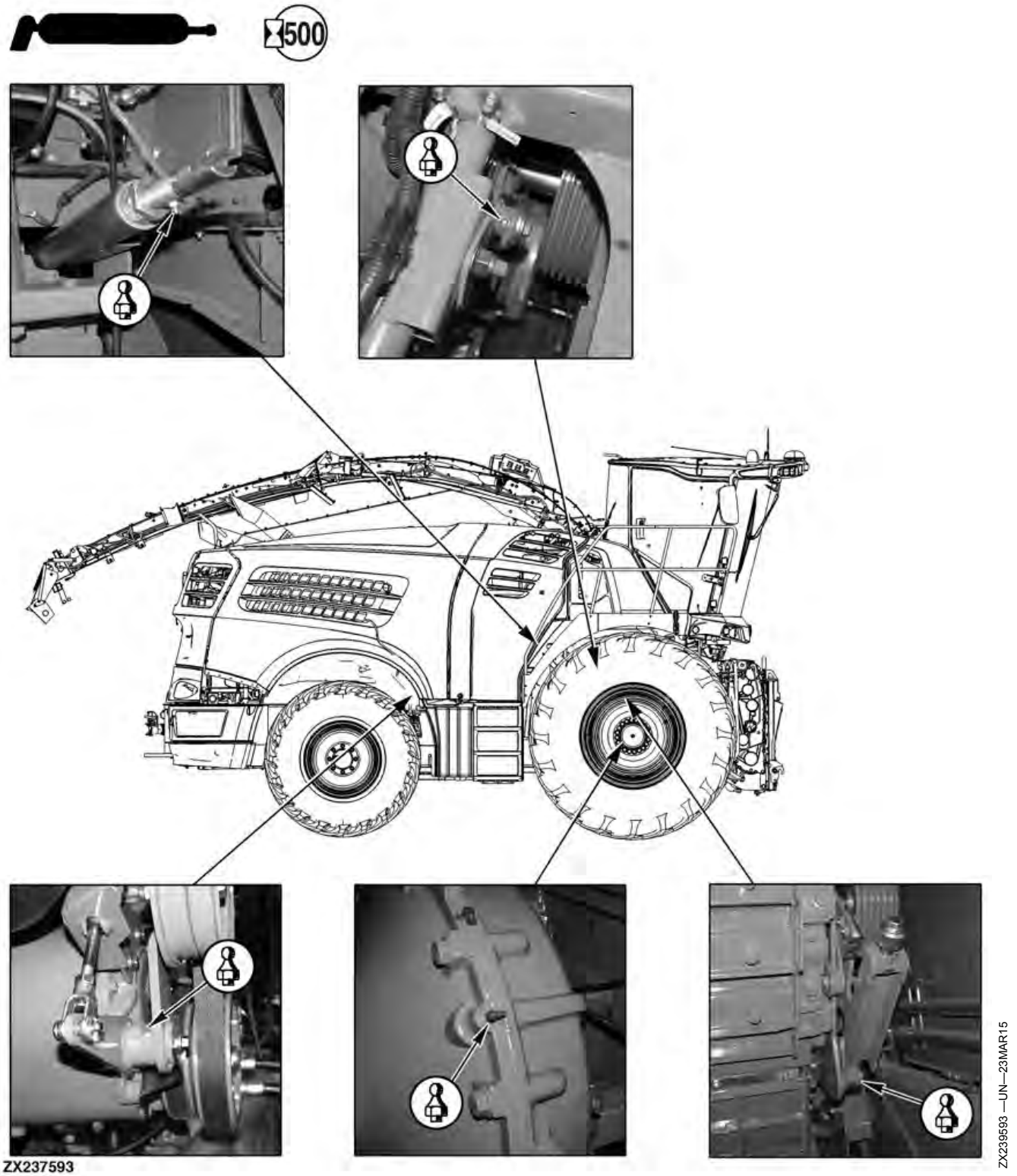


Greasing Points (500 Hours) - Part 2

OUCC002,0004C84 -19-29JUN16-9/9

Every 10 Operating Hours

Drain water of air compressor system.

Check engine oil level.

Check hydraulic oil level.

Clean rotary screen.

Clean fuel tank breather screen.

Check cooling system.

Check tires.

Check function of indicator lights.

Check function of lights.

Lubricate according to lubricating charts (apply grease until it escapes at the lubricating point).

Clean additive dosing system high volume and/or low volume tank (if equipped).

Clean additive dosing system high volume filter bowl (if equipped).

Clean additive dosing system nozzle tip (if equipped).

If bacterial inoculants are used, flush the additive dosing system (if equipped).

OUCC002,0004198 -19-23SEP14-1/1

Every 250 Operating Hours

Perform all work shown under Every 10 Operating Hours.

Tighten front wheel bolts to 710 N·m (524 lb·ft).

Tighten rear wheel nuts to 550 N·m (405 lb·ft).

Tighten steering cylinder attaching screws to 240 N·m (170 lb·ft).

Check specific gravity of battery electrolyte. If necessary, charge battery and/or top up with distilled water.

Check coolant level. Top up with antifreeze/water mixture, if necessary.

Check foot brake adjustment and correct, if necessary—Push-Button Shift transmission only.

Adjust park brake Bowden cable, if necessary—Push-Button Shift transmission only.

Check turbocharger hardware and hose connections for tightness.

Clean cab paper filter element.

Check and adjust drive belt tension.

Check transmission oil level.

Check header gearbox oil level.

Check left feedroll gearbox oil level.

Check right feedroll gearbox oil level.

Check oil level of final drives.

Check oil level of rear axle differential (four-wheel drive).

Check oil level of rear axle reduction gears (four-wheel drive).

Check oil level of rear axle wheel hubs (two-wheel drive).

Check brake fluid level—Push-Button Shift transmission only.

Replace coolant conditioner filter (8700 and 8800). Check that additive concentration is not above 3 units at each oil drain interval or every 6 months whichever occurs first.

8100—8600 WITHOUT John Deere Plus-50™ II oil Only:

IMPORTANT: On machine with Tier 2/Stage II or Tier 3/Stage III A Engine only, change oil every 100 hours if fuel contains more than 0.5 % sulfur. Fill crankcase with seasonal viscosity grade oil or Torq-Gard Supreme™ (250 hours change interval).

On machine with Tier 2/Stage II or Tier 3/Stage III A Engine only, if using Plus-50™ oil and a John Deere filter, service interval can be extended by 50 percent. Example: 250 Hours extend to 375 Hours.

On machine with Tier 2/Stage II or Tier 3/Stage III A Engine only, if using Plus-50™ II oil and a John Deere filter, service interval can be extended by 100 percent. Example: 250 Hours extend to 500 Hours.

- Drain engine oil and fill crankcase with fresh oil.
- Change engine oil filter.

8700 and 8800 Only:

IMPORTANT: Change oil every 100 hours if fuel is more than 0.5 % sulfur. Fill crankcase with seasonal viscosity grade oil (Plus-50™ or Valvoline®, Cummins Premium Blue®).

- Drain engine oil and fill crankcase with fresh oil.
- Change engine oil filter.

OUCC002,0004C68 -19-08JUN16-1/1

Every 500 Operating Hours

Perform all work shown under Every 10 Operating Hours.

Change fuel filter elements.

Thoroughly clean rotary screen and radiator.

Check rollers on rotary screen for wear and replace, if necessary.

Check rocker arm cover ventilation.

8100—8600 WITH John Deere Plus-50™ II oil Only:

- Drain engine oil and fill crankcase with fresh oil.
- Change engine oil filter.

OUCC002,0004504 -19-21MAR15-1/1

Every 1000 Operating Hours

Change oil of header drive gearbox.

Change oil of left and right feedroll gearboxes.

Change transmission oil (ProDrive™ or Push-Button Shift transmission).

Clean suction screen (ProDrive™ or Push-Button Shift transmission).

Change hydraulic oil filter (ProDrive™ transmission).

Change hydraulic system oil reservoir filter.

Change oil and filter of power distribution gear oil reservoir, and clean suction screen.

Change oil of rear axle differential (four-wheel drive).

Change oil of rear axle reduction gears (four-wheel drive).

Change oil of rear axle wheel hubs (two-wheel drive).

OUCC002,00042E6 -19-08SEP15-1/1

Every 1500 Operating Hours

Replace primary and secondary engine air cleaner elements.

Adjust engine valve clearance (8700 and 8800).

Clean crankcase breather tube (8700 and 8800).

Check engine mounting bolts (8700 and 8800).

Check crankshaft (8700 and 8800).

OUCC002,0004506 -19-21MAR15-1/1

Every 2000 Operating Hours

Change oil of hydraulic system oil reservoir (every 2000 operating hours or every two years whichever occurs first).

Have John Deere engine valve clearance checked and, if necessary, adjusted by your John Deere dealer (8100 and 8200).

OUCC002,00042E7 -19-31JAN15-1/1

Every 2500 Operating Hours (8300—8600)

Have John Deere engine valve clearance checked and, if necessary, adjusted by your John Deere dealer.

OUCC002,0003E3D -19-06OCT15-1/1

As Required

Periodically check level of reservoir (A) of rear couplers (B). If necessary, drain the reservoir (A) content in a suitable recipient.

Periodically check upper front feed roll down-stops for wear condition and correct installation.

Periodically check that no oil or coolant leakage appears at the level of the water pump weep hole. Keep the weep hole clean.

Replace both air cleaner elements.

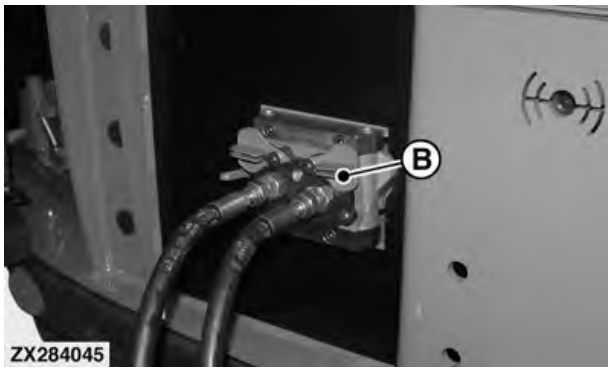
Change cab air filters.

Thoroughly clean fuel filler neck vent hole.

Clean battery.

A—Reservoir **B—Rear Coupler**

ZX284044 —UN—18JUN16



ZX284045 —UN—18JUN16

OUCC002,0004C85 -19-10JUN16-1/1

Annually

Have starting motor checked.

Have alternator checked.

Check air intake system hose connections.

Check park brake cylinder cables (Push-Button Shift transmission)

Lubricate and check bearings of kernel processor rolls.

Lubricate drive shaft between header drive gearbox and intermediate bearing support.

Sanitize additive dosing system low volume (if equipped).

Replace Diesel Exhaust Fluid (DEF) dosing unit filter and equalizing element (Final Tier4/Stage IV engine).

IMPORTANT: Replace DEF dosing unit filter after first year of operation and every THREE years thereafter.

Replace Diesel Exhaust Fluid (DEF) tank vent filter (Final Tier4/Stage IV engine).

IMPORTANT: Replace DEF tank vent filter after first year of operation and every THREE years thereafter.

OUCC002,000450A -19-21MAR15-1/1

Every 2 Years

Change brake fluid (Push-Button Shift transmission).

Clean air conditioning system.

Change oil of hydraulic system oil reservoir (every 2 years or every 2000 operating hours, whichever occurs first).

Change engine coolant thermostat.

Check vibration damper.

Check water pump (8700 and 8800).

Change filter of coolant conditioner (8700 and 8800).

OUCC002,000450C -19-21MAR15-1/1

Every 3 Years or 4500 Operating Hours

Replace Diesel Exhaust Fluid (DEF) dosing unit filter and equalizing element.

Replace Diesel Exhaust Fluid (DEF) tank vent filter.

OUCC002,0004133 -19-04SEP15-1/1

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 manufacturer. Use correct size and thread type as replaced hose.

OUCC002,0003DBC -19-08AUG13-1/1

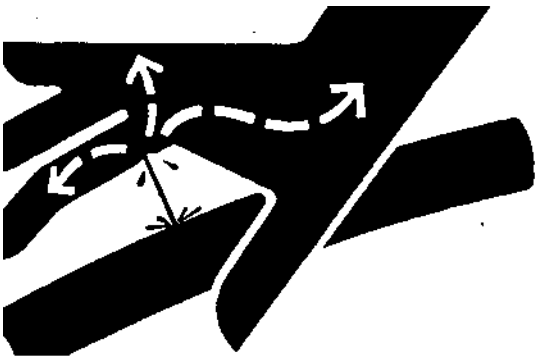
Hydraulic System Cleanliness

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 may 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.



X9811 —UN—23AUG88

Before installing any replacement hose, flush the inside with unused diesel fuel or unused commercial petroleum cleaning solvent for ten seconds minimum. Do not use water, water soluble cleaners or compressed air.

Remove cover from multi-coupler and attach to docking station on header. When coupling to header clean multi-coupler surfaces to remove dirt and debris.

OUCC002,0003DBD -19-08AUG13-1/1

Change Hydraulic System Oil

Only change oil when:

- Cutterhead is lowered.
- Reel or compressor roll of header is lowered.
- Discharge spout is lowered.

Change Hydraulic System Oil: After every 2000 hours of operation or every 2 years (whichever occurs first).

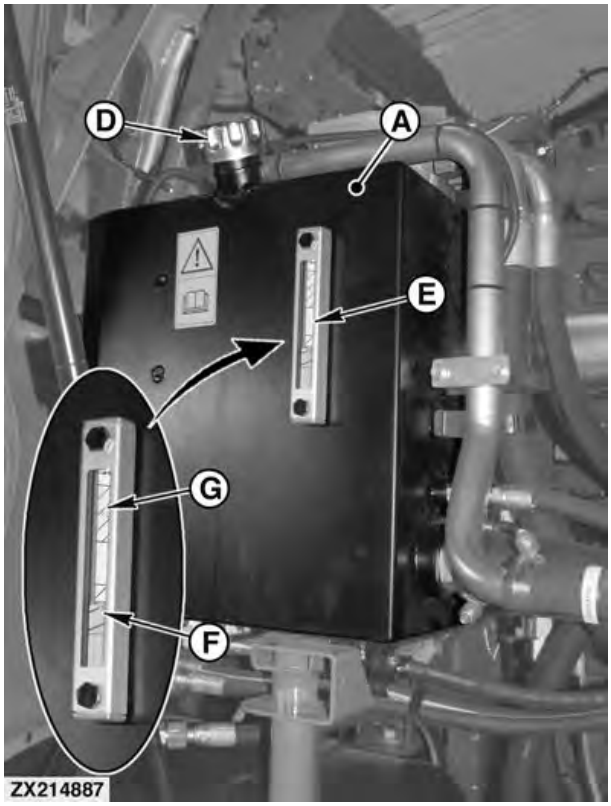
1. Drain oil from reservoir (A) into a suitable container.
2. Remove drain plug (B) from drain line (C).
3. Tighten drain plug (B) securely after oil has been drained.
4. Open filler neck (D).
5. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) until oil level is between the “Min” and “Max” marks of the relevant level scale of sight glass (E).

IMPORTANT: Make sure to fill the reservoir correctly. Oil level differs on machines with or without the high-flow wagon dump and/or the dual drive header drive options. Refer to the relevant oil level scale on decal (F) or (G):

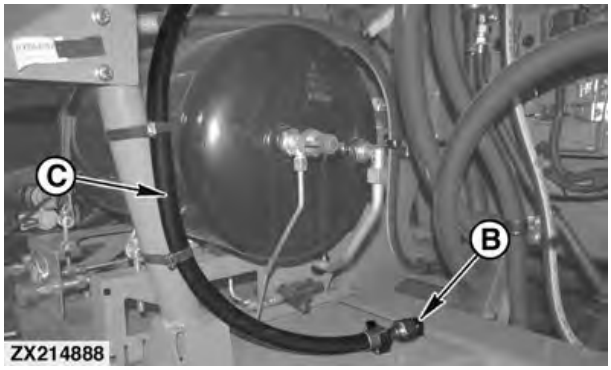
- **On machine without High-Flow Wagon Dump and Dual Drive Header Drive options, refer to scale (F).**
- **On machine with High-Flow Wagon Dump and/or Dual Drive Header Drive option, refer to scale (G).**

IMPORTANT: Always bleed the hydraulic system circuit after oil change.

6. Bleed the hydraulic system circuit as follows:
   a. Start and run the engine at rated speed.
   b. Simultaneously fully raise the cutterhead assembly AND rotate discharge spout.
   c. Repeat 3 to 5 times until suction noises are no longer heard at the level of power distribution gear (load sensing pump).



ZX214887 —UN—06OCT14



ZX214888 —UN—06OCT14

A—Hydraulic Oil Reservoir
B—Drain Plug
C—Drain Line
D—Filler Neck
E—Sight Glass
F—Oil Level Scale—Standard Machine
G—Oil Level Scale—Machine With Options

OUCC002,00046CD -19-08SEP15-1/1

Replace Hydraulic System Reservoir Filter

Remove and replace filter:

- When performance declines.
- When diagnostic trouble code **FH2 001713.0** is generated.
- After every 1000 hours of operation.

IMPORTANT: Clean area around filter cap before removing to prevent system contamination. It is not necessary to drain system when replacing filter.

Loosen cap screws equally to relieve spring pressure from filter cap.

NOTE: Inspect and replace O-rings (D) underneath filter head (B) as needed.

Proceed as follows:

1. Loosen cap screws (A) without removing them.
2. Press down and rotate filter head (B) counterclockwise.

IMPORTANT: Pay attention to deflector (E) orientation when removing filter head (B). Do not reinstall filter head in inverted position.

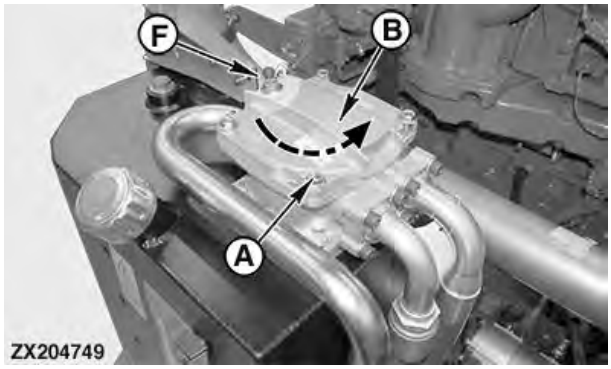
3. Remove and discard filter (C). Replace with an original John Deere filter.
4. Install new filter.
5. Install previously removed filter head (B).

IMPORTANT: Make sure to reinstall filter head (B) in correct position. Breather (F) must be oriented toward rear of the machine.

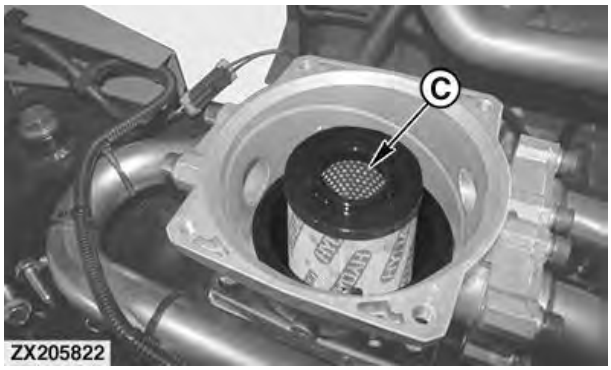
6. Use filter head (B) to compress spring and tighten flange screws (A) to 7 N·m (62 lb.-in.).

IMPORTANT: Verify that O-rings (D) remain in place when installing filter head (B).

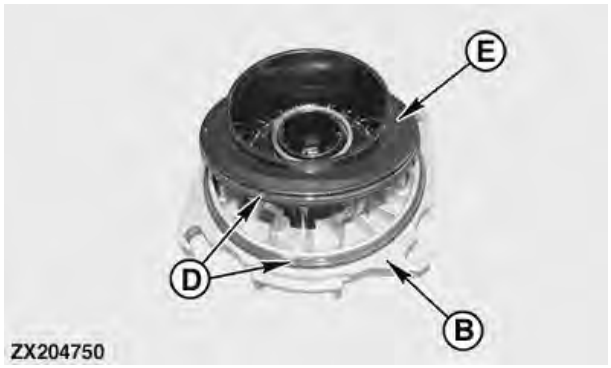
7. Start engine and check for leaks.



ZX204749 —UN—17NOV14



ZX205822 —UN—17NOV14

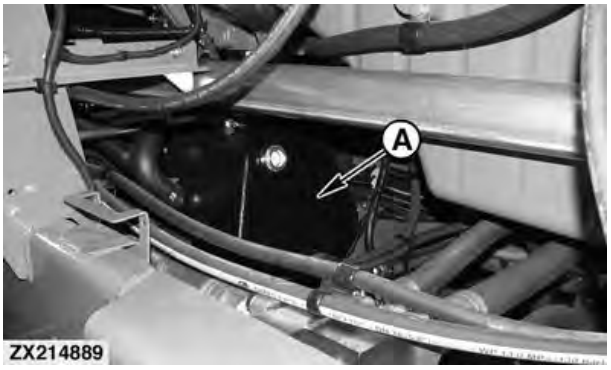


ZX204750 —UN—17NOV14

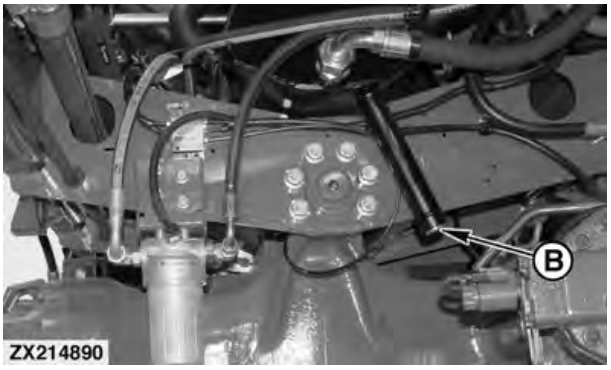
A—Flange Screw
B—Filter Head
C—Filter
D—O-Ring
E—Deflector
F—Breather

OUCC002,00042EA -19-31JAN15-1/1

Change Power Distribution Gear Oil (8100—8600 Only)



ZX214889 —UN—06OCT14



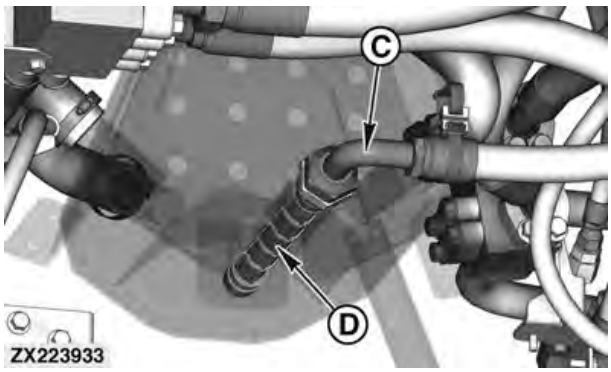
ZX214890 —UN—06OCT14

Change Power Distribution Gear Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

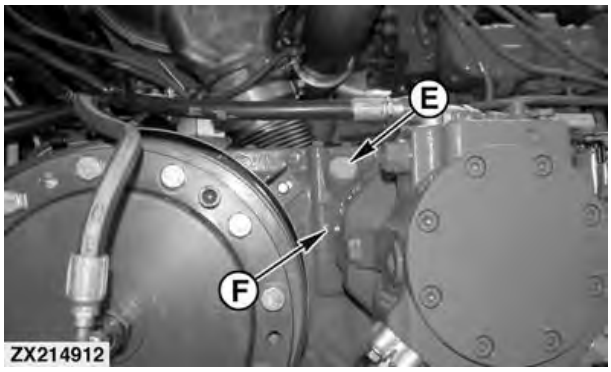
IMPORTANT: Also replace the power distribution gear oil filter (see Replace Power Distribution Gear Oil Filter in this section).

1. Drain oil from reservoir (A) into a suitable container.
2. Remove drain plug (B).
3. Tighten drain plug (B) securely after oil has been drained.
4. Disconnect hydraulic hose (C) from fitting then remove screen (D). Check cleanliness of screen (D) then reconnect hydraulic hose (C).
5. On left-hand side of the machine, remove plug (E) from power distribution gear (F).
6. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) until oil level is visible at sight glass (G).
7. Install refill plug (E) back on power distribution gear (F).

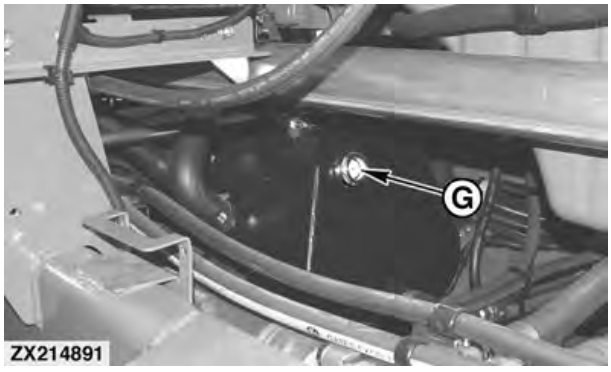
A—Power Distribution Gear Oil Reservoir
B—Drain Plug
C—Hydraulic Hose
D—Screen
E—Refill Plug
F—Power Distribution Gear
G—Sight Glass



ZX223933 —UN—30OCT14



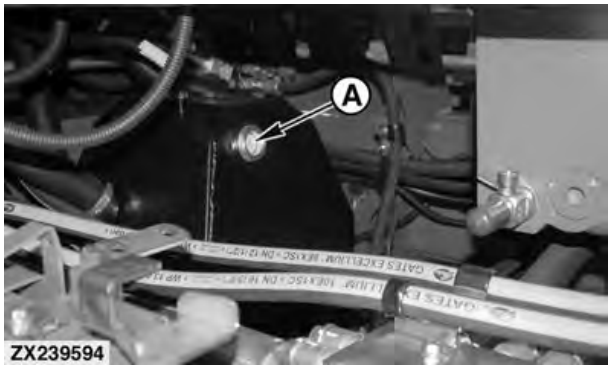
ZX214912 —UN—29OCT14



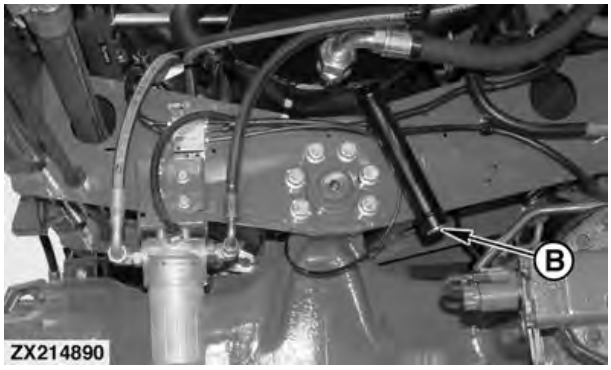
ZX214891 —UN—29OCT14

OUCC002,000450E -19-21MAR15-1/1

Change Power Distribution Gear Oil (8700 and 8800 Only)



ZX239594 —UN—23MAR15



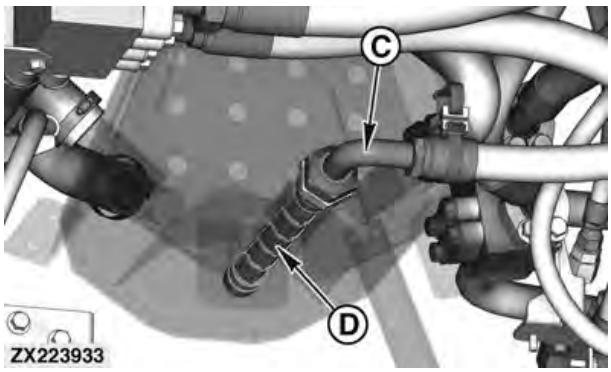
ZX214890 —UN—06OCT14

Change Power Distribution Gear Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

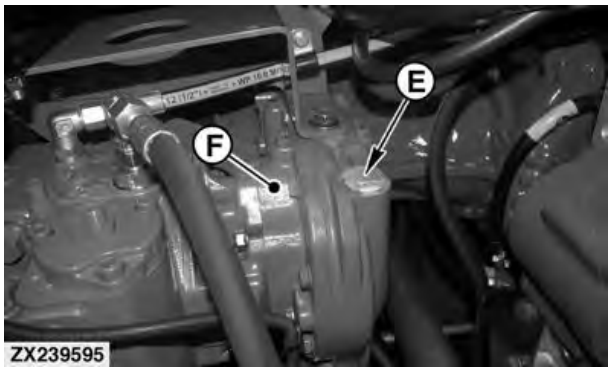
IMPORTANT: Also replace the power distribution gear oil filter (see Replace Power Distribution Gear Oil Filter in this section).

1. Drain oil from reservoir (A) into a suitable container.
2. Remove drain plug (B).
3. Tighten drain plug (B) securely after oil has been drained.
4. Disconnect hydraulic hose (C) from fitting then remove screen (D). Check cleanliness of screen (D) then reconnect hydraulic hose (C).
5. On left-hand side of the machine, remove plug (E) from power distribution gear (F).
6. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) until oil level is visible at sight glass (G).
7. Install refill plug (E) back on power distribution gear (F).

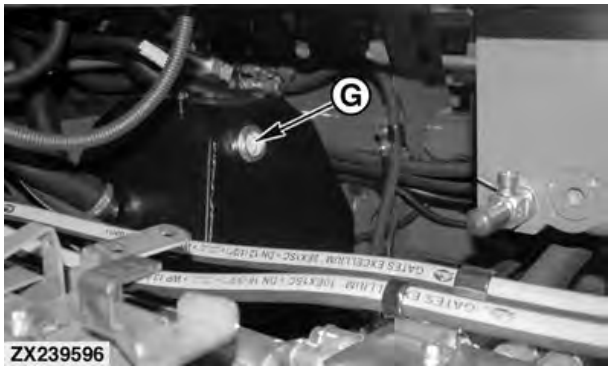
A—Power Distribution Gear Oil Reservoir
B—Drain Plug
C—Hydraulic Hose
D—Screen
E—Refill Plug
F—Power Distribution Gear
G—Sight Glass



ZX223933 —UN—30OCT14



ZX239595 —UN—23MAR15



ZX239596 —UN—23MAR15

OUCC002,000450F -19-21MAR15-1/1

Replace Power Distribution Gear Oil Filter

IMPORTANT: Observe utmost cleanliness when installing filter.

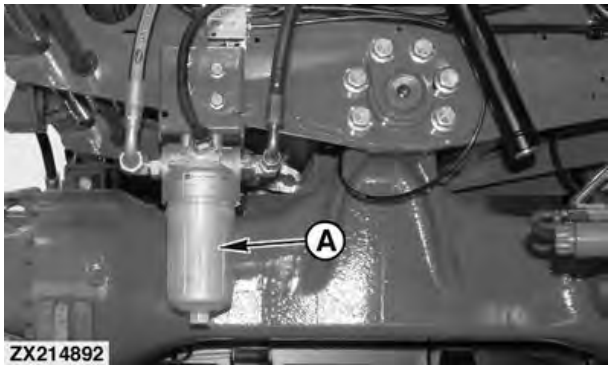
Remove and replace filter:

- When diagnostic trouble code **PTP 522375.0** is generated.
- After the first 100 hours of operation. Thereafter change filter every 1000 hours of operation.

IMPORTANT: If the filter is replaced after the first 100 hours or after 1000 hours of operation, also replace the power distribution gear oil (see Change Power Distribution Gear Oil in this section).

Proceed as follows:

1. Loosen and remove filter (A).
2. Discard filter (A) and replace with an original John Deere filter.
3. Coat filter sealing surface with oil.



ZX214892 —UN—06OCT14

A—Hydraulic Oil Filter

4. Tighten filter by hand until sealing ring touches filter housing sealing surface and then tighten a further 3/4 to 1-1/4 turns. Do not overtighten.
5. Start engine and check for leaks, if necessary retighten.

OUCC002,00041DA -19-29OCT14-1/1

Change ProDrive™ Transmission Oil

Change ProDrive™ Transmission Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

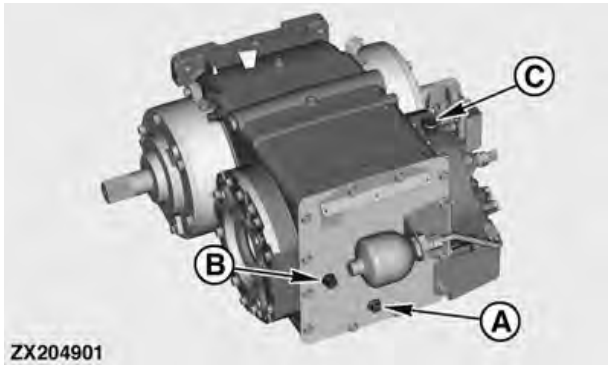
IMPORTANT: Also replace the ProDrive™ transmission oil filter (see Replace ProDrive™ Transmission Hydraulic Oil Filter in this section).

NOTE: Check oil level every 250 hours of operation.

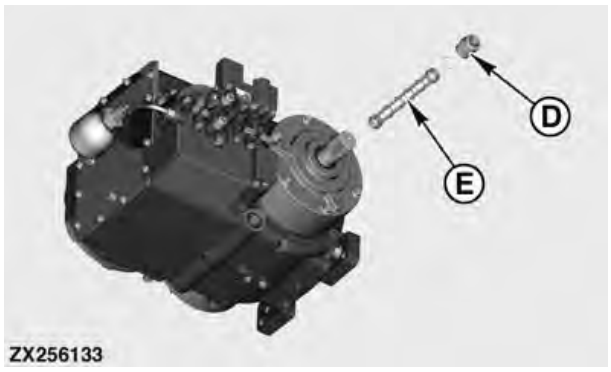
1. Remove drain plug (A) and filler plug (B).
2. Drain oil into a suitable container.
3. Check vent plug (C) and clean if necessary.
4. Tighten drain plug (A) securely after oil has been drained.
5. Remove fitting (D) from transmission housing.
6. Check screen (E) and O-rings and replace, if necessary.
7. Reinstall all parts.

IMPORTANT: When reinstalling, make sure screen (E) is seated correctly in transmission housing.

8. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) at level/filler plug (B) until level is at plug bore.
9. Reinstall level/filler plug (B).



ZX204901 —UN—14AUG13



ZX256133 —UN—09SEP15

A—Drain Plug
B—Level/Filler Plug
C—Vent Plug
D—Fitting
E—Screen

OUCC002,000413C -19-08SEP15-1/1

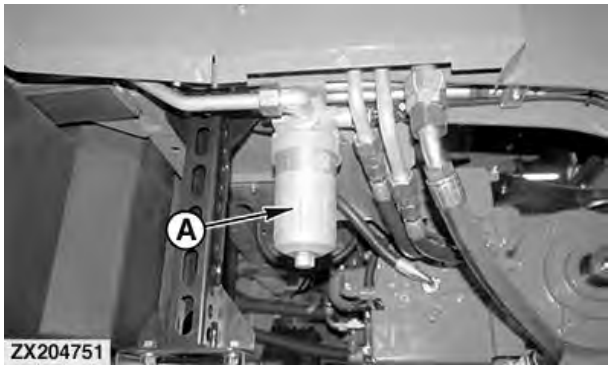
Replace ProDrive™ Transmission Hydraulic Oil Filter

IMPORTANT: Observe utmost cleanliness when installing filter.

Remove and replace filter:

- When diagnostic trouble code **PTP 522375.0** is generated.
- After the first 100 hours of operation. Thereafter change filter every 1000 hours of operation.

IMPORTANT: If the filter is replaced after the first 100 hours or after 1000 hours of operation, also replace the ProDrive™ transmission oil (see Change ProDrive™ Transmission Oil in this section).



ZX204751 —UN—17NOV14

A—Hydraulic Oil Filter

Proceed as follows:

1. Loosen and remove filter (A).
2. Discard filter (A) and replace with an original John Deere filter.
3. Coat filter sealing surface with oil.
4. Tighten filter by hand until sealing ring touches filter housing sealing surface and then tighten a further 3/4 to 1-1/4 turns. Do not overtighten.
5. Start engine and check for leaks, if necessary retighten.

OUCC002,000413A -19-25AUG14-1/1

Change Push-Button Shift Transmission Oil

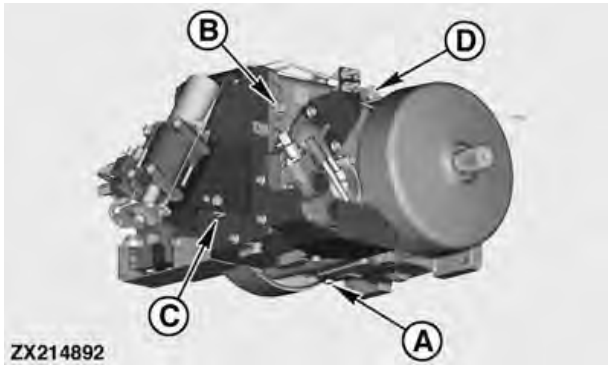
Change Push-Button Shift Transmission Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

NOTE: Check oil level every 250 hours of operation.

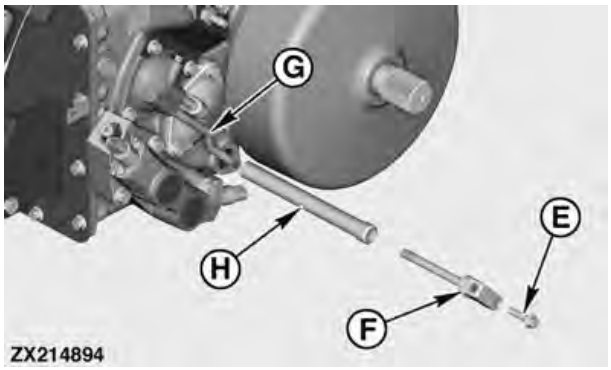
1. Remove drain plug (A), filler plug (B), and level plug (C).
2. Drain oil into a suitable container.
3. Check vent plug (D) and clean if necessary.
4. Tighten drain plug (A) securely after oil has been drained.
5. Remove cap screw (E).
6. Remove fitting (F) from transmission housing and from line (G).
7. Check screen (H) and O-rings and replace, if necessary.
8. Reinstall all parts.

IMPORTANT: When reinstalling, make sure screen (H) is seated correctly in transmission housing.

9. Refill with specified transmission oil (see **Transmission Oil** in this section) at filler plug (B) until level is at level plug (C) bore.
10. Reinstall filler plug (B) and level plug (C).



ZX214893 —UN—06OCT14



ZX214894 —UN—06OCT14

A—Drain Plug
B—Filler Plug
C—Level Plug
D—Vent Plug
E—Cap Screw
F—Fitting
G—Line
H—Screen

OUCC002,000414C -19-08SEP15-1/1

Change Final Drive Oil

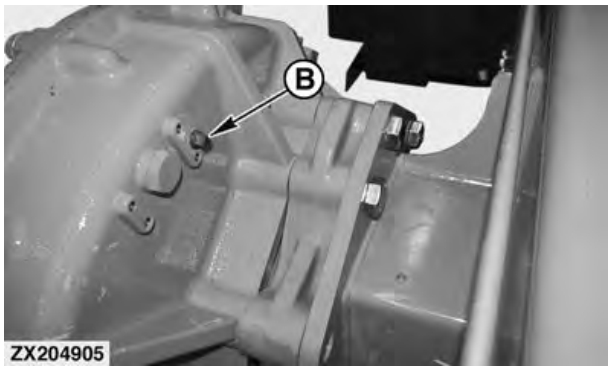
Change Final Drive Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

NOTE: Check oil level every 250 hours of operation.

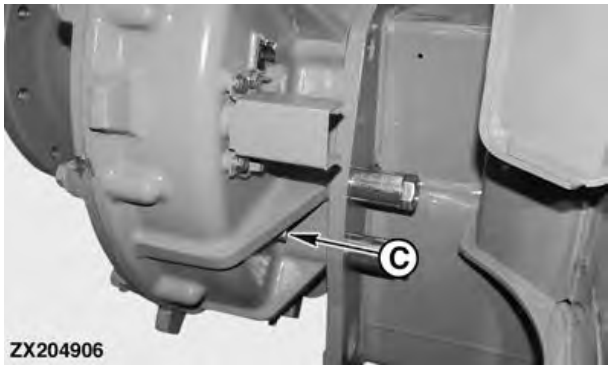
1. Remove drain plug (A) and filler plug (B).
2. Drain oil into a suitable container.
3. Tighten drain plug (A) securely after oil has been drained.
4. Remove level plug (C).
5. Refill with specified transmission oil (see **Transmission Oil** in this section) at filler plug (B) until oil level is at level plug (C) bore.
6. Reinstall filler plug (B) and level plug (C).

A—Drain Plug
B—Filler Plug
C—Level Plug

ZX204904 —UN—14AUG13



ZX204905 —UN—14AUG13



ZX204906 —UN—14AUG13

OUCC002,0004150 -19-25AUG14-1/1

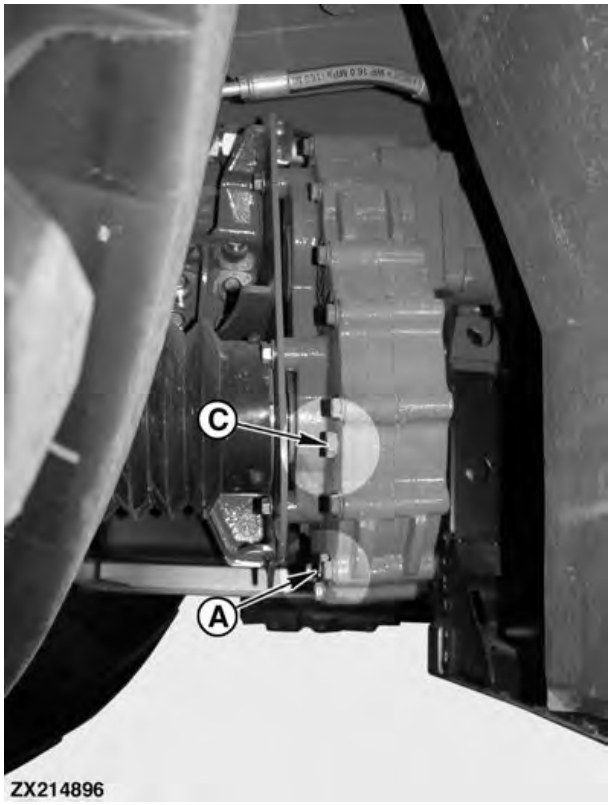
Change Header Gearbox Oil

Change Header Gearbox Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

NOTE: Check oil level every 250 hours of operation.

1. Remove drain plug (A) and filler plug (B).
2. Drain oil into a suitable container.
3. Tighten drain plug (A) securely after oil has been drained.
4. Remove level plug (C).
5. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) at filler plug (B) until oil level is at level plug (C) bore.
6. Reinstall filler plug (B) and level plug (C).

A—Drain Plug
B—Filler Plug
C—Level Plug



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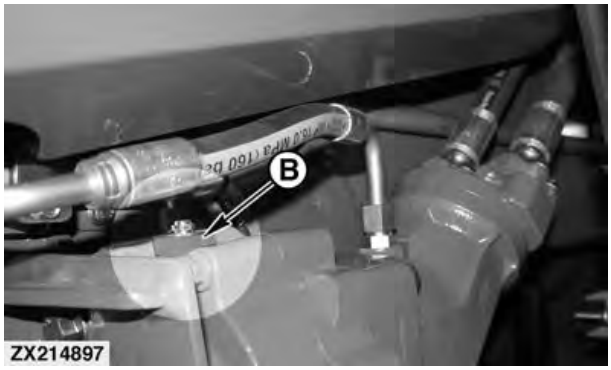

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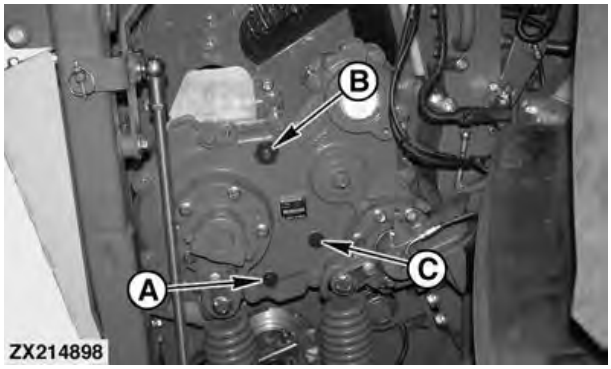
OUCC002,0004151 -19-25AUG14-1/1

Change Left Feedroll Gearbox Oil

Change Left Feedroll Gearbox Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

NOTE: Check oil level every 250 hours of operation.

1. Remove drain plug (A) and filler plug (B).
2. Drain oil into a suitable container.
3. Tighten drain plug (A) securely after oil has been drained.
4. Remove level plug (C).
5. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) at filler plug (B) until oil level is at level plug (C) bore.
6. Reinstall filler plug (B) and level plug (C).



ZX214898 —UN—06OCT14

A—Drain Plug
B—Filler Plug
C—Level Plug

OUCC002,0004152 -19-25AUG14-1/1

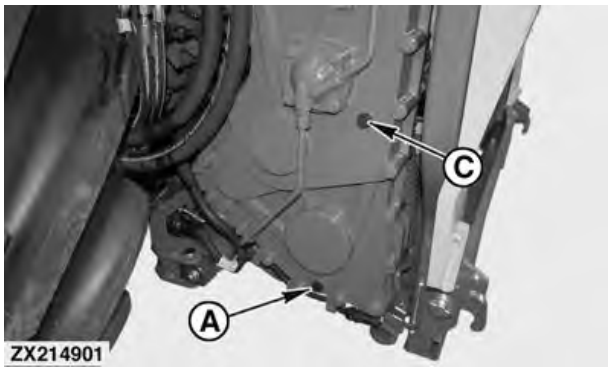
Change Right Feedroll Gearbox Oil

Change Right Feedroll Gearbox Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

NOTE: Check oil level every 250 hours of operation.

1. Remove drain plug (A) and filler plug (B).
2. Drain oil into a suitable container.
3. Tighten drain plug (A) securely after oil has been drained.
4. Remove level plug (C).
5. Refill with specified hydraulic oil (see **Hydraulic Oil** in this section) at filler plug (B) until oil level is at level plug (C) bore.
6. Reinstall filler plug (B) and level plug (C).

A—Drain Plug
B—Filler Plug
C—Level Plug



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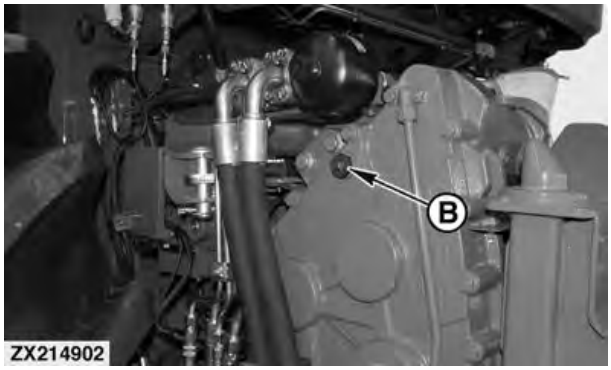


ZX214902 —UN—06OCT14

OUCC002,0004154 -19-25AUG14-1/1

Change Rear Axle Oil

Change Differential Oil (Powered Rear Axle Only): After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

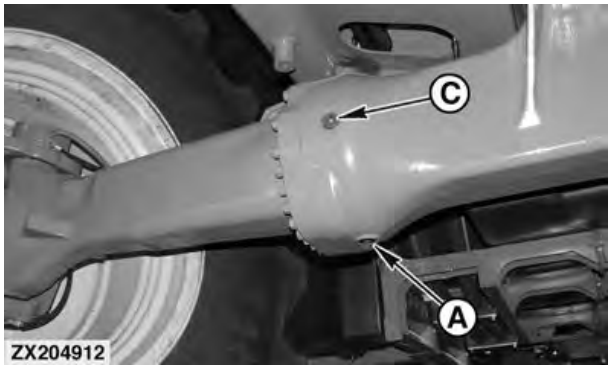
NOTE: Check oil level every 250 hours of operation.

1. Remove drain plugs (A) and filler plug (B).
2. Drain oil into a suitable container.
3. Tighten drain plugs (A) securely after oil has been drained.
4. Remove level plug (C).
5. Refill with specified transmission oil (see **Transmission Oil** in this section) at filler plug (B) until oil level is at level plug (C) bore.

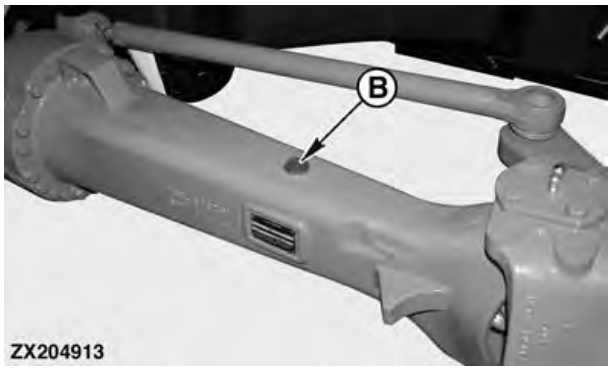
NOTE: Filling the axle housing with oil to the correct level can take up to 30 minutes time!

6. Reinstall filler plug (B) and level plug (C).

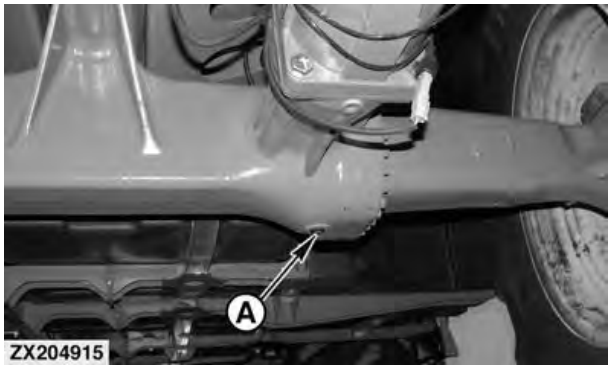
A—Drain Plug
B—Filler Plug
C—Level Plug



ZX204912 —UN—14AUG13



ZX204913 —UN—14AUG13



ZX204915 —UN—14AUG13

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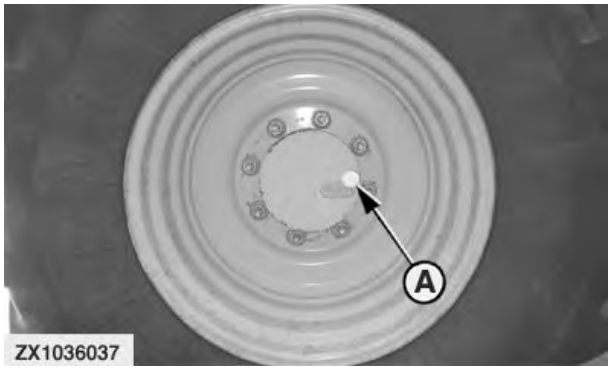
OUCC002,0004155 -19-26AUG14-1/3

Change Reduction Gear/Wheel Hub Oil: After the first 100 hours of operation. Thereafter change oil every 1000 hours of operation.

NOTE: Filling the axle housing with oil to the correct level can take up to 30 minutes time!

1. Before draining oil from reduction gear or wheel hub, rotate the wheel so that plug (A) is at the highest position and partially unscrew plug (A) to relieve possible pressure.
2. Rotate the reduction gear or wheel hub so that the plug (A) is toward the ground.
3. Remove plug (A) and drain oil into a suitable container.
4. Rotate the reduction gear or wheel hub so that the **OIL LEVEL** mark is parallel to the ground.
5. Fill oil up to the bottom of the plug hole.



ZX1036037 —UN—08SEP04

A—Level, Fill and Drain Plug

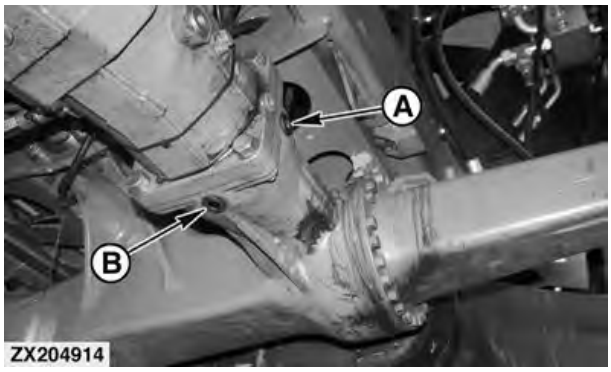
6. Reinstall plug (A).

OUCC002,0004155 -19-26AUG14-2/3

Change Motor Housing Oil: Only when a rear wheel drive motor has been removed.

To prevent sealing from drying out, the motor housing is filled with 1 L (0.26 gal.) of transmission oil.

A—Level/Filler plug **B—Drain Plug**



ZX204914 —UN—14AUG13

OUCC002,0004155 -19-26AUG14-3/3

Diesel Exhaust Fluid (DEF) — Use in Selective Catalytic Reduction (SCR) Equipped Engines

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.

In some cases, DEF is referred to by one or more of these names:

- Urea
- Aqueous Urea Solution 32
- AUS 32
- AdBlue™
- NOx Reduction Agent
- Catalyst Solution

AdBlue is a trademark of VDA, the German Association of the Automotive Industry.

DX,DEF -19-13JUN13-1/1

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.

The following storage information is provided 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 °C (12 °F). Exposure to temperatures greater than 30 °C (86 °F) can degrade DEF over time.

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 °C and 30 °C (23 °F and 86 °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 °C (9 °F) temperature above 30 °C (86 °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 -19-13JUN13-1/1

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 -19-13JUN13-1/1

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 -19-13JUN13-1/1

Fill the 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.

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.

Fill DEF tank every time machine is refueled. If this cannot be done, monitor DEF level on the Primary Display Unit (PDU) and refill as necessary. To avoid drastic changes in machine performance, always keep DEF level above red mark (C) of the DEF level gauge (B).

NOTE: Spilled DEF, if left to dry or if only wiped away with a cloth, leaves white residues. Aside from cosmetic issues, an improperly cleaned DEF spill may interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

To fill the DEF tank:

1. Before using containers, funnels, etc. to dispense DEF, wash and rinse items thoroughly with distilled water to remove contaminants.
2. Wipe DEF tank cap (A) and area around cap and filler neck to reduce chance of contaminating DEF.

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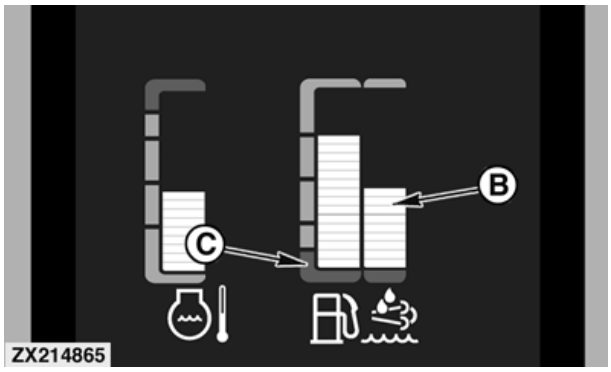


ZX214865 —UN—06OCT14

A—DEF Tank Cap
B—DEF Level Gauge
C—Red Mark

3. Remove DEF tank cap (A).
4. Using funnel, carefully pour DEF into tank, watching level through filler neck.
5. Securely tighten DEF tank cap (A).
6. Carefully clean any spills, using distilled water only.

IMPORTANT: 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 Clean Diesel Exhaust Fluid (DEF) Tank in this section. After refilling the tank, check the DEF concentration. See Testing Diesel Exhaust Fluid (DEF).

OUCC002,0004156 -19-26AUG14-1/1

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 °C (–4 °F) or elevations above 1675 m (5500 ft.).

Cold Filter Plugging Point (CFPP) should be at least 5 °C (9 °F) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

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).

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 B, and Stage IV 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.
- 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 -19-13JAN16-1/1

Handle and Store Diesel Fuel

CAUTION: 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 for recommendations.

OUCC002,0003D4C -19-29JUL13-1/1

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.

DX,FUEL5 -19-07FEB14-1/1

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 cetane number, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

DX,FUEL6 -19-14APR11-1/1

Biodiesel Fuel

Biodiesel is a fuel comprised of mono-alkyl 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.

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.bq-9000.org.

While 5% blends are preferred (B5), biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used in all John Deere engines. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751 (US), EN 14214 (EU), or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

John Deere approved fuel conditioners containing detergent/dispersant additives are recommended when using lower biodiesel blends, but are required when using blends of B20 or greater.

John Deere engines can also operate on biodiesel blends above B20 (up to 100% biodiesel) ONLY if the biodiesel meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 may not fully comply with 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 approved fuel conditioners containing detergent/dispersant additives are required.

NOTE: Components (fuel fitting, fuel hoses,...) of machines equipped with Final Tier 4/Stage IV engines are not biodiesel compatible and must be replaced with biodiesel compatible components when using biodiesel blends above B20.

The petroleum diesel portion of biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standards.

Biodiesel blends up to B20 must be used within 90 days of the date of biodiesel manufacture. Biodiesel blends from B21 to B100 must be used within 45 days of the date of biodiesel manufacture.

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the above specifications.

When using biodiesel fuel, the engine oil level must be checked daily. If oil becomes diluted with fuel, shorten oil change intervals. Refer to Diesel Engine Oil and Filter Service Intervals for more details regarding biodiesel and engine oil change intervals.

The following must be considered when using biodiesel blends up to B20:

- Cold weather flow degradation
- Stability and storage issues (moisture absorption, oxidation, 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
- Possible reduction of service life of engine components

The following must also be considered when using biodiesel blends above B20.

- Possible coking and/or blocked injector nozzles, resulting in power loss and engine misfire if John Deere approved fuel conditioners containing detergent/dispersant additives are not used
- Possible crankcase oil dilution, requiring more frequent oil changes
- Possible corrosion of fuel injection equipment
- Possible lacquering and/or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible elastomer seal and gasket material degradation (primarily an issue with older engines)
- Possible compatibility issues with other materials (including copper, lead, zinc, tin, brass, and bronze) used in fuel systems and fuel handling equipment
- Possible reduction in water separator efficiency
- Potential high acid levels within fuel system
- Possible damage to paint if exposed to biodiesel

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.

OUCC002,00040F3 -19-27JUN14-1/1

Fill the Fuel Tank

CAUTION: Be careful when handling fuel. Never fill tank when engine is running. During filling of tank smoking is strictly prohibited!

Fill the fuel tank at the end of each day's operation to prevent condensation.

To prevent smaller filler nozzles from slipping out of the filler neck during fuel tank refilling, a filler nozzle adapter (A) is available through regular spare part channel. This adapter (A) can hold nozzles with a diameter up to 32 mm (1.26 in). Contact your John Deere dealer.

A—Filler Nozzle Adapter

ZX203210 —UN—25MAR14

ZX280458 —UN—18JUN16

OUCC002,0004C43 -19-31MAY16-1/1

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 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) 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 -19-15MAY13-1/1

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.

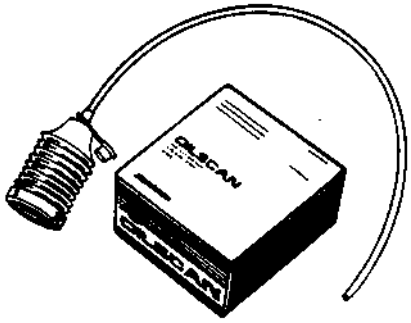
DX,LUBMIX -19-18MAR96-1/1

Oilscan™ and CoolScan™

Oilscan™ 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 Oilscan™ and CoolScan™ kits.



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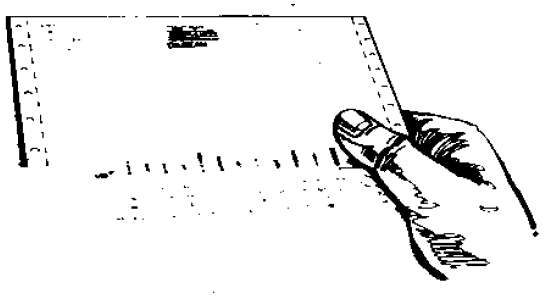

T6829AB —UN—26AUG11

Oilscan is a trademark of Deere & Company
CoolScan is a trademark of Deere & Company

DX,OILSCAN -19-13SEP11-1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require 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 both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

DX,ALTER -19-11APR11-1/1

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.

DX,LUBST -19-11APR11-1/1

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.

OUCC002,0003CAA -19-08JUL13-1/1

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

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
- 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
- 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. Distilled, 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.

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.

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DX,COOL3 -19-15MAY13-1/1

Supplemental Coolant Additives

Some coolant additives will gradually deplete during engine operation. For nitrite-containing coolants, replenish coolant additives between drain intervals by adding a supplemental coolant additive as determined necessary by coolant testing.

John Deere Liquid Coolant Conditioner is recommended as a supplemental coolant additive for nitrite-containing coolants.

John Deere Liquid Coolant Conditioner is not designed for use with John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate.

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**

If other coolants are used, consult the coolant supplier and follow the manufacturer's recommendation for use of supplemental coolant additives.

The use of non-recommended supplemental coolant additives may result in additive drop-out and gelation of the coolant.

Add the manufacturer's recommended concentration of supplemental coolant additive. DO NOT add more than the recommended amount.

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DX,COOL4 -19-14APR11-1/1

Drain Intervals for Diesel Engine Coolant

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix and COOL-GARD II Concentrate are maintenance free coolants for up to six years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG Premix.

Test the coolant condition annually with Coolant Test Strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

If John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate is used, but the coolant is not tested OR additives are not replenished by adding John Deere COOL-GARD II Coolant Extender, the drain interval is four years or 4000 hours of operation. This drain interval only applies to COOL-GARD II coolants that have been maintained within a 40—60% mixture of concentrate with quality water.

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.

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DX,COOL11 -19-14APR11-1/1

Additional Information About Diesel Engine Coolants and John Deere LIQUID COOLANT CONDITIONER

Engine coolants are a combination of three chemical components: ethylene glycol or propylene glycol antifreeze, inhibiting coolant additives, and quality water.

Coolant Specifications

Some products, including John Deere COOL-GARD™ Premix coolant, are fully formulated coolants that contain all three components in their correct concentrations. Do not add an initial charge of supplemental coolant additives or water to John Deere COOL-GARD Premix.

John Deere COOL-GARD Concentrate contains both ethylene glycol and inhibiting coolant additives. Mix COOL-GARD Concentrate with quality water, but do not add an initial charge of supplemental coolant additives.

Replenish Coolant Additives

Some coolant additives will gradually deplete during engine operation. Periodic replenishment of inhibitors is required, even when John Deere COOL-GARD Premix, COOL-GARD Concentrate, or COOL-GARD PG Premix is used. Follow the recommendations in this manual for the use of supplemental coolant additives.

Why use John Deere LIQUID COOLANT CONDITIONER?

Operating without proper coolant additives will result in increased corrosion, cylinder liner erosion and pitting, and other damage to the engine and cooling system. A simple mixture of ethylene glycol or propylene glycol and water will not give adequate protection.

John Deere LIQUID COOLANT CONDITIONER is an additive system designed to reduce corrosion, erosion, and pitting when used with nitrite-containing diesel engine coolants such as John Deere COOL-GARD Premix, COOL-GARD Concentrate, and COOL-GARD PG Premix. Maintaining John Deere COOL-GARD coolants with John Deere LIQUID COOLANT CONDITIONER provides optimum protection for up to 5 years or 5000 hours of operation.

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Avoid Automotive-type Coolants

Never use automotive-type coolants (such as those meeting ASTM D3306). These coolants do not contain the correct additives to protect heavy-duty diesel engines. They often contain a high concentration of silicates and may damage the engine or cooling system. Do not treat an automotive engine coolant with a supplemental coolant additive because the high concentration of additives can result in additive fallout.

Water Quality

Water quality is important to the performance of the cooling system. Distilled, 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 dissolved solids	<340 mg/L
Total hardness	<170 mg/L
pH	5.5 to 9.0

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,COOL7 -19-03NOV08-1/1

Testing Diesel Engine Coolant

Maintaining adequate concentrations of glycol and inhibiting additives in the coolant is critical to protect the engine and cooling system against freezing, corrosion, and cylinder liner erosion and pitting.

Test the coolant solution at intervals of 12 months or less and whenever excessive coolant is lost through leaks or overheating.

Coolant Test Strips

Coolant test strips are available from your John Deere dealer. These test strips provide a simple, effective method to check the freeze point and additive levels of your engine coolant.

When Using John Deere COOL-GARD II

John Deere COOL-GARD II Premix™ , COOL-GARD II PG Premix and COOL-GARD II Concentrate are maintenance free coolants for up to six years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG premix. Test the coolant condition annually with coolant test strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

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Add only the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

When Using Nitrite-Containing Coolants

Compare the test strip results to the supplemental coolant additive (SCA) chart to determine the amount of inhibiting additives in your coolant and whether more John Deere Liquid Coolant Conditioner should be added.

Add only the recommended concentration of John Deere Liquid Coolant Conditioner. DO NOT add more than the recommended amount.

Coolant Analysis

For a more thorough evaluation of your coolant, perform a coolant analysis. The coolant analysis can provide critical data such as freezing point, antifreeze level, pH, alkalinity, nitrite content (cavitation control additive), molybdate content (rust inhibitor additive), silicate content, corrosion metals, and visual assessment.

Contact your John Deere dealer for more information on coolant analysis.

DX,COOL9 -19-11APR11-1/1

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 -19-15MAY13-1/1

Adjust Engine Valve Clearance

See your John Deere™ dealer for correct engine valve clearance.

ZX203215 —UN—13JUL13

OUCC002,0003D4D -19-29JUL13-1/1

Check Engine Oil Level (8100—8600 Only)

IMPORTANT: Correct level of engine oil is critical for long engine service life. Check oil level with machine standing on level ground.

NOTE: 8100—8600 (Final Tier 4/Stage IV Engine): The oil should be checked with the dipstick screwed all the way into the holder.

8100 and 8200 (Tier 2/Stage II Engine): The oil should be checked with the dipstick screwed all the way into the holder.

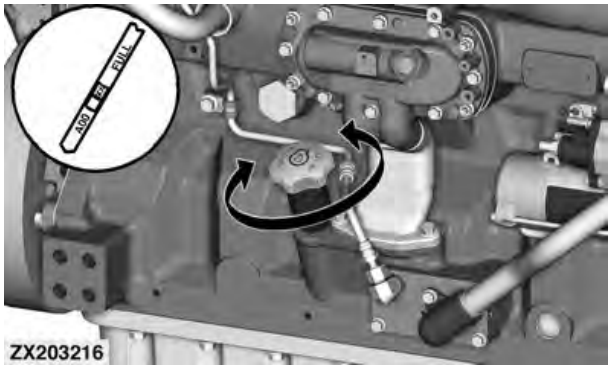
8300—8600 (Tier 2/Stage II and Tier 3/Stage III A Engine): The oil should be checked with the dipstick pushed all the way into the holder.

Before removing dipstick, clean surrounding area thoroughly.

Check engine crankcase oil level after every 10 hours of operation.

Oil level should be between upper and lower marks on dipstick.

- FULL — Maximum
- ADD — Minimum



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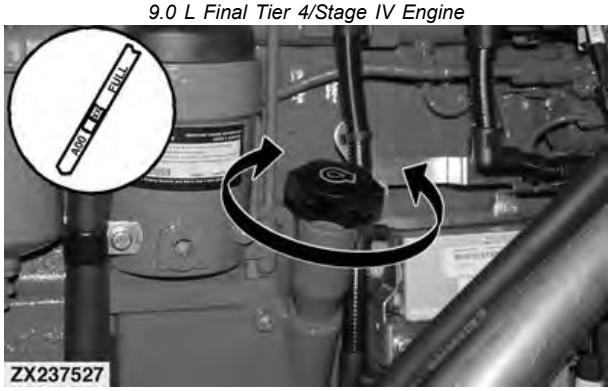
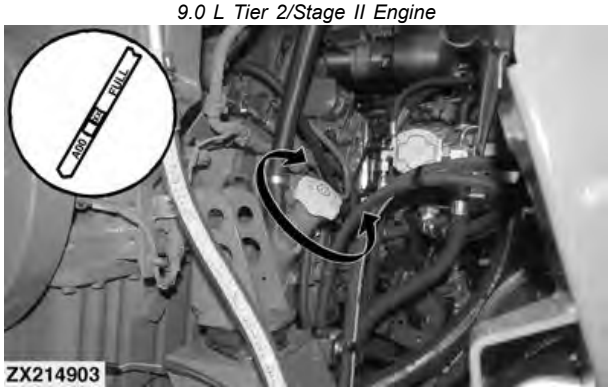
9.0 L Final Tier 4/Stage IV Engine



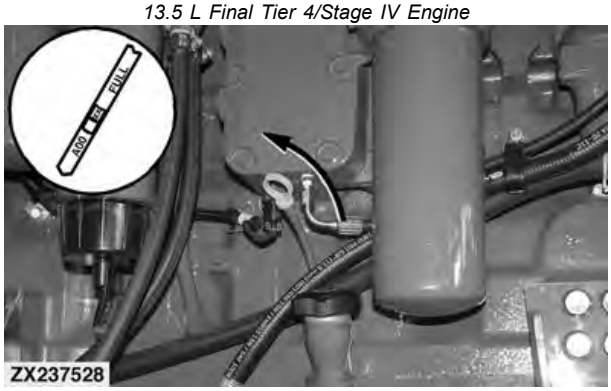
ZX237527 —UN—23MAR15

9.0 L Tier 2/Stage II Engine



ZX214903 —UN—06OCT14

13.5 L Final Tier 4/Stage IV Engine



ZX237528 —UN—23MAR15

13.5 L Tier 2/Stage II and Tier 3/Stage III A Engine

OUCC002,0004C69 -19-08JUN16-1/1

Check Engine Oil Level (8700 and 8800 Only)

IMPORTANT: Correct level of engine oil is critical for long engine service life. Check oil level with machine standing on level ground.

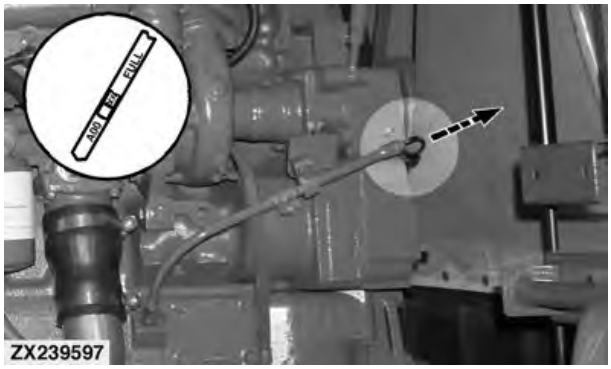
NOTE: The oil should be checked with the dipstick pushed all the way into the holder.

Before removing dipstick, clean surrounding area thoroughly.

Check engine crankcase oil level after every 10 hours of operation.

Oil level should be between upper and lower marks on dipstick.

- High — Maximum
- Low — Minimum



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OUCC002,00046DD -19-07SEP15-1/1

Change Engine Oil and Filter (8100 and 8200 Final Tier 4/Stage IV Engine Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 100 hours of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8100—8600 Final Tier 4/Stage IV Engine Only) in this section.

Run the engine for approx. 5 minutes to heat up oil. Then shut engine off.

On left-hand side of engine attach a suitable hose on the drain valve (A).

Open drain valve (A) to drain crankcase oil while warm.

Change oil filter (B) as follows:

1. Use a wrench to loosen oil filter cap (B). Wait 30 seconds to allow oil filter housing to drain. Remove cap and filter assembly.

IMPORTANT: Do not remove plug (D). It is not an oil drain.

NOTE: Oil in filter will drain down automatically as filter cap is loosened.

2. While holding on to screw cap, strike filter element against a solid surface, as shown, to disconnect filter from cap. Discard used filter.
3. Remove O-ring seal and replace with new O-ring provided with new filter element.
4. Press new filter into cap until it snaps into place.
5. Insert cap and filter assembly into oil filter housing. Screw cap in place.
6. Tighten oil filter cap (B) to specification.

Specification	
Oil Filter Cap—Torque	40 N·m (30 lb-ft)

Close oil drain valve (A) and remove attached hose.

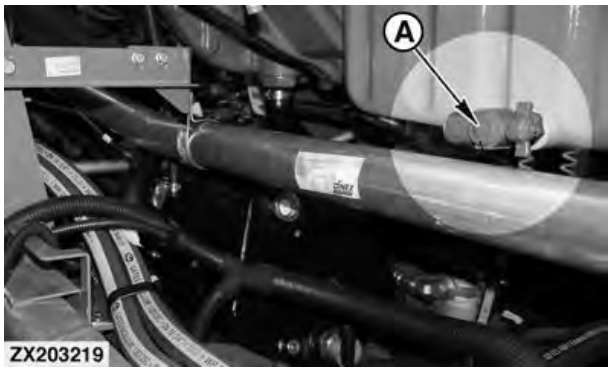
Fill crankcase at filler neck (C) with correct engine oil.

Capacity (with filter change): **37 L (9.80 gal)**

IMPORTANT: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F48 immediately after completing oil and/or filter change and crank engine for 30 seconds by means of starting motor. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F48.

Start engine and check for leaks.



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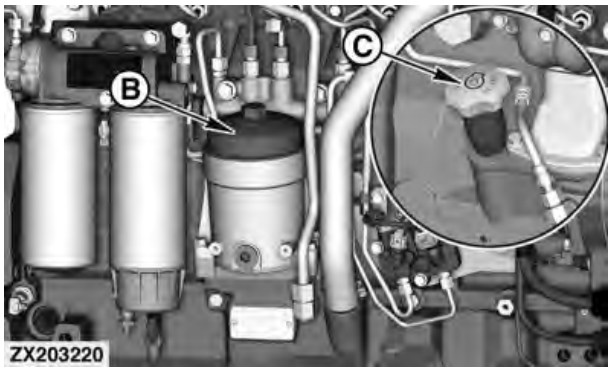

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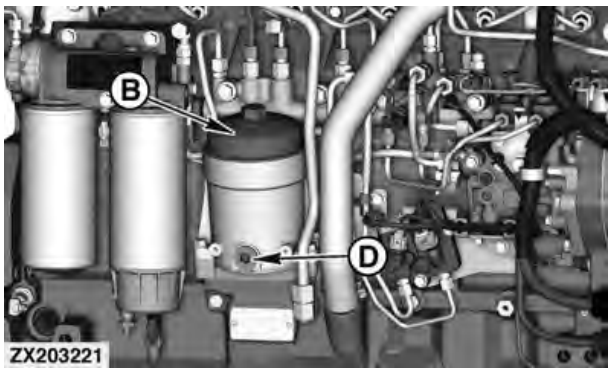


ZX203221 —UN—06OCT14

RG11628 —UN—01FEB01

A—Oil Drain Valve (Oil Pan)
B—Oil Filter
C—Oil Filler Neck
D—Plug

Continued on next page

Shut off engine and wait 10 minutes before checking the oil level. The oil should still be up to the upper mark on the dipstick.

OUCC002,0004C6B -19-08JUN16-2/2

Change Engine Oil and Filter (8100 and 8200 Tier 3/Stage III A Engine Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 100 hours of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8100—8600 Tier 3/Stage III A Engine Only) in this section.

Run the engine for approx. 5 minutes to heat up oil. Then shut engine off.

On left-hand side of engine attach a suitable hose on the drain valve (A).

Open drain valve (A) to drain crankcase oil while warm.

Change oil filter (B) as follows:

1. Use a wrench to loosen oil filter cap (B). Wait 30 seconds to allow oil filter housing to drain. Remove cap and filter assembly.

IMPORTANT: Do not remove plug (D). It is not an oil drain.

NOTE: Oil in filter will drain down automatically as filter cap is loosened.

2. While holding on to screw cap, strike filter element against a solid surface, as shown, to disconnect filter from cap. Discard used filter.
3. Remove O-ring seal and replace with new O-ring provided with new filter element.
4. Press new filter into cap until it snaps into place.
5. Insert cap and filter assembly into oil filter housing. Screw cap in place.
6. Tighten oil filter cap (B) to specification.

Specification	
Oil Filter Cap—Torque	40 N·m (30 lb-ft)

Close oil drain valve (A) and remove attached hose.

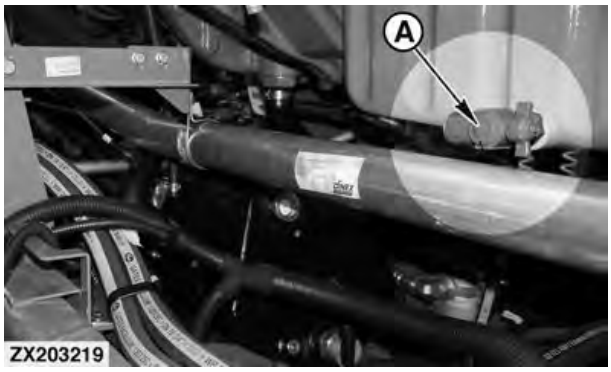
Fill crankcase at filler neck (C) with correct engine oil.

Capacity (with filter change): **37 L (9.80 gal)**

IMPORTANT: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F48 immediately after completing oil and/or filter change and crank engine for 30 seconds by means of starting motor. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F48.

Start engine and check for leaks.



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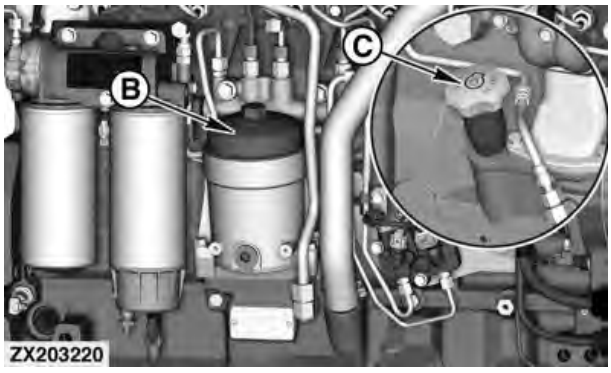

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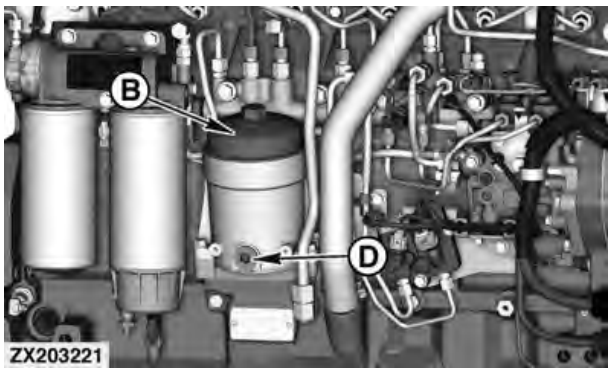


ZX203221 —UN—06OCT14

RG11628 —UN—01FEB01

A—Oil Drain Valve (Oil Pan)
B—Oil Filter
C—Oil Filler Neck
D—Plug

Continued on next page

Shut off engine and wait 10 minutes before checking the oil level. The oil should still be up to the upper mark on the dipstick.

OUCC002,0004C6C -19-08JUN16-2/2

Change Engine Oil and Filter (8100 and 8200 Tier 2/Stage II Engine Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 100 hours maximum of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8100—8600 Tier 2/Stage II Engine Only) in this section.

Run the engine for approx. 5 minutes to heat up oil. Then shut engine off.

On left-hand side of engine attach a suitable hose to the drain valve (A).

Open drain valve (A) to drain crankcase oil while warm.

Change oil filter (B) as follows:

1. Use a wrench to loosen oil filter cap (B). Wait 30 seconds to allow oil filter housing to drain. Remove cap and filter assembly.

IMPORTANT: Do not remove plug (D). It is not an oil drain.

NOTE: Oil in filter will drain down automatically as filter cap is loosened.

2. While holding on to screw cap, strike filter element against a solid surface, as shown, to disconnect filter from cap. Discard used filter.
3. Remove O-ring seal and replace with new O-ring provided with new filter element.
4. Press new filter into cap until it snaps into place.
5. Insert cap and filter assembly into oil filter housing. Screw cap in place.
6. Tighten oil filter cap (B) to specification.

Specification	
Oil Filter Cap—Torque	40 N·m (30 lb-ft)

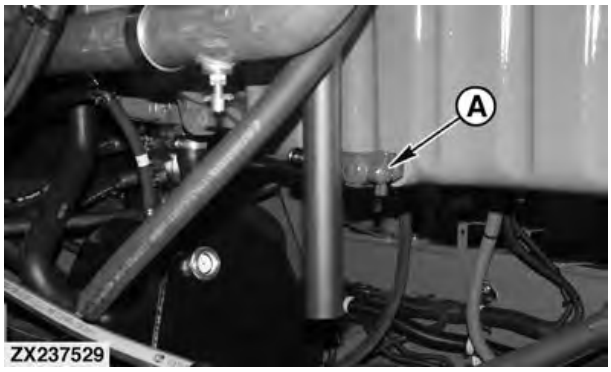
Close oil drain valve (A) and remove attached hose.

Fill crankcase at filler neck (C) with correct engine oil.

Capacity (with filter change): **37 L (9.80 gal)**

NOTE: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F48 immediately after completing oil and/or filter change and crank engine for 30 seconds by means of starting motor. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F48.



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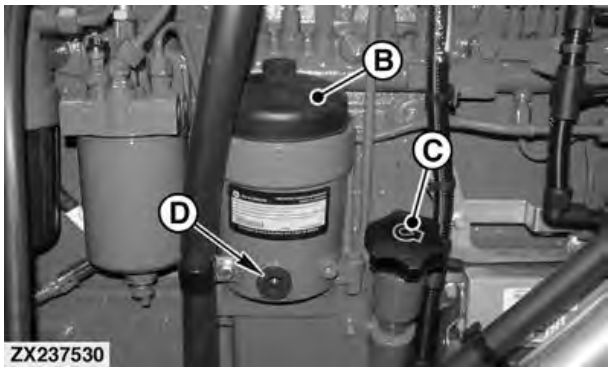


ZX237530 —UN—23MAR15

RG11628 —UN—01FEB01

A—Oil Drain Valve (Oil Pan)
B—Oil Filter
C—Oil Filler Neck
D—Plug

Start engine and check for leaks.

Shut off engine and wait 10 minutes before checking the oil level. The oil should still be up to the upper mark on the dipstick.

OUCC002,00046E0 -19-09SEP15-1/1

Change Engine Oil and Filter (8300—8600 Final Tier 4/Stage IV Engine Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 100 hours of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8100—8600 Final Tier 4/Stage IV Engine Only) in this section.

Run the engine for approx. 5 minutes to heat up oil and shut engine off.

On right-hand side of engine attach a suitable hose to the drain valve (A).

Open drain valve (A) to drain crankcase oil while warm.

Remove filter (B) and dispose of properly.

Discard filter seal. Clean mounting surface of seal.

IMPORTANT: Fill the new oil filter with clean engine oil. The lack of lubrication during the delay until filter is filled with oil is harmful to the engine.

Coat the new filter seal with a thin layer of oil and install a new filter. When the filter sea is just touching the mounting surface, tighten filter manually by another 1/2 to 3/4 revolution. Do NOT overtighten filter.

Close oil drain valve (A) and remove attached hose.

Fill crankcase with correct engine oil at filler neck (C).

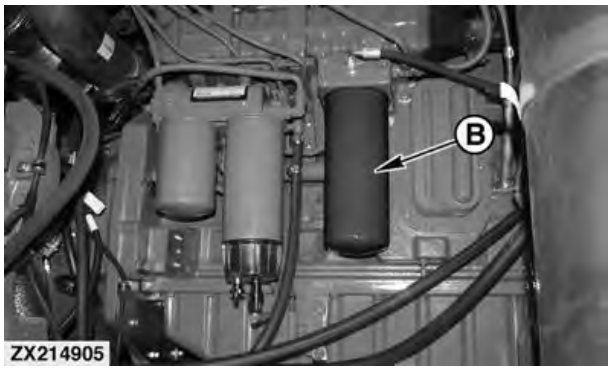
Crankcase oil capacity (with filter change): **58 L (14.8 gal)**

IMPORTANT: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F48 immediately after completing any change and crank engine for 30 seconds. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F48.

Start engine and check for leaks.

ZX214904 —UN—06OCT14



ZX214905 —UN—06OCT14

ZX214906 —UN—06OCT14

A—Oil Drain Valve (Oil Pan)
B—Filter
C—Oil Filler Neck

Stop engine and check oil level after 10 minutes. The oil should still be up to the upper mark on the dipstick.

OUCC002,00046DF -19-07SEP15-1/1

Change Engine Oil and Filter (8300—8600 Tier 3/Stage III A Engine Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 100 hours of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8100—8600 Tier 3/Stage III A Engine Only) in this section.

Run the engine for approx. 5 minutes to heat up oil and shut engine off.

Attach a suitable hose on the drain valve (A).

Open oil pan drain valve (A) and drain crankcase oil while warm.

Remove filter (B) and dispose of properly.

Discard filter seal. Clean mounting surface of seal.

IMPORTANT: Fill the new oil filter with clean engine oil. The lack of lubrication during the delay until filter is filled with oil is harmful to the engine.

Coat the new filter seal with a thin layer of oil and install a new filter. When the filter sea is just touching the mounting surface, tighten filter manually by another 1/2 to 3/4 revolution. Do NOT overtighten filter.

Close drain valve (A) and remove attached hose.

Fill crankcase with correct engine oil at filler neck (C).

Crankcase oil capacity (with filter change): **58 L (14.8 gal.)**

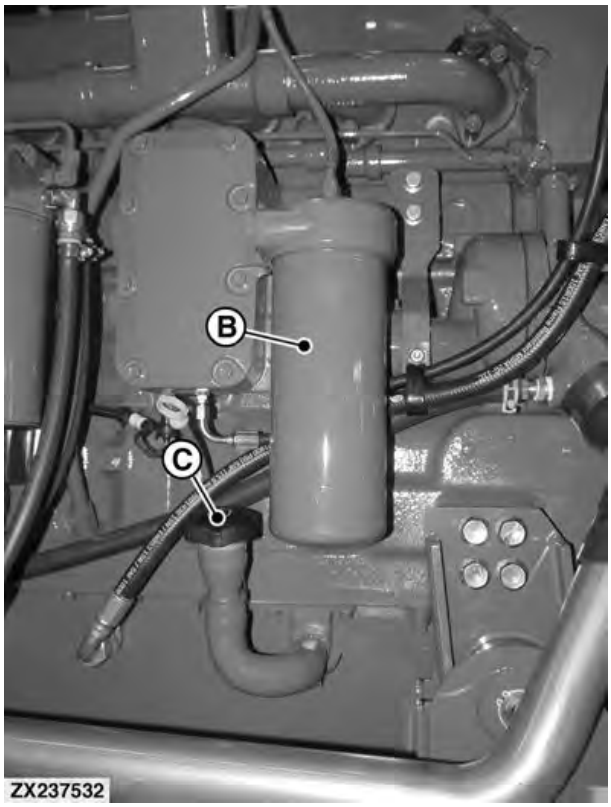
IMPORTANT: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F48 immediately after completing any change and crank engine for 30 seconds. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F48.

Start engine and check for leaks.

Stop engine and check oil level after 10 minutes. The oil should still be up to the upper mark on the dipstick.

ZX237531 —UN—23MAR15



ZX237532 —UN—23MAR15

A—Oil Drain Valve (Oil Pan)
B—Filter
C—Oil Filler Neck

OUCC002,0004C6A -19-08JUN16-1/1

Change Engine Oil and Filter (8300—8600 Tier 2/Stage II Engine Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 100 hours of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8100—8600 Tier 2/Stage II Engine Only) in this section.

Run the engine for approx. 5 minutes to heat up oil and shut engine off.

Attach a suitable hose on the drain valve (A).

Open oil pan drain valve (A) and drain crankcase oil while warm.

Remove filter (B) and dispose of properly.

Discard filter seal. Clean mounting surface of seal.

IMPORTANT: Fill the new oil filter with clean engine oil. The lack of lubrication during the delay until filter is filled with oil is harmful to the engine.

Coat the new filter seal with a thin layer of oil and install a new filter. When the filter sea is just touching the mounting surface, tighten filter manually by another 1/2 to 3/4 revolution. Do NOT overtighten filter.

Close drain valve (A) and remove attached hose.

Fill crankcase with correct engine oil at filler neck (C).

Crankcase oil capacity (with filter change): **58 L (14.8 gal.)**

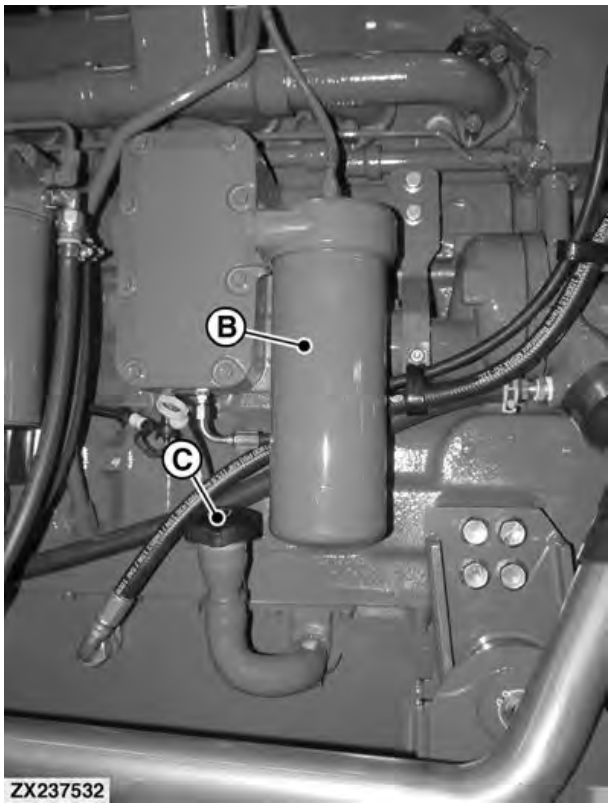
IMPORTANT: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F48 immediately after completing any change and crank engine for 30 seconds. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F48.

Start engine and check for leaks.

Stop engine and check oil level after 10 minutes. The oil should still be up to the upper mark on the dipstick.

ZX237531 —UN—23MAR15



ZX237532 —UN—23MAR15

A—Oil Drain Valve (Oil Pan)
B—Filter
C—Oil Filler Neck

OUCC002,00046E1 -19-07SEP15-1/1

Change Engine Oil and Filter (8700 and 8800 Only)

IMPORTANT: Observe the utmost cleanliness when installing replacement filter element.

IMPORTANT: Change engine oil and filter for the first time before 250 hours of operation, then strictly observe indications given under Engine Oil and Filter Service Intervals (8700 and 8800 Only) in this section.

Run the engine for approx. 5 minutes to heat up oil and shut engine off.

Attach a suitable hose on the drain valve (A).

Open oil pan drain valve (A) and drain crankcase oil while warm.

Remove filter elements (B) and dispose of properly.

NOTE: The O-ring can stick on the filter head. Be sure the O-ring is removed.

Dispose of filter packings. Clean mounting pads.

IMPORTANT: Fill the new oil filter with clean lubricating oil. The lack of lubrication during the delay until filters are pumped full of oil is harmful to the engine.

Oil new packings and install new filter elements. Hand tighten the element by 3/4 to 1 turn after the packing comes into contact with the filter housing. Do NOT overtighten filter element.

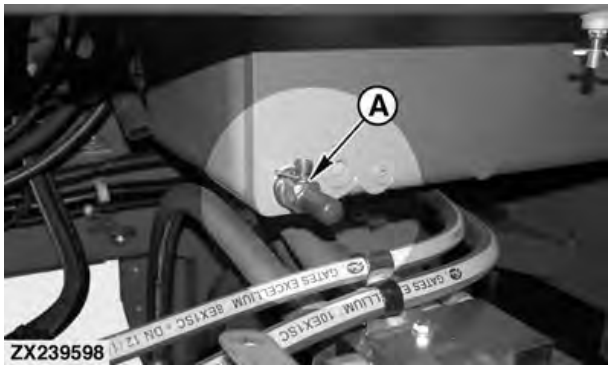
Close drain valve (A) and remove attached hose.

Fill crankcase with correct engine oil at filler neck (C).

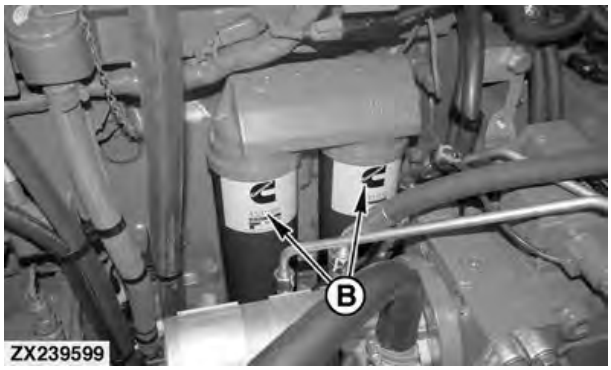
Crankcase oil capacity (with filter change): **64 L (16.9 gal)**

IMPORTANT: The actual capacity may vary slightly from the figure stated above. Fill crankcase until the oil is up to the upper mark on the dipstick. Do not overfill!

IMPORTANT: Remove fuse F92 immediately after completing any change and crank engine for 30 seconds. This will ensure proper lubrication of all engine parts during the starting procedure. Re-install fuse F92.



ZX239598 —UN—23MAR15



ZX239599 —UN—23MAR15

ZX239600 —UN—23MAR15

A—Oil Drain Valve (Oil Pan)
B—Filter Elements
C—Oil Filler Neck

Start engine and check for leaks.

Stop engine and check oil level after 10 minutes. The oil should still be up to the upper mark on the dipstick.

OUCC002,00046E2 -19-08SEP15-1/1

Check Engine Weep Hole

When accessible, clean any debris or obstruction from the weep hole area of coolant pump, being careful not to move the seal.

Inspect weep hole (A) for oil or coolant leakage.

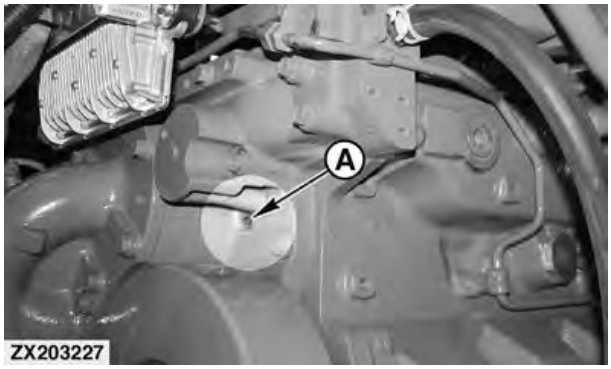
- Oil leakage necessitates a coolant pump replacement.
- Coolant leakage indicates a possible damaged front seal.

If leakage is detected, see your John Deere dealer to replace complete coolant pump assembly (repair parts are not available).

IMPORTANT: If no leakage of coolant is observed during normal operating conditions, the coolant pump should not be replaced.

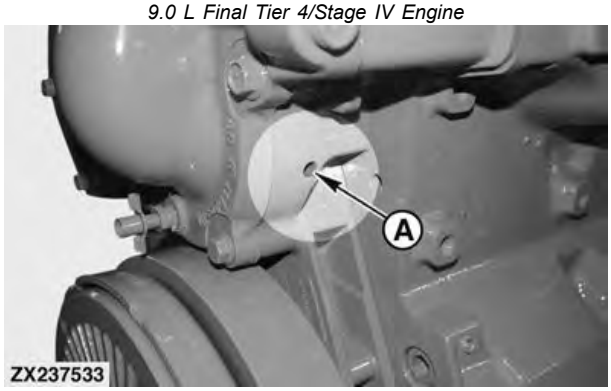
NOTE: Chemical streak trails, or coolant "weeping", or "seeping" are normal. "Weeping" can be defined as a passing of liquid across a sealed surface of about 1-5 drops per day of use. "Seepage" is defined as a coolant loss equal to more than five drops per day of use. A "leak" is defined as a near constant dripping of coolant.

A—Weep Hole



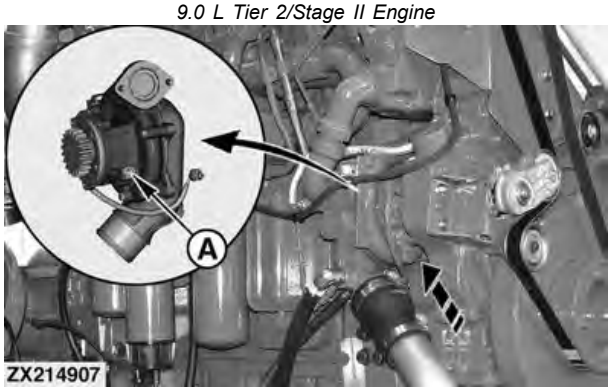
ZX203227 —UN—13JUL13

9.0 L Final Tier 4/Stage IV Engine



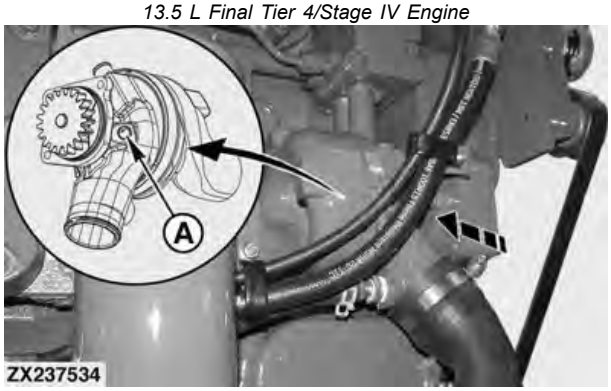
ZX237533 —UN—23MAR15

9.0 L Tier 2/Stage II Engine



ZX214907 —UN—06OCT14

13.5 L Final Tier 4/Stage IV Engine



ZX237534 —UN—23MAR15

13.5 L Tier 2/Stage II and Tier 3/Stage III A Engine

OUCC002,0004C6D -19-08JUN16-1/1

Do Not Open High-Pressure Fuel System

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.)

TS1343 —UN—18MAR92

DX,WW,HPCR1 -19-07JAN03-1/1

Do Not Modify Fuel System

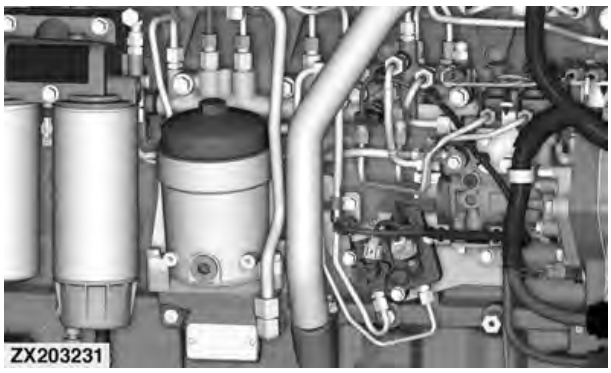
IMPORTANT: Modification or alteration of the injection pump, injection pump timing or fuel injection nozzles in ways not recommended by the manufacturer will terminate the warranty obligation of the engine manufacturer. See warranty information on inside front cover.

Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. See your John Deere dealer.

John Deere dealers are in violation of their dealership agreement if found to be altering power levels of John Deere equipment.

Machine warranty is void if power level is changed from factory specifications.

Never steam clean or spray water on a warm injection pump. This could cause damage to pump parts.



ZX203231 —UN—06OCT14

Fuel System—9.0 L Engine Shown

IMPORTANT: Tampering with fuel system which alters emission-related equipment on engines may result in fines or other penalties, per EPA regulations or other local emission laws.

OUCC002,000415F -19-26AUG14-1/1

Fuel Tank Breather

On 8100—8600: Fuel tank is ventilated through two breathers (A).

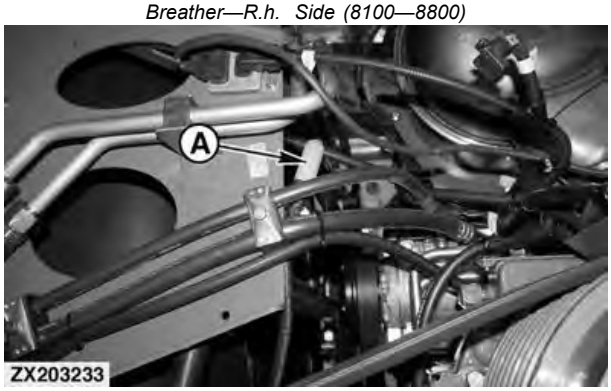
On 8700 and 8800: Fuel tank is ventilated through three breathers (A).

IMPORTANT: Periodically check and, if necessary, clean breathers (A).

A—Breather

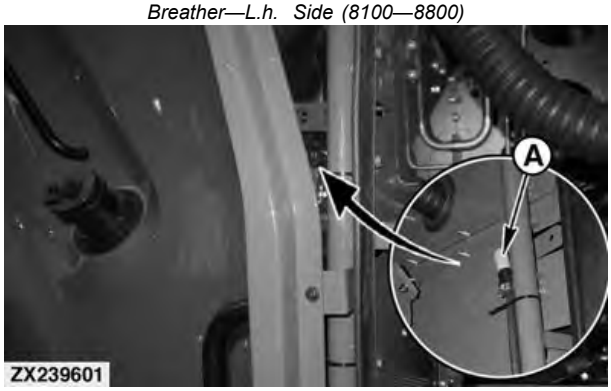
ZX203232 —UN—06AUG13

Breather—R.h. Side (8100—8800)



ZX203233 —UN—06AUG13

Breather—L.h. Side (8100—8800)



ZX239601 —UN—23MAR15

Breather—L.h. Side (8700 and 8800 only)

OUCC002,0004513 -19-21MAR15-1/1

Drain Water Separator (8100—8600 Only)

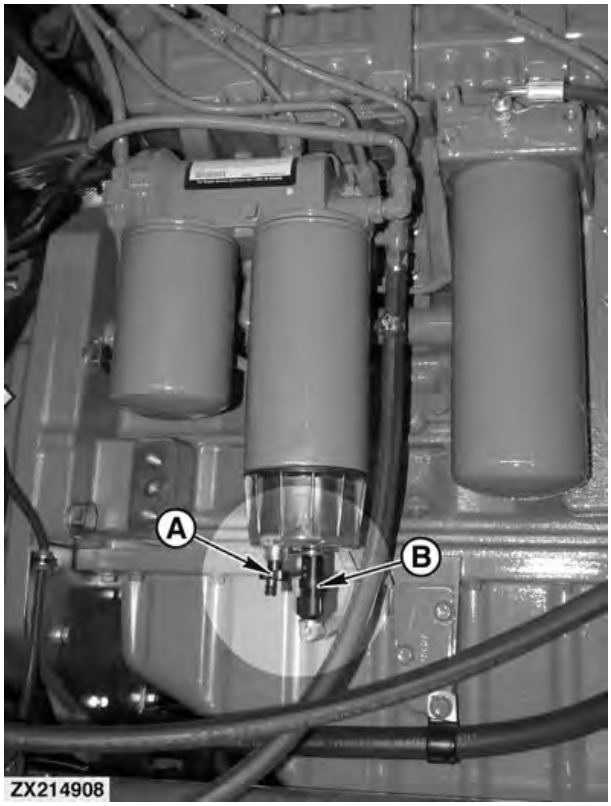
Attach a suitable hose to the drain valve (A).

Loosen drain valve (A) all the way so that the valve opens to the hold tabs and drain water and debris as needed.

IMPORTANT: When water-in-fuel sensor (B) detects water in the fuel system, diagnostic trouble code ECU 000097.16 is generated.

If diagnostic trouble code ECU 000097.16 - Water in Fuel Detected appears, drain fuel/water separator bowl using drain valve (A) and delete diagnostic trouble code.

A—Drain Valve **B—Water-in-Fuel Sensor**



ZX214908 —UN—06OCT14

OUCC002,00046E4 -19-07SEP15-1/1

Drain Water Separator (8700 and 8800 Only)

Attach a suitable hose to the drain valve (A).

IMPORTANT: When water-in-fuel sensor detects water in the fuel system, diagnostic trouble code ECU 000097.15 is generated.

If diagnostic trouble code ECU 000097.15 - Water in Fuel Detected appears, drain fuel/water separator bowl using drain valve (A) and delete diagnostic trouble code.

Shut off the engine. Open drain valve (A) manually. Turn valve counterclockwise approximately 3½ turns until it drops down 25.4 mm (1 in.) and draining occurs. Drain the fuel/water separator until clear fuel is visible.

IMPORTANT: When closing the drain valve, do not overtighten, as this can damage the threads.

To close the valve, lift and turn clockwise until it is hand-tight.

ZX239602 —UN—23MAR15

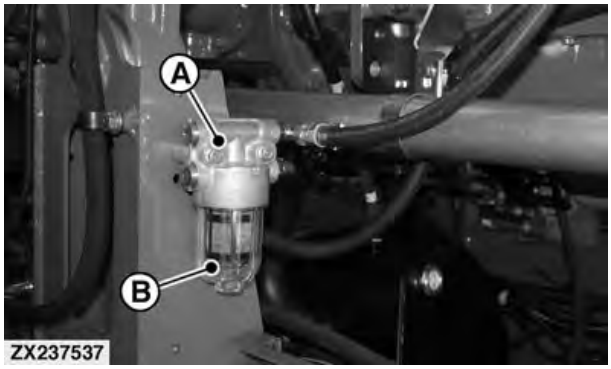
A—Drain Valve

OUCC002,0004514 -19-22MAR15-1/1

Drain Fuel Precleaner (8100—8600 Tier 2/Stage II Engine Only)

Loosen bowl (A) of fuel precleaner (B) all the way and drain water and debris as needed.

A—Bowl **B—Fuel Precleaner**



ZX237537 —UN—23MAR15

OUCC002,00044F6 -19-20MAR15-1/1

Replace Fuel Filter Elements (8100—8600 Final Tier 4/Stage IV and Tier 3/Stage III A Engine Only)

IMPORTANT: Replace fuel filter elements anytime diagnostic trouble codes indicate plugged fuel filters (low fuel pressure) otherwise replace filters after 500 hours operation.

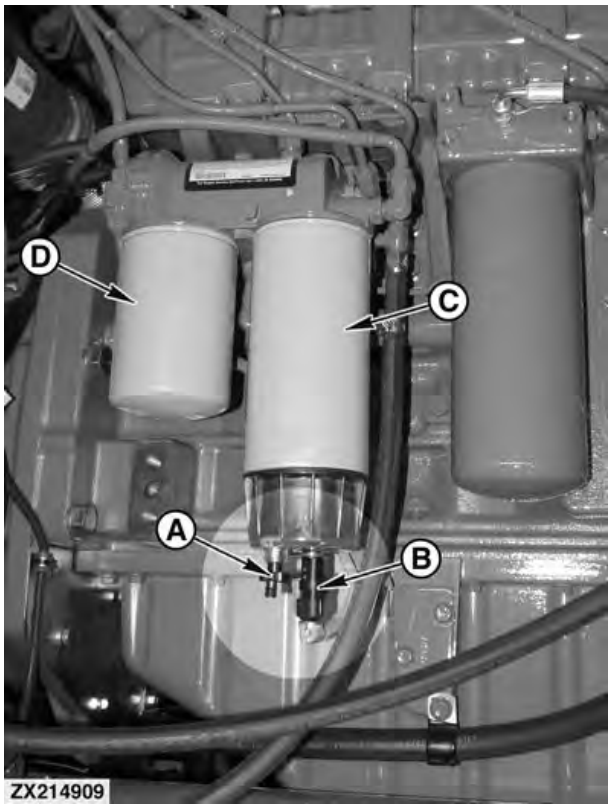
1. Thoroughly clean exterior of fuel filter/water separator assembly and surrounding area.
2. Drain water and contaminants from primary filter into suitable container by opening drain valve (A) on bottom of separator.
3. Disconnect the water-in-fuel sensor connector (B) from primary filter.
4. Remove primary filter (C) and secondary filter (D) and discard.

IMPORTANT: Do NOT prefill either fuel filter with fuel.

5. Lubricate gasket for primary fuel filter with fuel, and install canister onto base. Tighten 3/4 turn after packing contacts base.
6. Lubricate primary fuel filter water separator gasket with fuel and install onto filter canister. Tighten 3/4 of a full turn after gasket contacts the base.
7. Lubricate gasket for secondary fuel filter with fuel, and install filter onto base. Tighten 3/4 turn after packing contacts base.
8. Reconnect connector (B).

IMPORTANT: Key must be turned to ON position for 3 minutes before starting engine to provide time to prefill fuel filters. Fuel system is self-bleeding.

Do not try to crank engine until after 3 minute time elapses or an air lock in the fuel system may occur.



ZX214909 —UN—06OCT14

Fuel Filter Elements—13.5 L Engine Shown

A—Drain Valve **C—Primary Filter**
B—Connector **D—Secondary Filter**

9. Turn key switch to ON position for 3 minutes to allow transfer pump to prefill fuel filters.
10. Turn key switch clockwise to START position, and run engine at high idle for 2 minutes.

OUCC002,0004C6E -19-08JUN16-1/1

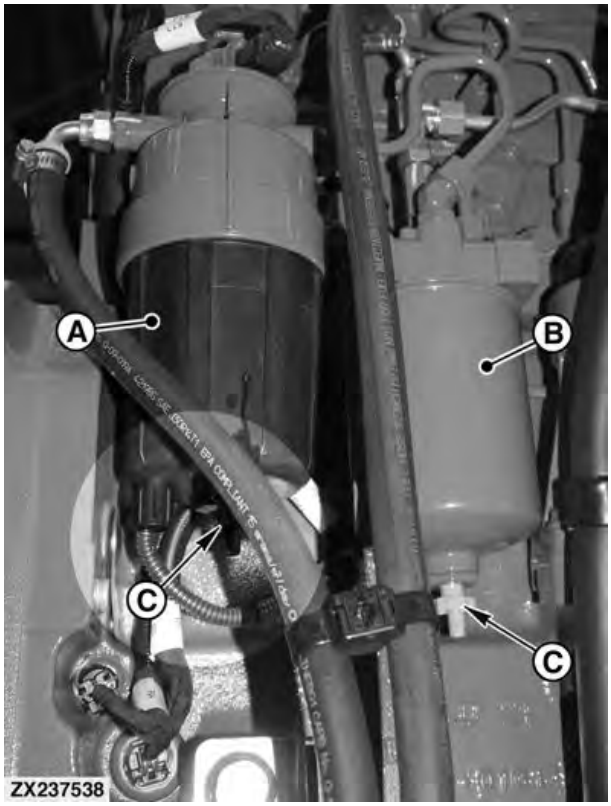
Replace Fuel Filter Elements (8100 and 8200 Tier 2/Stage II Engine Only)

Fuel System Pressure Relief

CAUTION: Always remove ignition key and set park brake before performing maintenance work on fuel filter.

Fuel in filter may be under high pressure. Open valve (C) on bottom of water separator bowl (canister) to relieve pressure prior to removing primary and secondary fuel filters (A-B).

A—Primary Fuel Filter
B—Secondary Fuel Filter (Final)
C—Drain Valve



ZX237538 —UN—23MAR15

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OUCC002,00044F7 -19-20MAR15-1/3

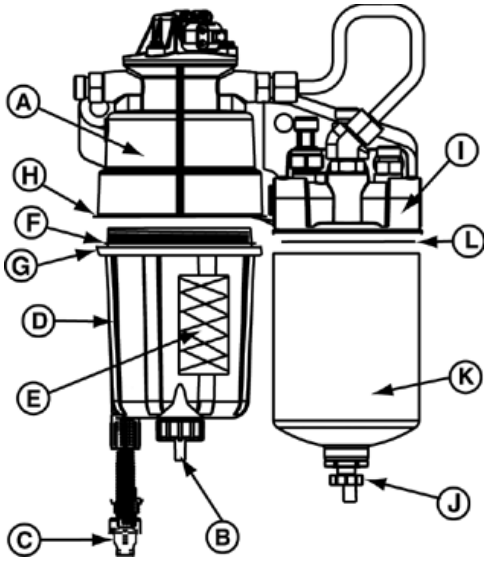
Remove and Install Primary Fuel Filter Element

IMPORTANT: Both primary and secondary filters must be replaced at the same time.

IMPORTANT: Do not pre-fill filter with fuel. This may introduce debris into the fuel system.

1. Thoroughly clean filter header (A) and surrounding area to keep from getting dirt and debris into fuel system.
2. Connect a fuel line to filter drain valve (B) on bottom of filter and drain all fuel from the filter canister (D).
3. Disconnect water-in-fuel sensor connector (C).
4. Turn filter canister (D) counterclockwise to remove.
5. Once filter canister is removed, pull filter element (E) down to remove from filter header (A).
6. Inspect filter header and filter canister sealing surfaces. Clean as required.
7. Place new packing on filter canister.
8. Apply thin film of fuel on filter packing.
9. Place filter element in canister with tangs on bottom going into canister.
10. Screw canister into filter header and turn clockwise. Tighten until canister lip (G) just mates with header lip (H), then tighten to specification:

Specification	
Primary Fuel Filter Canister to Filter Header—Torque	14 N·m (120 lb.-in.)



RG14250 —UN—06JUN05

Primary and Secondary Fuel Filter

A—Primary Filter Header
B—Primary Filter Canister Drain Valve
C—Water-In-Fuel Sensor Connector
D—Primary Filter Canister
E—Primary Filter Element
F—Primary Filter Packing
G—Primary Filter Canister Lip
H—Primary Filter Header Lip
I— Secondary Fuel Filter Header
J— Secondary Filter Drain Valve
K—Secondary Fuel Filter
L—Secondary Filter Packing

11. Connect water-in-fuel sensor connector.

Continued on next page

Remove and Install Secondary (Final) Fuel Filter

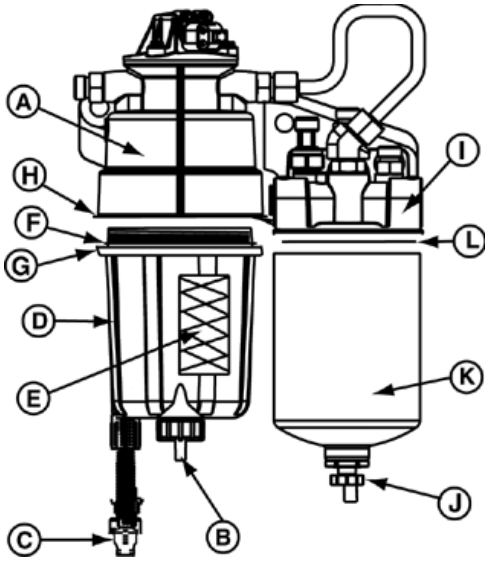
IMPORTANT: Do not pre-fill filter with fuel. This may introduce debris into the fuel system.

1. Thoroughly clean filter header (I) and surrounding area to keep from getting dirt and debris into fuel system.
2. Connect a fuel line to filter drain valve (J) on bottom of filter and drain all fuel from the filter.
3. Turn element (K) counterclockwise to remove.
4. Inspect filter header sealing surface. Clean as required.
5. Install new filter fuel drain valve and tighten to specification.

Specification	
Secondary Fuel Filter Drain Valve—Torque	3.4 - 4 N·m (30 - 35 lb.-in.)

6. Place new filter packing (L) on filter.
7. Apply thin film of fuel on packing.
8. Screw fuel filter into fuel filter header. Tighten until fuel filter snugly mates with fuel filter header (I).
9. Turn filter 1/2 to 3/4 turn further.

NOTE: To prime the fuel system before starting engine, turn ignition key to ON for 60 seconds.



RG14250 —UN—06JUN05

Primary and Secondary Fuel Filter

A—Primary Filter Header
B—Primary Filter Canister Drain Valve
C—Water-In-Fuel Sensor Connector
D—Primary Filter Canister
E—Primary Filter Element
F—Primary Filter Packing
G—Primary Filter Canister Lip
H—Primary Filter Header Lip
I— Secondary Fuel Filter Header
J— Secondary Filter Drain Valve
K—Secondary Fuel Filter
L—Secondary Filter Packing

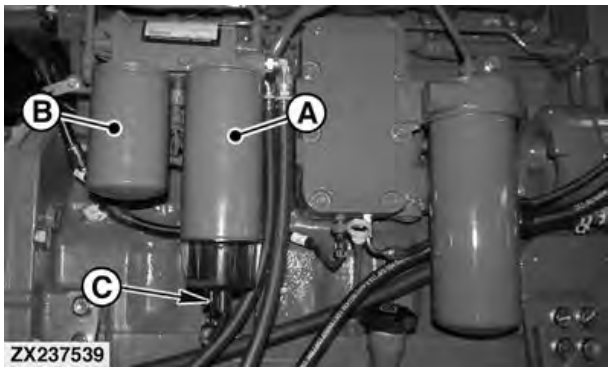
OUCC002,00044F7 -19-20MAR15-3/3

Replace Fuel Filter Elements (8300—8600 Tier 2/Stage II Engine Only)

Fuel System Pressure Relief

CAUTION: Always remove ignition key and set park brake before performing maintenance work on fuel filter.

Fuel in filter may be under high pressure. Open valve (C) on bottom of water separator bowl (canister) to relieve pressure prior to removing primary and secondary fuel filters (A-B).



ZX237539 —UN—23MAR15

A—Primary Fuel Filter
B—Secondary Fuel Filter (Final)
C—Drain Valve

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OUCC002,00044F8 -19-09SEP15-1/3

Remove and Install Primary Fuel Filter Element

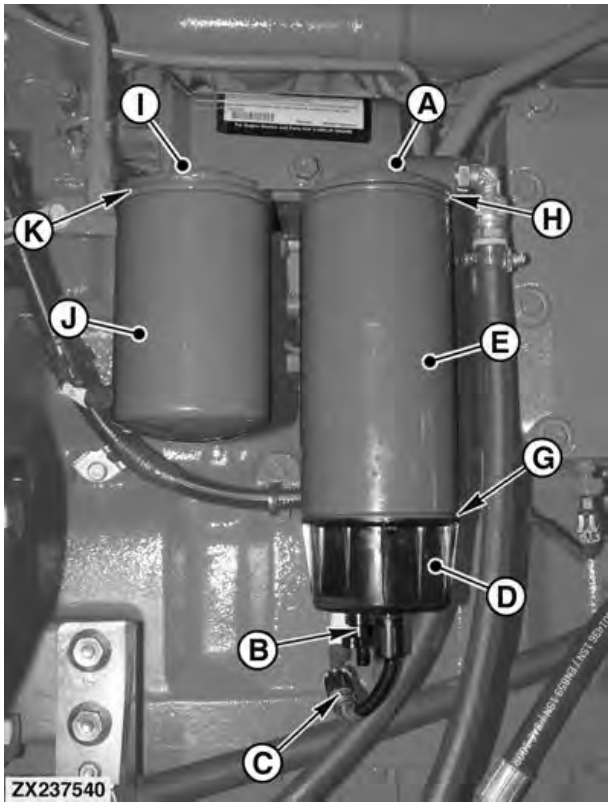
IMPORTANT: Both primary and secondary filters must be replaced at the same time.

IMPORTANT: Do not pre-fill filter with fuel. This may introduce debris into the fuel system.

1. Thoroughly clean filter header (A) and surrounding area to keep from getting dirt and debris into fuel system.
2. Connect a fuel line to filter drain valve (B) on bottom of filter and drain all fuel from the filter canister (D).
3. Disconnect water-in-fuel sensor connector (C).
4. Turn filter canister (D) counterclockwise to remove.
5. Once filter canister is removed, remove filter element (E) from filter header (A).
6. Inspect filter header and filter canister sealing surfaces. Clean as required.
7. Place new packing on filter canister.
8. Apply thin film of fuel on filter packing.
9. Screw canister into filter element and turn clockwise. Tighten until canister lip (G) just mates with filter lip, then tighten to specification:

Specification	
Primary Fuel Filter Canister to Filter Header—Torque	14 N·m (120 lb-in)

10. Screw filter element (E) into filter header. Tighten until fuel filter snugly mates with fuel filter header (A).
11. Turn filter 1/2 to 3/4 turn further.
12. Connect water-in-fuel sensor connector.



ZX237540 —UN—23MAR15

Primary and Secondary Fuel Filter

A—Primary Filter Header
B—Primary Filter Canister Drain Valve
C—Water-In-Fuel Sensor Connector
D—Primary Filter Canister
E—Primary Filter Element
F—Primary Filter Packing
G—Primary Filter Canister Lip
H—Primary Filter Header Lip
I— Secondary Fuel Filter Header
J— Secondary Fuel Filter
K—Secondary Filter Packing

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OUCC002,00044F8 -19-09SEP15-2/3

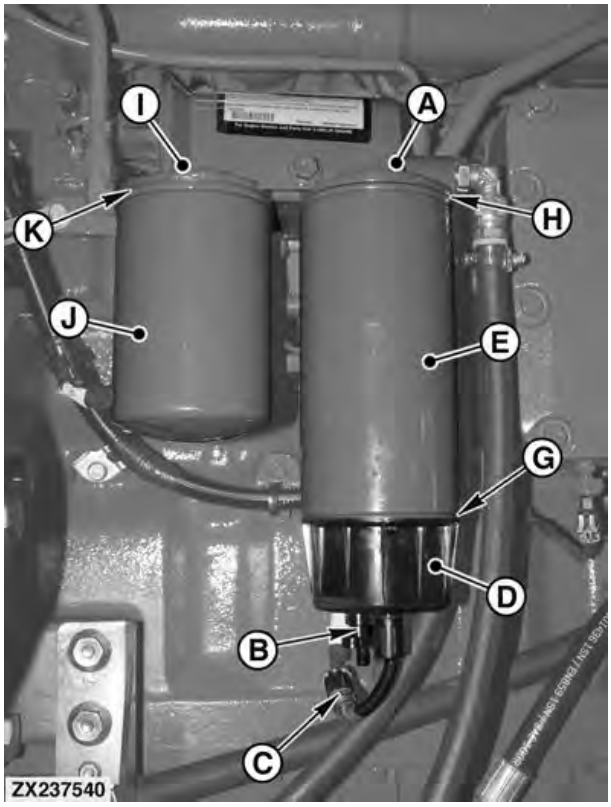
Remove and Install Secondary (Final) Fuel Filter

IMPORTANT: Do not pre-fill filter with fuel. This may introduce debris into the fuel system.

1. Thoroughly clean filter header (I) and surrounding area to keep from getting dirt and debris into fuel system.
2. Turn secondary fuel filter (J) counterclockwise to remove.
3. Inspect filter header sealing surface. Clean as required.
4. Place new filter packing (K) on filter.
5. Apply thin film of fuel on packing.
6. Screw fuel filter (J) into fuel filter header. Tighten until fuel filter snugly mates with fuel filter header (I).
7. Turn filter 1/2 to 3/4 turn further.

NOTE: To prime the fuel system before starting engine, turn ignition key to ON for 60 seconds.

A—Primary Filter Header
B—Primary Filter Canister Drain Valve
C—Water-In-Fuel Sensor Connector
D—Primary Filter Canister
E—Primary Filter Element
F—Primary Filter Packing
G—Primary Filter Canister Lip
H—Primary Filter Header Lip
I— Secondary Fuel Filter Header
J— Secondary Fuel Filter
K—Secondary Filter Packing



ZX237540 —UN—23MAR15

Primary and Secondary Fuel Filter

OUCC002,00044F8 -19-09SEP15-3/3

Replace Fuel Filter Elements (8700 and 8800 Only)

CAUTION: To prevent a possible fire hazard, remove the ignition key before servicing filter.

IMPORTANT: Always follow the fuel filter replacement procedure and interval as described in this Operator's Manual. Do not pay attention to what is written (fuel level indicator) on the Stage 1 fuel filter glass bowl.

Replace Stage 1 Fuel Filter

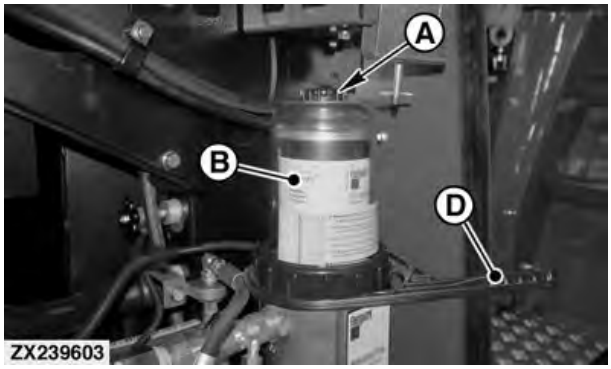
1. Shut off the engine.
2. Open vent cap (A) to break the air lock in filter (B).
3. Turn drain valve (C) counterclockwise approximately 1-1/2 to two turns and leave open until clear fuel appears.
4. Drain contaminated fuel into a suitable container.
5. Close drain valve (C) by turning it approximately 1-1/2 to two turns clockwise.

IMPORTANT: Do not overtighten the valve, as this can damage the threads.

6. Clean the area around the fuel filter.
7. Using the special tool (D) provided with the machine, remove clear cover, filter spring, fuel filter element (B), and O-ring.
   Remove the sealing grommet from the filter spud. Discard the O-ring and sealing grommet.
8. Clean the gasket surface of filter. Use the correct filter for your engine.

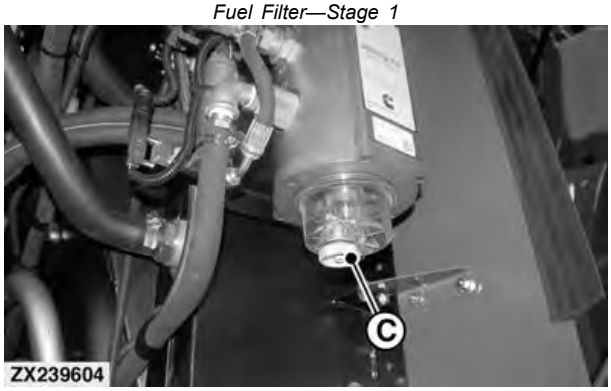
   Use clean oil to lubricate the filter seal.
9. Verify that the used O-ring has been removed and discarded before installing the new O-ring.
10. **Install the Stage 1 filter (B) in reverse order of removal:**

    a. The O-ring and grommet must be replaced with filter element (B) to make sure of correct operation.



ZX239603 —UN—23MAR15

Fuel Filter—Stage 1



ZX239604 —UN—23MAR15

A—Vent Cap
B—Fuel Filter—Stage 1
C—Drain Valve

    b. Install a new O-ring, filter element (supplied with a sealing grommet inserted into the filter element), filter spring, and clear cover on Stage 1 filter (B).

    c. Install vent cap (A) and collar onto the clear cover and hand tighten only. Do not use tools to tighten the collar.

IMPORTANT: Do not overtighten filter, as it can distort the threads or damage the filter element seal.

Continued on next page

Replace Stage 2 Fuel Filters

1. Remove fuel filters (A) with fuel filter wrench.
2. Remove the thread adapter sealing ring.
3. Check that the thread adapter sealing ring has been removed. Use a clean lint-free cloth to clean the surface of the filter head gasket. Spray the surface of the filter head gasket with cleaning solvent. Allow the filter head gasket to air dry.
4. **Install Stage 2 filters (A) in reverse order:**

IMPORTANT: Do not fill Stage 2 filters (A) with fuel.

   a. Install Stage 2 fuel filters (A) on the dual filter head.

   b. Turn the filter until the gasket touches the surface of the filter head.

   c. Tighten the filter an extra 1/2 to 3/4 of a turn after the gasket touches the filter head surface.

ZX239605 —UN—23MAR15

Fuel Filters—Stage 2

A—Fuel Filters—Stage 2

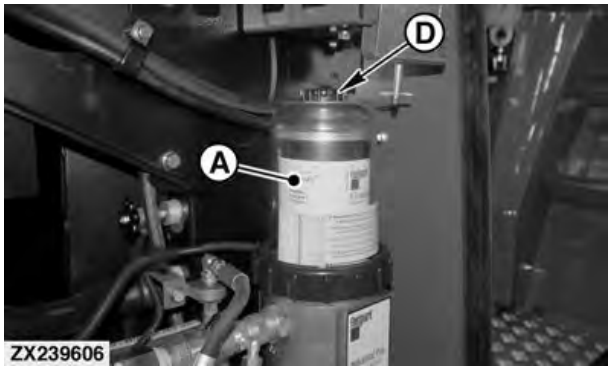
Continued on next page

Prime the Fuel System

Stage 1 and Stage 2 filters (A) and (B) must be primed before starting the engine.

1. Verify drain valve (C) on Stage 1 filter (A) is closed at the base of the filter.
2. Remove vent cap (D) from the top of filter (A).
3. Fill the filter with clean diesel fuel.
4. Install and tighten vent cap (D) by hand only.
5. The key switch must be cycled 2 to 3 times to prime the fuel system. The fuel lift pump operates for 120 sec. when the key is switched to the ON position. When the lift pump stops operating, turn the key switch to the OFF position for approximately 30 sec. before repeating.

A—Fuel Filter—Stage 1
B—Fuel Filters—Stage 2
C—Drain Valve
D—Vent Cap



ZX239606 —UN—23MAR15

ZX239608 —UN—23MAR15

ZX239607 —UN—23MAR15

OUCC002,0004515 -19-23MAR15-3/3

Check Fuel Injection Nozzles

IMPORTANT: Never attempt to remove injection nozzles. Special tools are required.

If the engine is running rough, this indicates that the injection nozzles are clogged or not operating properly. Consult your John Deere dealer.

OUCC002,0003D5D -19-29JUL13-1/1

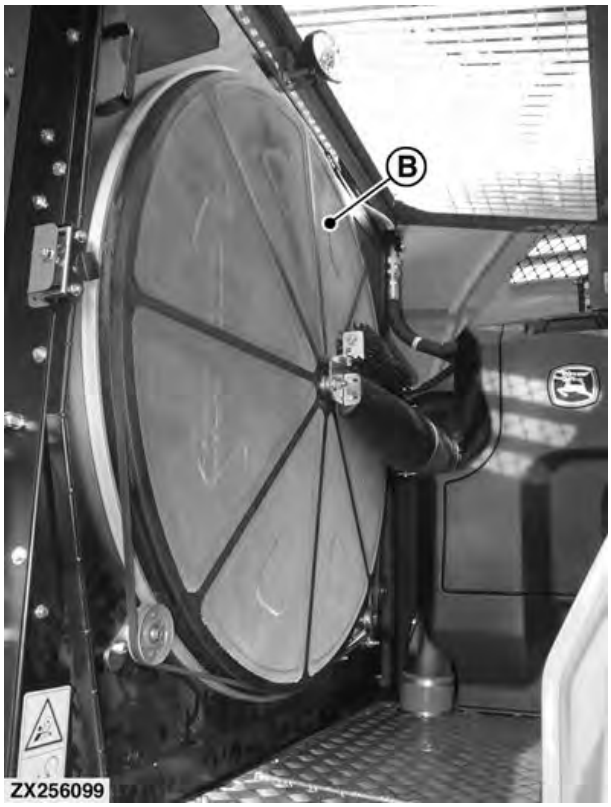
Check Cooling Elements

Open central service compartment access door (A).

Open rotary screen (B).

A—Access Door **B—Rotary Screen**

ZX214911 —UN—06OCT14



ZX256099 —UN—09SEP15

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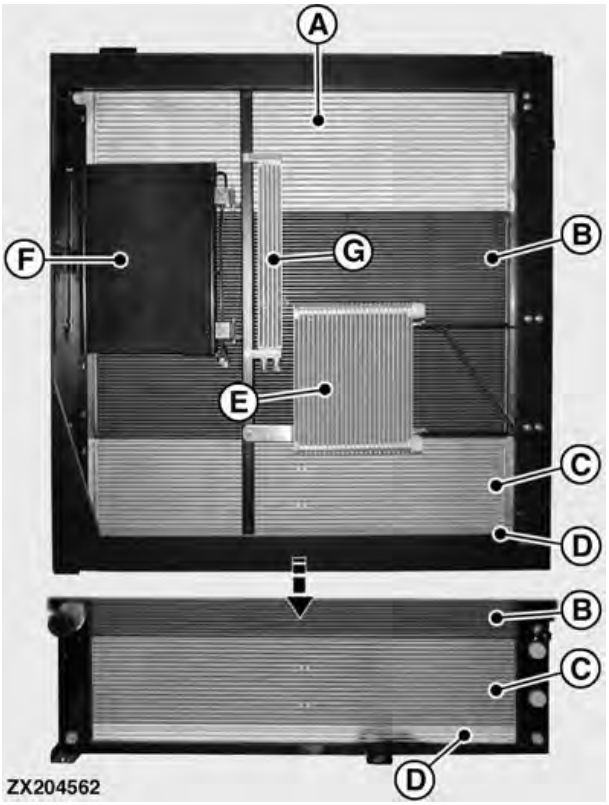
OUCC002,00046E6 -19-07SEP15-1/2

Clean cooling package with a brush. When very dirty, use compressed air, directing air in opposite direction to normal air flow.

NOTE: Cooling package removed from machine for illustration purpose only.

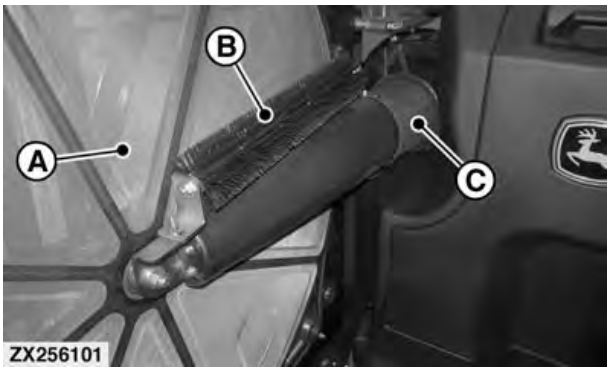
A—Charge Air Cooler
B—Radiator
C—Hydraulic Oil Cooler
D—Transmission Oil Cooler (ProDrive™ only)
E—Power Distribution Gear Oil Cooler
F—Air-Conditioning Condenser
G—Fuel Cooler



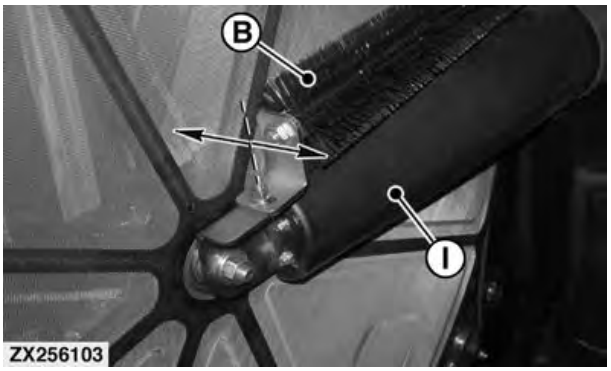
ZX204562 —UN—06AUG13

OUCC002,00046E6 -19-07SEP15-2/2

Check the Rotary Screen



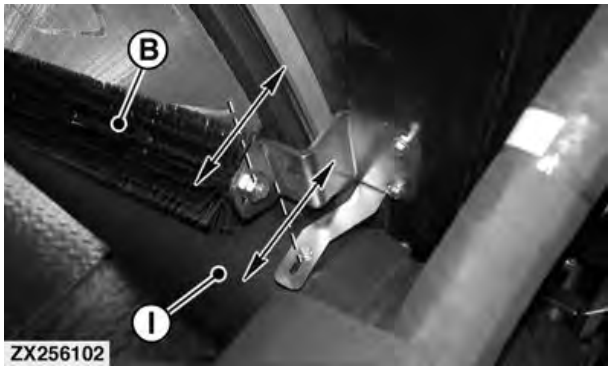
ZX256101 —UN—09SEP15



ZX256103 —UN—09SEP15

IMPORTANT: Avoid engine overheating. The build up of chaff and crop debris on rotary screen leads to engine overheating. To ensure an effective brushing effect of rotary screen (A), regularly check adjustment of brush (B). Do not let the screen clogged by chaff and crop debris.

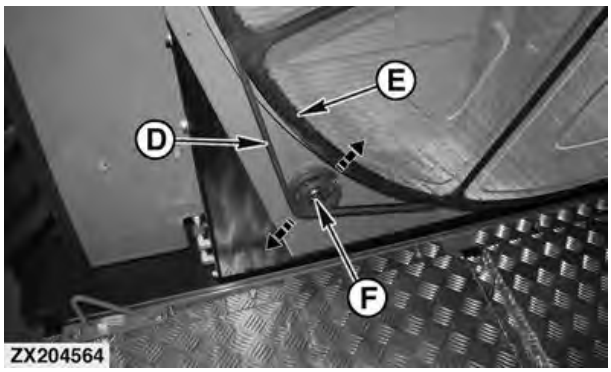
- Check free rotation of screen (A).
- Check free rotation and adjustment of brush (B). To ensure a good brushing effect, check that brush bristles are firmly in contact with rotary screen (A). Adjust brush (B) position if necessary.
- Check suction nozzle seal.
- Check tension of drive belt (D).
- Check screen-to-frame seal (E).
- Check door frame seal.



ZX256102 —UN—09SEP15

Adjust Belt Tension:

Check drive belt tension. If necessary loosen and slide tensioner (F) in its slot to adjust belt tension. Spring coils (H) of belt tension roller (G) must be maintained apart.



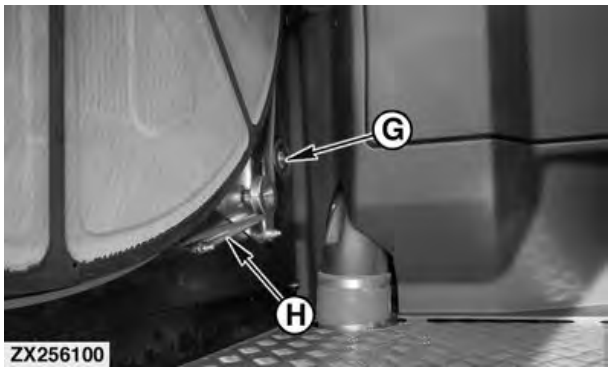
ZX204564 —UN—06AUG13

Winter Operation:

IMPORTANT: When iced or covered with snow, clean rotary screen before starting the engine.

Avoid damage to the drive belt.

When operating the machine at temperatures below 0°C (32°F), make sure that rotary screen is free to turn before starting the engine.



ZX256100 —UN—09SEP15

Every 500 hours of operation, check belt tension roller (G) for wear.

Every 100 hours of operation, remove nozzle seal (C) and check inside of air duct (I) for debris accumulation.

IMPORTANT: If air duct (I) has been removed, install and adjust air duct (I) position as close as the rotary screen (A) without rubbing.

Continued on next page

A—Rotary Screen
B—Brush
C—Nozzle Seal
D—Drive Belt
E—Frame Seal
F— Tensioner
G—Belt Tension Roller
H—Spring Coils
I— Air Duct

OUCC002,00046E7 -19-09SEP15-2/2

Engine Coolant

CAUTION: Danger of scalding! Remove radiator filler cap only when coolant temperature is below boiling point (wait a few minutes). Then loosen cap slightly to the stop to relieve pressure before removing cap.

Place the spout in such a position that it can be used as a handhold before climbing on the machine to add coolant to expansion tank. Always use the spout handhold to access expansion tank cap (A).

IMPORTANT: Never use a cooling system sealing additive. Never pour cold liquid into a hot engine, as this may crack the cylinder head or block. Do not operate engine without coolant.

Add Coolant:

Expansion tank (B) total capacity is:

- On 8100 and 8200: 8.0 L (2.11 gal)
- On 8300—8800: 10.0 L (2.7 gal)

Always shut off engine before adding coolant. Add coolant when the cooling system is cold. Coolant level must be between the "Max Cold" and "Min Cold" marks.

NOTE: MIN COLD Level = 2.1 L (0.55 gal)

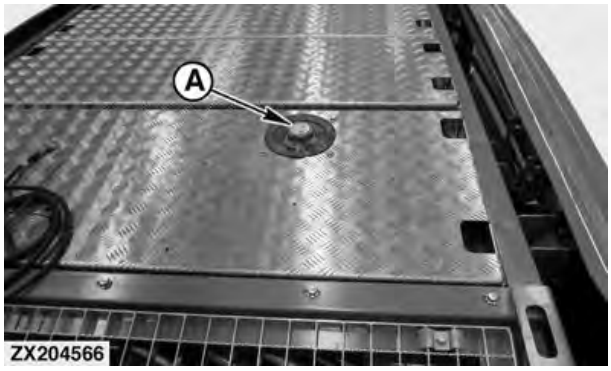
MAX COLD Level = 3.1 L (0.82 gal)

Expansion tank (B) coolant level is monitored by one sensor (C).

Check Condition of Coolant

IMPORTANT: Regardless of the season, use only John Deere Cool-Gard™ in the cooling system. If John Deere Deere Cool-Gard™ II is used, drain cooling system and refill with fresh coolant at least every six years or every 6000 hours of operation, whichever occurs first. Otherwise, drain cooling system and refill with fresh coolant every 2 years.

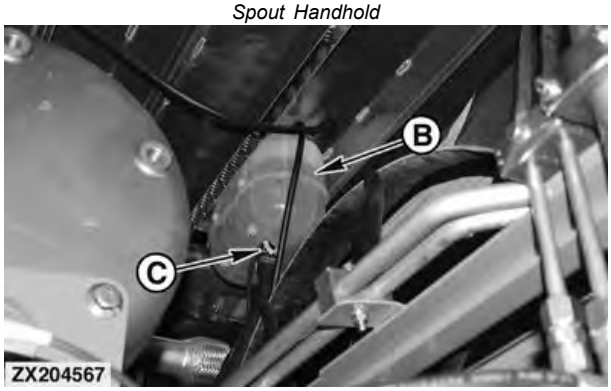
Check condition of coolant mixture before the winter season. Coolant should protect engine against frost down to -36°C (-35°F).



ZX204566 —UN—06AUG13

ZX224021 —UN—08NOV14

Spout Handhold



ZX204567 —UN—06AUG13

A—Expansion Tank Cap
B—Expansion Tank
C—Sensor

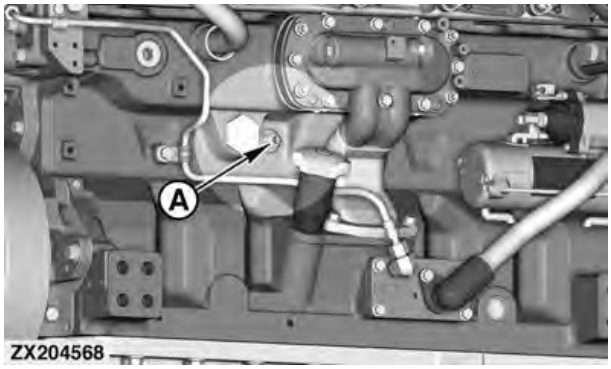
OUCC002,00046E8 -19-07SEP15-1/1

Engine Coolant Drain Valves (8100—8600 Only)

Drain Valves—9.0 L Final Tier 4/Stage IV and Tier 3/Stage III A Engine:

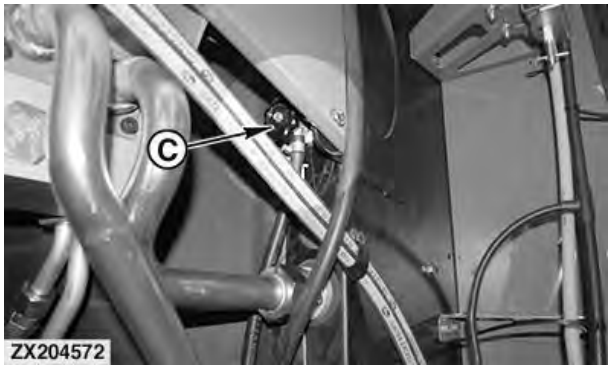
Refer to illustrations to locate relevant engine coolant drain valves.

A—At Cylinder Block
B—At Radiator Pipe
C—At Right-Hand Side of Radiator



ZX204568 —UN—06OCT14

ZX204570 —UN—06AUG13



ZX204572 —UN—01APR14

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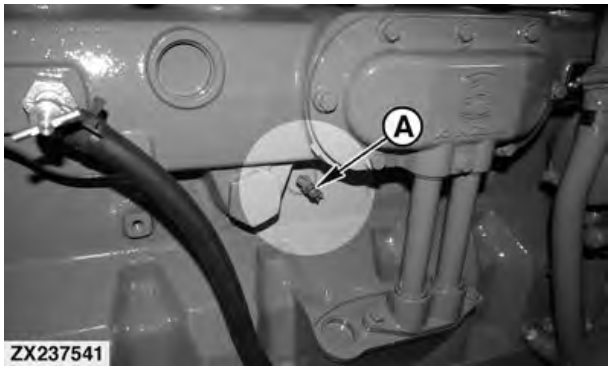
OUCC002,0004C6F -19-08JUN16-1/4

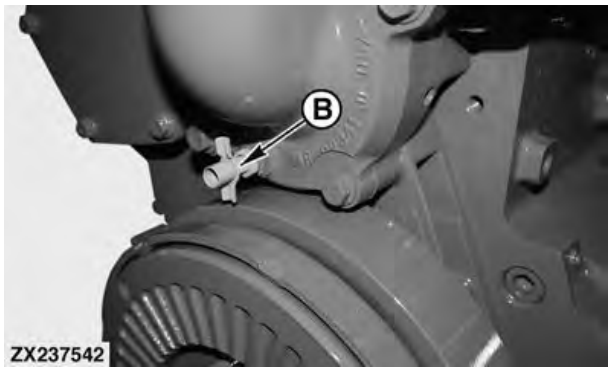
Drain Valves—9.0 L Tier 2/Stage II Engine:

Refer to illustrations to locate relevant engine coolant drain valves.

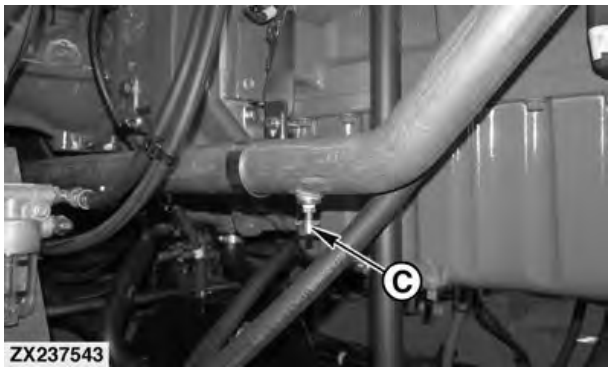
A—At Cylinder Block
B—Near Crankshaft Vibration Damper
C—At Radiator Pipe
D—At Right-Hand Side of Radiator



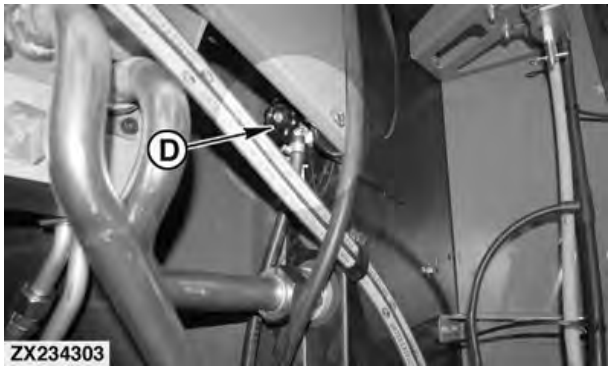
ZX237541 —UN—23MAR15



ZX237542 —UN—23MAR15



ZX237543 —UN—23MAR15



ZX234303 —UN—23MAR15

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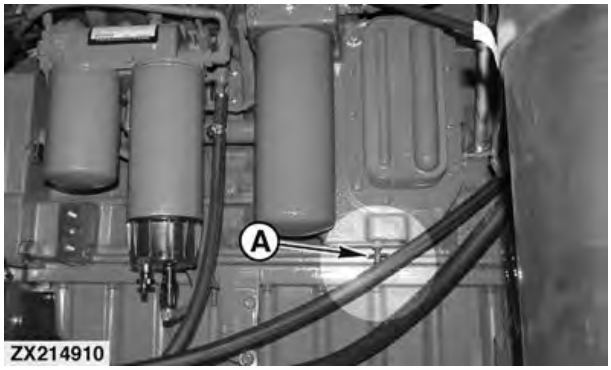
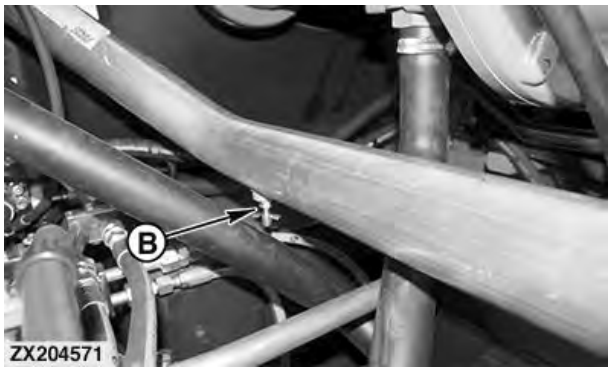
OUCC002,0004C6F -19-08JUN16-2/4

Drain Valves—13.5 L Final Tier 4/Stage IV Engine:

A—At Cylinder Block
B—At Radiator Pipe
C—At Right-Hand Side of Radiator



ZX214910 —UN—06OCT14



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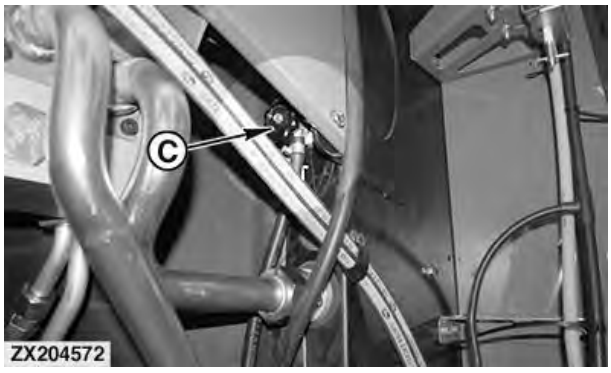

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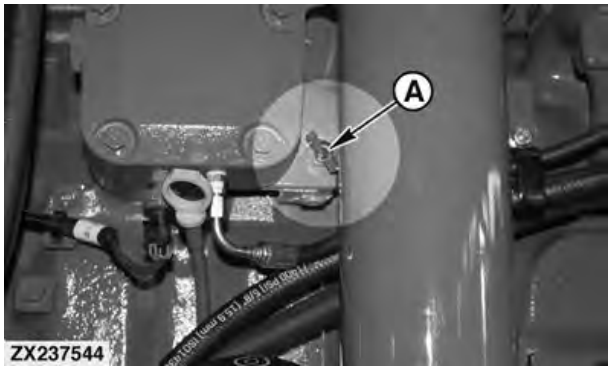
OUCC002,0004C6F -19-08JUN16-3/4

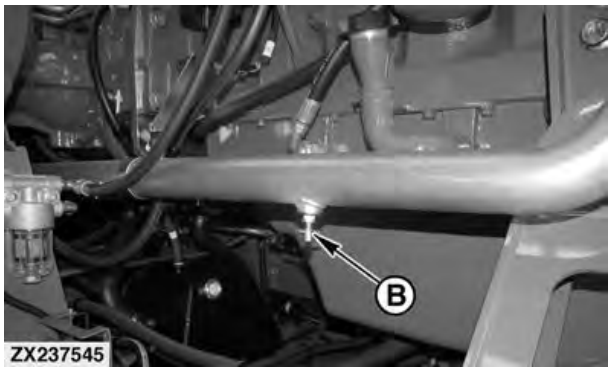
Drain Valves—13.5 L Tier 2/Stage II and Tier 3/Stage III A Engine:

Refer to illustrations to locate relevant engine coolant drain valves.

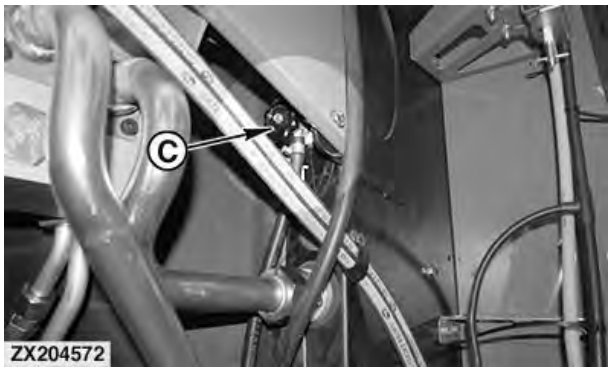
A—At Cylinder Block
B—At Radiator Pipe
C—At Right-Hand Side of Radiator
D—At Vent Plug—Tier 3/Stage III A Engine Only



ZX237544 —UN—23MAR15



ZX237545 —UN—23MAR15



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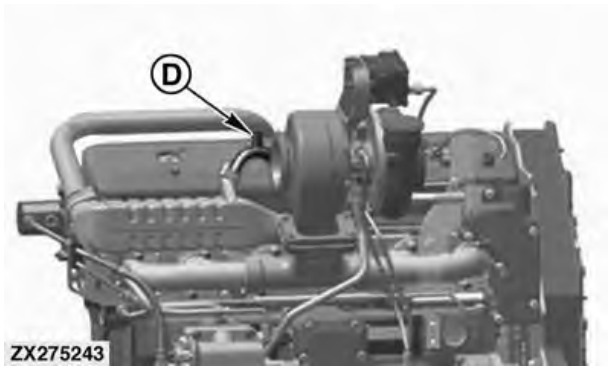


ZX274243 —UN—25FEB16

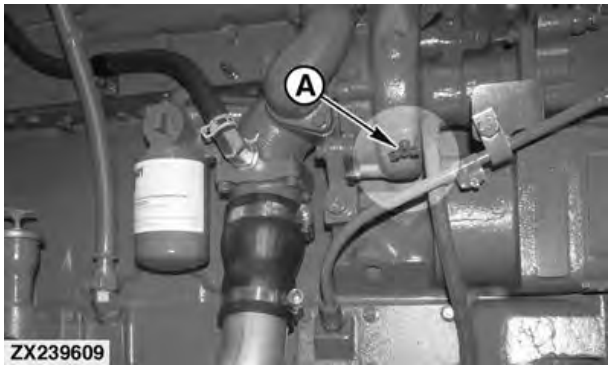
EGR Cooler Vent Plug

OUCC002,0004C6F -19-08JUN16-4/4

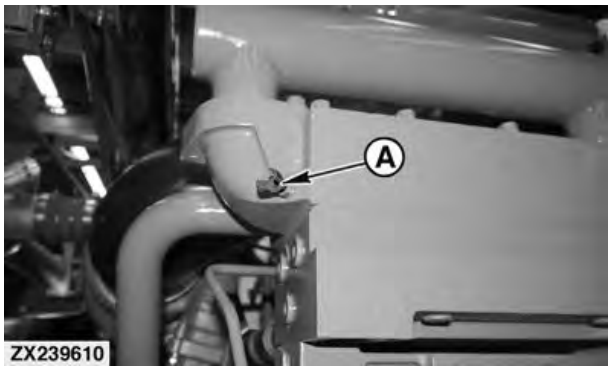
Engine Coolant Drain Valves (8700 and 8800 Only)

Refer to illustrations to locate relevant engine coolant drain valves.

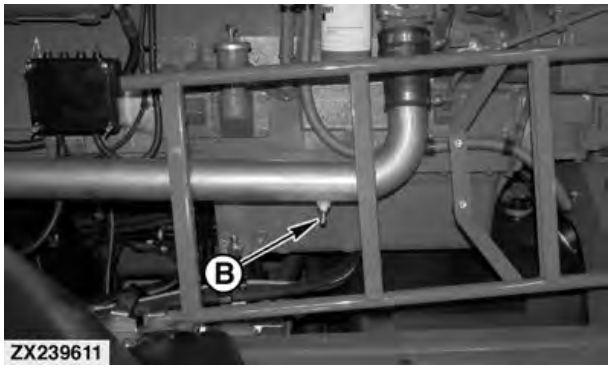
A—At Cylinder Block
B—Near Crankshaft Vibration Damper
C—At Radiator Pipe
D—At Right-Hand Side of Radiator



ZX239609 —UN—23MAR15



ZX239610 —UN—23MAR15



ZX239611 —UN—23MAR15

ZX239612 —UN—23MAR15

OUCC002,0004519 -19-22MAR15-1/1

Drain, Flush and Refill Cooling System (8100—8600 Only)

IMPORTANT: *INITIAL* change interval is 6 years or 6000 hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix and coolant is tested at recommended intervals. After initial service, *SCHEDULED* interval (2 years or 2000 operating hours) can be extended up to 6 years or 6000 hours depending on coolant used and if coolant is tested at recommended intervals. Follow recommendations in Drain Intervals for Diesel Engine Coolant in this section.

IMPORTANT: Thermostat, thermostat gasket, and expansion tank cap should be replaced whenever system is flushed. In this case, special tools and other products are needed to complete procedure. Contact your John Deere Dealer.

NOTE: When service is performed on cooling system, check coolant daily for next three days of operation. Most effective way to check coolant level is when machine is cool. If coolant is low, fill expansion tank to mark on tank.

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

Shut off engine. Only remove cap (A) when cool enough to touch with bare hands. Slowly loosen cap (A) to first stop to relieve pressure before removing completely.

Always use handhold (B) to open/close cap (A) or to refill coolant expansion tank. Slightly move the spout to the right so that handhold (B) can be used.

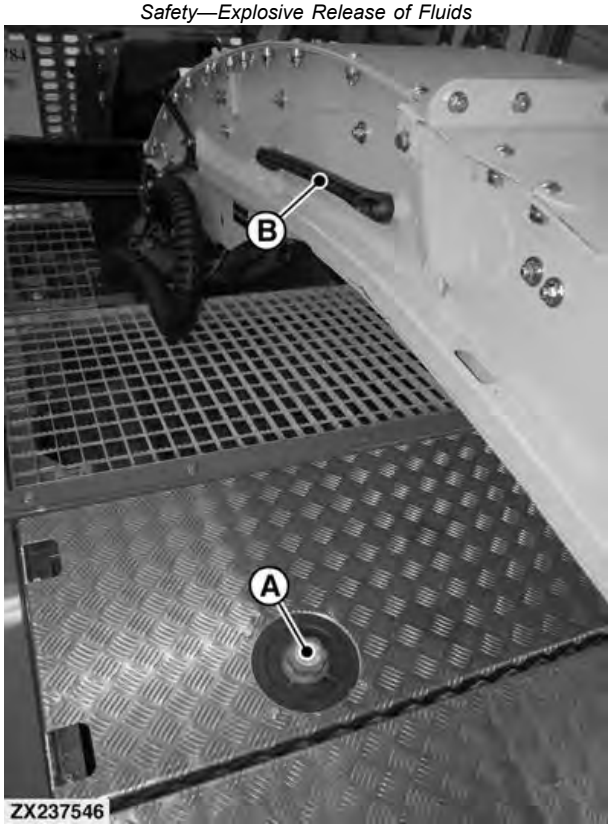
1. Park machine, turn key switch off and allow radiator to cool.

NOTE: Throughout draining, flushing and filling procedure, turn cab temperature knob to highest setting and leave set to highest setting to ensure that fluids are drained from heating/air-conditioning unit. If either temperature knob is not set to highest setting or ignition key is not turned to Run, system will not completely drain.

See your John Deere dealer for recommendations on cleaning solutions.

TS281 —UN—15APR13

Safety—Explosive Release of Fluids



ZX237546 —UN—23MAR15

A—Expansion Tank Cap **B—Handhold**

2. Turn key switch to Run, then turn cab temperature knob to highest setting.

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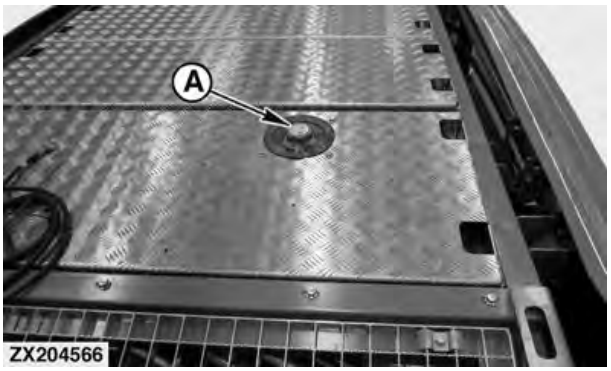

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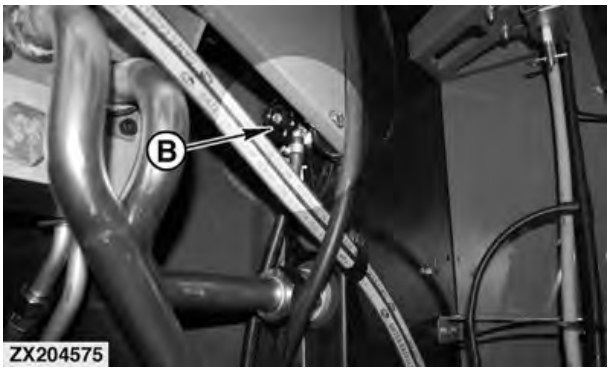

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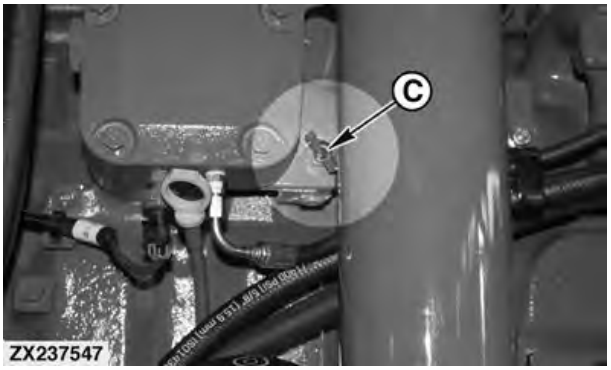

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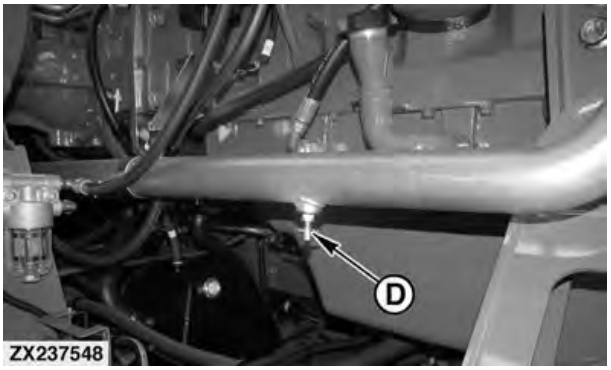
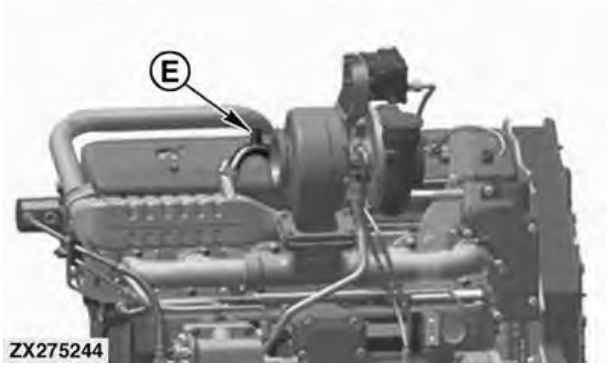


ZX237548 —UN—23MAR15

13.5 L Engine Shown

13.5 L Engine Shown



ZX274244 —UN—25FEB16

EGR Cooler Vent Plug—Tier 3/Stage III A Engine Only

A—Expansion Tank Cap
B—Radiator Drain Valve
C—Engine Drain Valve
D—Radiator Pipe Drain Valve
E—EGR Cooler Vent Plug

3. Remove expansion tank cap (A).
4. Open radiator drain valve (B), engine drain valve (C), and radiator pipe drain valve (D) then drain coolant into catch pans. On 8300-8600 with Tier 3/Stage III A engine, open EGR cooler vent plug (E).
5. Close all drain valves and reinstall vent plug (E).
6. Dispose of old coolant in accordance with local laws and ordinances.

IMPORTANT: Never pour cold water or coolant into hot engine.

NOTE: See your John Deere dealer for recommendations on cleaning solutions.

7. Fill high pressure coolant system at expansion tank with cooling system cleaning solution.
8. Install expansion tank cap.
9. Start engine and run at a minimum of 1500 rpm for 15 minutes.
10. Shut off engine and allow cleaning solution to cool.
11. Make sure temperature knob is turned to highest setting, then turn key to Run position.

Continued on next page

OUCC002,0004C70 -19-08JUN16-2/3

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

Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

12. Remove expansion tank cap, put catch pans in place, then open radiator, radiator pipe, and engine drain valves.
13. Allow cooling system to completely drain.
14. Close all drain valves.

IMPORTANT: Never pour cold water or coolant into hot engine.

15. Dispose of cleaning solution in accordance with local laws and ordinances.
16. Fill high pressure coolant system at expansion tank with clean water.
17. Install expansion cap.
18. Start engine and run at a minimum of 1500 rpm for 15 minutes.
19. Shut off engine and allow water to cool.
20. Make sure temperature knob is turned to highest setting, then turn key to Run position.

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

Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

21. Remove expansion tank cap, put catch pans in place, then open radiator, radiator pipe, and engine drain valves.
22. Allow radiator to drain.
23. Close all drain valves.
24. Dispose of drained water in accordance with local laws and ordinances.

NOTE: Use engine coolant and additives as specified under Engine Coolant in this section.

25. Fill coolant system at expansion tank with respective amount of new coolant solution.
    - 8100, 8200 (Final Tier 4/Stage IV Engine) complete system: 82 L (21.7 gal.)
    - 8100, 8200 (Tier 3/Stage III A Engine) complete system: 82 L (21.7 gal.)
    - 8100, 8200 (Tier 2/Stage II Engine) complete system: 78 L (21.7 gal)
    - 8300-8600 (Final Tier 4/Stage IV Engine) complete system: 113 L (29.9 gal.)
    - 8300-8600 (Tier 3/Stage III A Engine) complete system: 99 L (26.2 gal)
    - 8300-8600 (Tier 2/Stage II Engine) complete system: 100 L (26.4 gal)
26. Install expansion tank cap, start engine and run at a minimum of 1500 rpm for 15 minutes.

NOTE: Coolant may seep out of the expansion tank overflow vent as air is purged from cooling system.

Coolant level may change when machine is running or during next few operation cycles.

It is highly recommended the cooling system be checked for leaks after draining, flushing and refilling to ensure optimum machine performance. Consult your John Deere dealer for procedure and appropriate tools.

27. Monitor coolant level for next several hours/overnight. Refill expansion tank as required.

OUCC002,0004C70 -19-08JUN16-3/3

Drain, Flush and Refill Cooling System (8700 and 8800 Only)

IMPORTANT: *INITIAL* change interval is 6 years or 6000 hours, provided cooling system is topped off using only John Deere Cool-Gard™ II and premix and coolant is tested at recommended intervals. After initial service, *SCHEDULED* interval (2 years or 2000 operating hours) can be extended up to 6 years or 6000 hours depending on coolant used and if coolant is tested at recommended intervals. Follow recommendations in Drain Intervals for Diesel Engine Coolant in this section.

IMPORTANT: Thermostat, thermostat gasket, and expansion tank cap should be replaced whenever system is flushed. In this case, special tools and other products are needed to complete procedure. Contact your John Deere Dealer.

NOTE: When service is performed on cooling system, check coolant daily for next three days of operation. Most effective way to check coolant level is when machine is cool. If coolant is low, fill expansion tank to mark on tank.

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

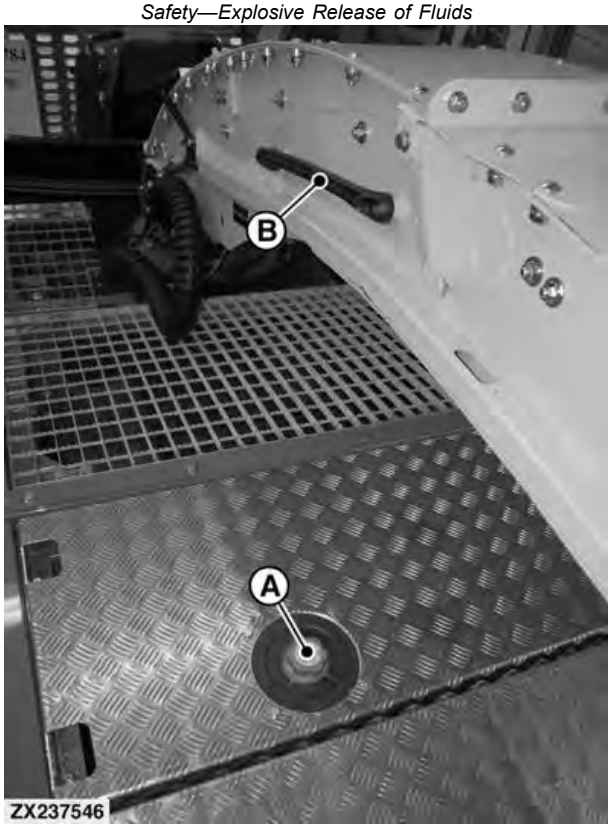
Shut off engine. Only remove cap (A) when cool enough to touch with bare hands. Slowly loosen cap (A) to first stop to relieve pressure before removing completely.

Always use handhold (B) to open/close cap (A) or to refill coolant expansion tank. Slightly move the spout to the right so that handhold (B) can be used.

A—Expansion Tank Cap **B—Handhold**

TS281 —UN—15APR13

Safety—Explosive Release of Fluids



ZX237546 —UN—23MAR15

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OUCC002,00046EC -19-07SEP15-1/3

1. Park machine, turn key switch off and allow radiator to cool.

NOTE: Throughout draining, flushing and filling procedure, turn cab temperature knob to highest setting and leave set to highest setting to ensure that fluids are drained from heating/air-conditioning unit. If either temperature knob is not set to highest setting or ignition key is not turned to Run, system will not completely drain.

See your John Deere dealer for recommendations on cleaning solutions.

2. Turn key switch to Run, then turn cab temperature knob to highest setting.
3. Remove expansion tank cap (A).
4. Open radiator drain valve (B), engine drain valve (C), and radiator pipe drain valve (D) then drain coolant into catch pans.
5. Close all drain valves.
6. Dispose of old coolant in accordance with local laws and ordinances.

IMPORTANT: Never pour cold water or coolant into hot engine.

NOTE: See your John Deere dealer for recommendations on cleaning solutions.

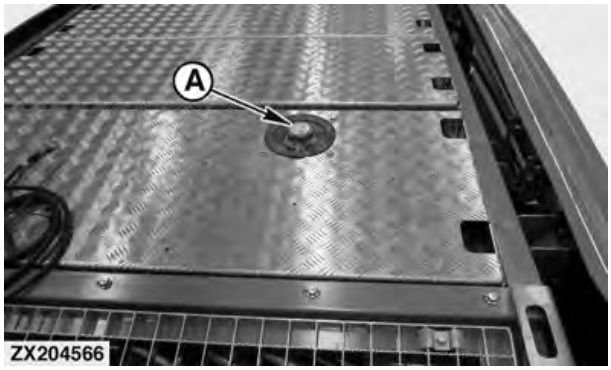
7. Fill high pressure coolant system at expansion tank with cooling system cleaning solution.
8. Install expansion tank cap.
9. Start engine and run at a minimum of 1500 rpm for 15 minutes.
10. Shut off engine and allow cleaning solution to cool.
11. Make sure temperature knob is turned to highest setting, then turn key to Run position.

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

Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

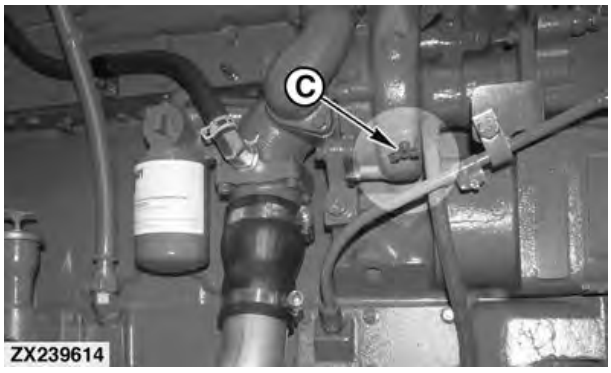
12. Remove expansion tank cap, put catch pans in place, then open radiator, radiator pipe, and engine drain valves.
13. Allow cooling system to completely drain.
14. Close all drain valves.

IMPORTANT: Never pour cold water or coolant into hot engine.

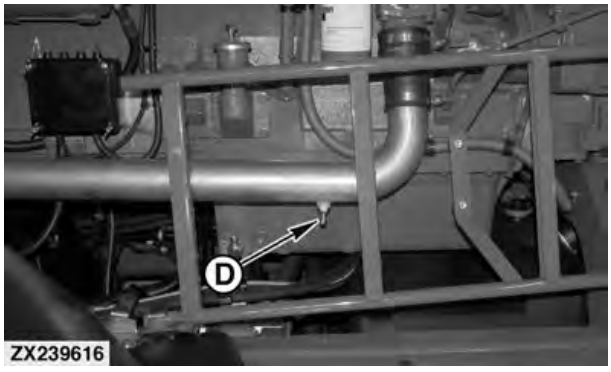


ZX204566 —UN—06AUG13

ZX239613 —UN—23MAR15



ZX239614 —UN—23MAR15



ZX239616 —UN—23MAR15

A—Expansion Tank Cap
B—Radiator Drain Valve
C—Engine Drain Valve
D—Radiator Pipe Drain Valve

15. Dispose of cleaning solution in accordance with local laws and ordinances.

Continued on next page

OUCC002,00046EC -19-07SEP15-2/3

16. Fill high pressure coolant system at expansion tank with clean water.
17. Install expansion cap.
18. Start engine and run at a minimum of 1500 rpm for 15 minutes.
19. Shut off engine and allow water to cool.
20. Make sure temperature knob is turned to highest setting, then turn key to Run position.

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

Only remove cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

21. Remove expansion tank cap, put catch pans in place, then open radiator, radiator pipe, and engine drain valves.
22. Allow radiator to drain.
23. Close all drain valves.
24. Dispose of drained water in accordance with local laws and ordinances.

NOTE: Use engine coolant and additives as specified under Engine Coolant in this section.

25. Fill coolant system at expansion tank with **115 L (30.4 gal)** of new coolant solution.
26. Install expansion tank cap, start engine and run at a minimum of 1500 rpm for 15 minutes.

NOTE: Coolant may seep out of the expansion tank overflow vent as air is purged from cooling system.

Coolant level may change when machine is running or during next few operation cycles.

It is highly recommended the cooling system be checked for leaks after draining, flushing and refilling to ensure optimum machine performance. Consult your John Deere dealer for procedure and appropriate tools.

27. Monitor coolant level for next several hours/overnight. Refill expansion tank as required.

OUCC002,00046EC -19-07SEP15-3/3

Replace Coolant Conditioner Filter (8700 and 8800 Only)

The engine is equipped with a coolant conditioner filter (A). Filter element contains chemicals to prevent corrosion, scaling, and other cooling system problems.

Replace element at hourly interval stated in Lubrication, Periodic Services section to maintain proper chemical concentration. Also replace element if coolant level indicator light lights up.

CAUTION: Do not service coolant filter when engine is hot.

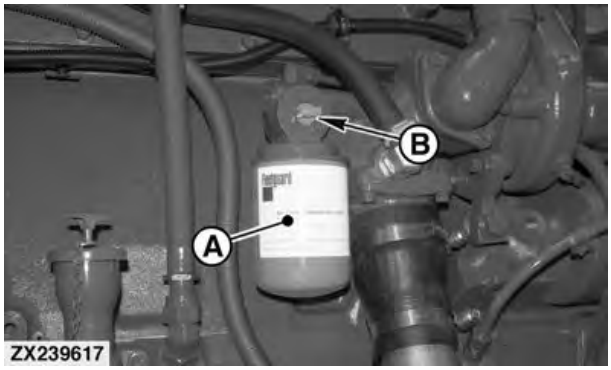
CAUTION: Do not loosen filter element when engine is hot.

IMPORTANT: Do not use a coolant system sealing additive as it would plug the filter.

Whenever replacing coolant, replace coolant conditioner filter as well.

IMPORTANT: If coolant must be added due to leakage (loss of coolant 4 L (1 gal) or more), replace filter element immediately.

Close shutoff valve (B)—arrow in OFF position.



ZX239617 —UN—23MAR15

A—Coolant Conditioner Filter B—Shutoff Valve

Remove filter (A). Dispose of it properly.

Lubricate filter gasket on new element with oil. Tighten element until it contacts base, then another 1/2 to 3/4 turn. Do **not** overtighten.

Open shutoff valve (B)—arrow in ON position.

Check for leaks after starting the engine.

OUCC002,00046EB -19-07SEP15-1/1

Check Alternator/Compressor and Air Compressor Drive Belt Wear (8100—8600 Only)

Belt drive systems equipped with automatic (spring) belt tensioners (A) and (B) cannot be adjusted or repaired. The automatic belt tensioner is designed to maintain proper belt tension over the life of the belt.

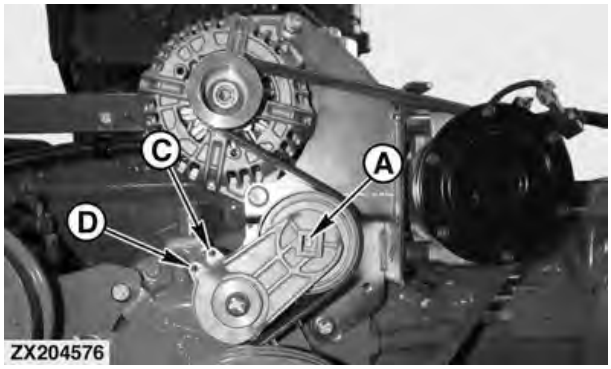
Check Belt Wear

The belt tensioner is designed to operate within the limit of arm movement indicated by the indicators (X and Y) when correct belt length and geometry is used.

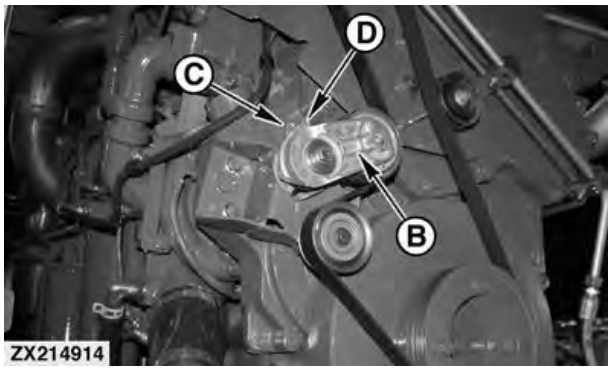
If the tensioner indicator (X) on swing arm is aligned with the fixed indicator (Y), check mounting brackets (alternator, belt tensioner, idler pulley) and belt length. If necessary, replace belt as follows.

1. Use a square-section key to turn the belt tensioner until holes (C) and (D) are in alignment. Insert a 5 mm (0.2 in) dia. metal pin (E) into the two bores that are in alignment and secure the belt tensioner.
2. Take drive belt off.
3. Install the drive belt as shown under Belt Routing and slacken drive belt tensioner again.
4. For tensioning, turn belt tensioner slightly to release metal pin (E) and pull it from the holes. The belt tensioner returns to its tensioning position automatically.

A—Alternator/Compressor Belt Tensioner
B—Air Compressor Belt Tensioner (Optional)
C—Hole
D—Hole
E—Metal Pin
X—Indicator
Y—Indicator—Fixed

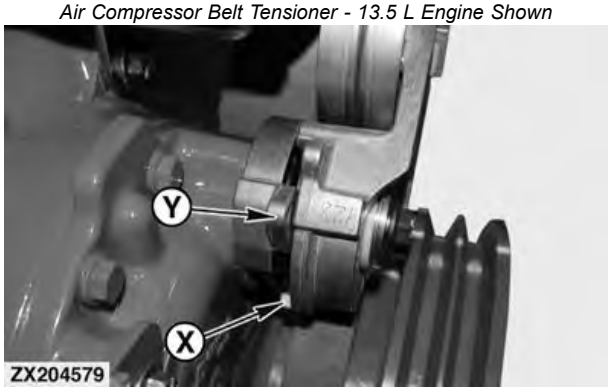


ZX204576 —UN—06AUG13

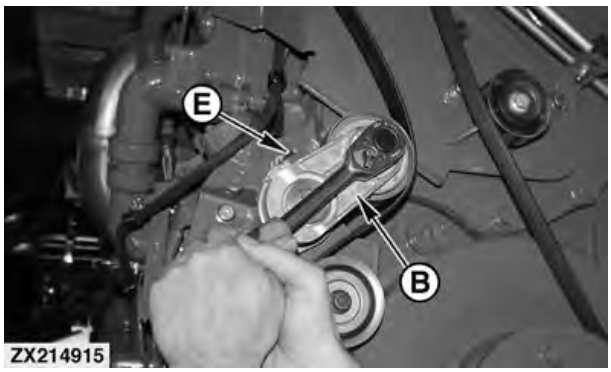


ZX214914 —UN—06OCT14

Air Compressor Belt Tensioner - 13.5 L Engine Shown



ZX204579 —UN—06AUG13



ZX214915 —UN—06OCT14

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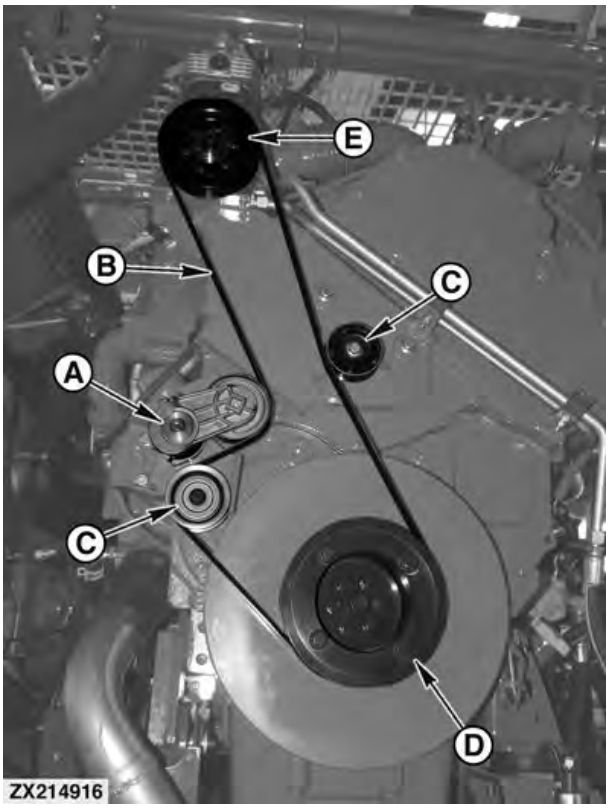
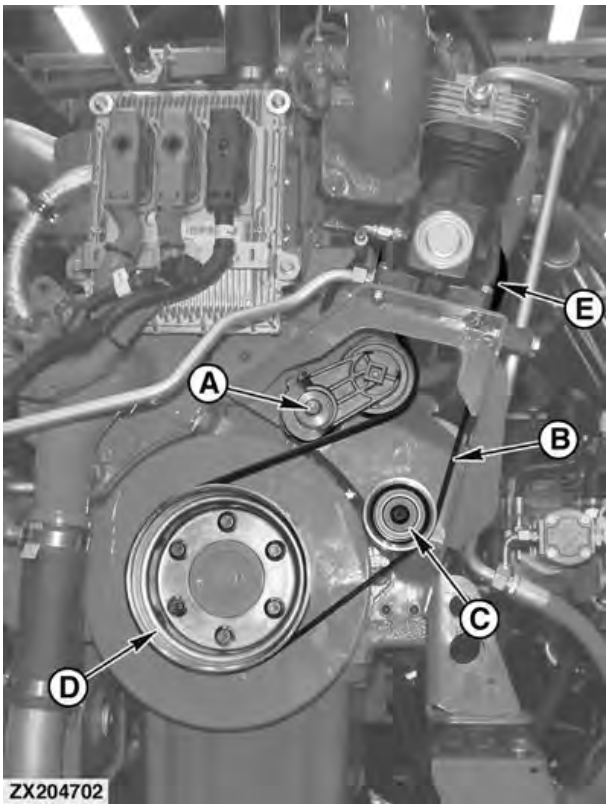


ZX214916 —UN—06OCT14

Engine With Air Compressor (13.5 L Engine)

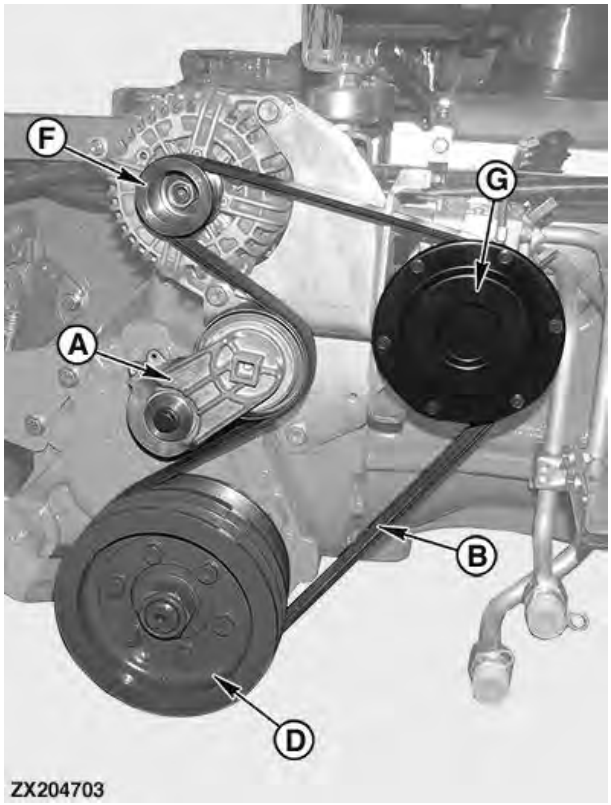


ZX204702 —UN—06AUG13

Engine With Air Compressor (9.0 L Engine)

Belt Routing:

A—Belt Tensioner
B—Drive Belt
C—Tensioner Roll
D—Drive Sheave
E—Air Compressor
F—Alternator
G—Air-Conditioning Compressor



ZX204703 —UN—07MAR14

Alternator and Compressor

OUCC002,00046F0 -19-07SEP15-2/2

Check 12 V Alternator/Compressor and Air Compressor Drive Belt Wear (8700 and 8800 Only)

Belt drive systems equipped with automatic (spring) belt tensioners (A) and (B) cannot be adjusted or repaired. The automatic belt tensioner is designed to maintain proper belt tension over the life of the belt.

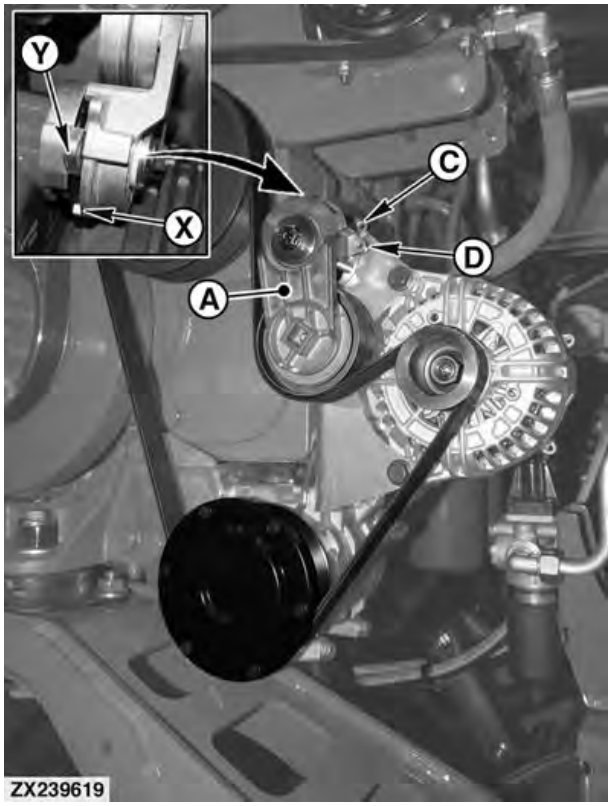
Check Belt Wear

The belt tensioner is designed to operate within the limit of arm movement indicated by the indicators (X and Y) when correct belt length and geometry is used.

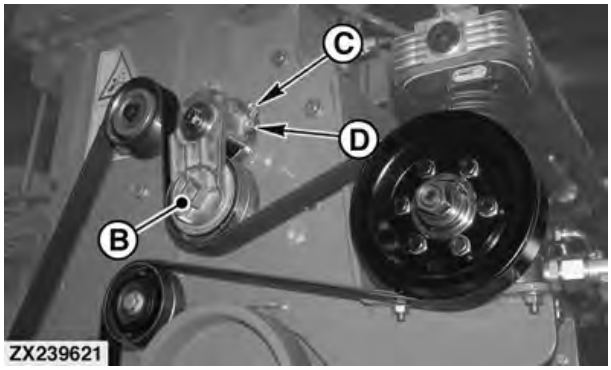
If the tensioner indicator (X) on swing arm is aligned with the fixed indicator (Y), check mounting brackets (alternator, belt tensioner, idler pulley) and belt length. If necessary, replace belt as follows.

1. Use a square-section key to turn the belt tensioner until holes (C) and (D) are in alignment. Insert a 5 mm (0.2 in) dia. metal pin into the two bores that are in alignment and secure the belt tensioner.
2. Take drive belt off.
3. Install the drive belt as shown under Belt Routing and slacken drive belt tensioner again.
4. For tensioning, turn belt tensioner slightly to release metal pin and pull it from the holes. The belt tensioner returns to its tensioning position automatically.

A—Alternator/Compressor Belt Tensioner
B—Air Compressor Belt Tensioner (Optional)
C—Hole
D—Hole
X—Indicator
Y—Indicator—Fixed



ZX239619 —UN—23MAR15



ZX239621 —UN—23MAR15

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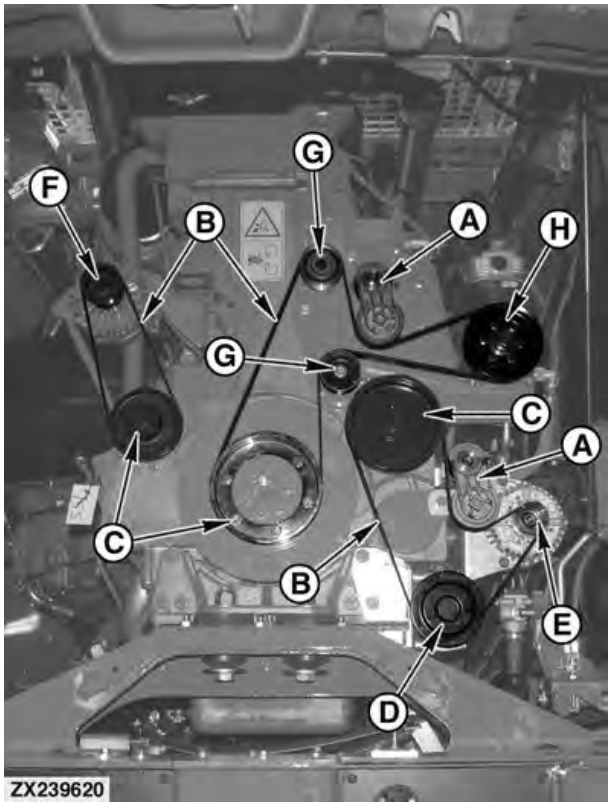
OUCC002,00046EE -19-07SEP15-1/2

Belt Routing:

A—Belt Tensioner
B—Drive Belt
C—Drive Sheave
D—Air-Conditioning Compressor
E—12 V Alternator
F—24 V Alternator
G—Tensioner Roll
H—Air Compressor



ZX239620 —UN—23MAR15

Engine With Air Compressor

OUCC002,00046EE -19-07SEP15-2/2

Check 24 V Alternator Drive Belt Wear (8700 and 8800 Only)

To check and adjust drive belt (A) tension, a belt tension measuring gauge is required. Contact your John Deere dealer.

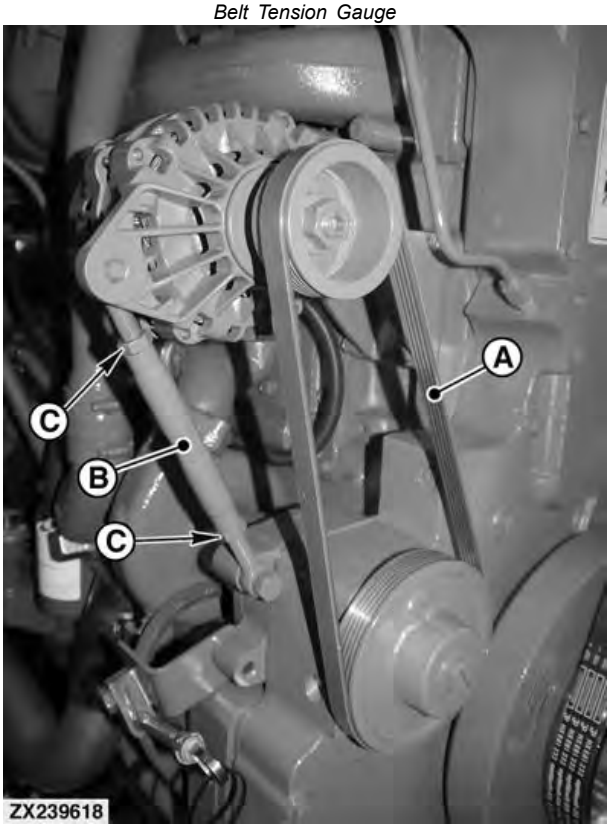
Proceed as follows:

1. Apply gauge on belt and check that tension is **670 N (150 lbf)**.
2. Loosen lock nuts (C) and use adjusting nut of tensioner (B) to adjust belt tension as necessary.

A—24 V Alternator Drive Belt
B—Belt Tensioner
C—Lock Nut

ZX1043261 —UN—04SEP09

Belt Tension Gauge



ZX239618 —UN—23MAR15

OUCC002,00046EF -19-07SEP15-1/1

Check Fan Drive Belt Wear

The fan drive belt is tensioned by spring (A).

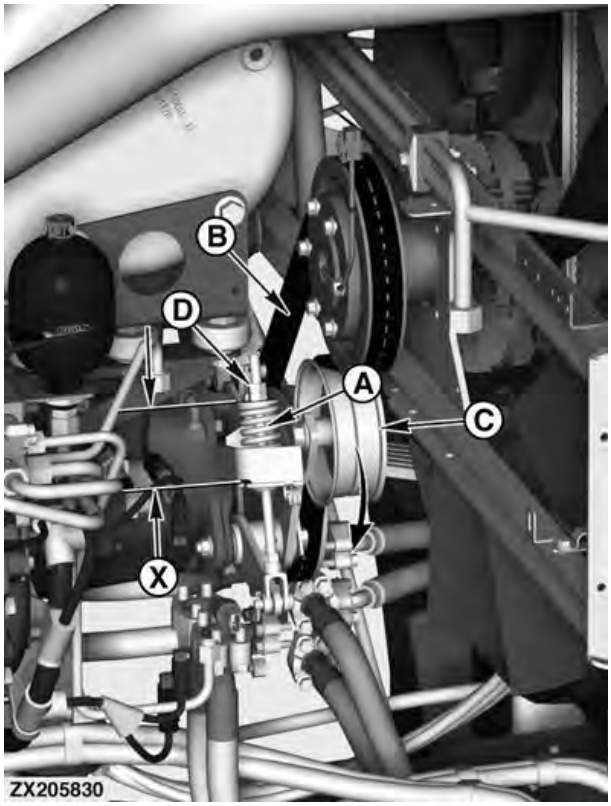
Check Belt Wear

NOTE: Several components have been removed for illustration purpose only.

Push idler (C) in the direction of the arrow to remove drive belt (B).

Install new drive belt and adjust spring length (X) according to gauge using the adjusting nuts (D).

A—Spring
B—Drive Belt
C—Idler
D—Adjusting Nuts
X—Spring Length



ZX205830 —UN—16OCT13

OUCC002,0003D72 -19-10OCT13-1/1

Check Suction Fan Drive Belt Wear

The suction fan drive belt is tensioned by spring (B).

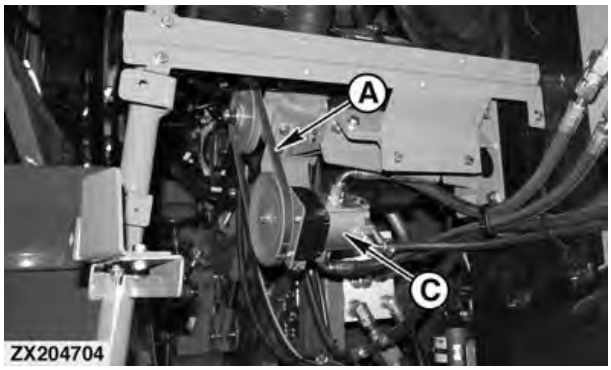
Check Belt Wear

NOTE: Some guards and shields have been removed for illustration purpose only.

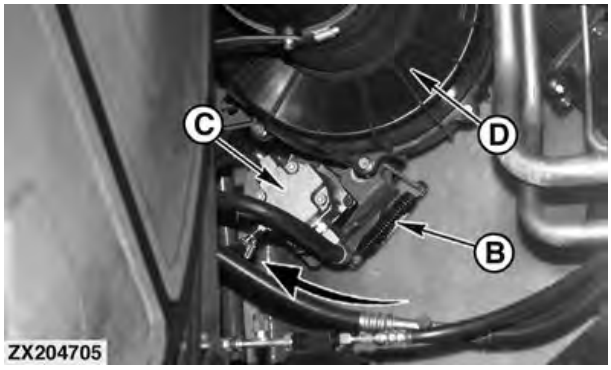
Replace drive belt (A) once the coils of the spring (B) are in contact with each other. Push hydraulic motor (C) in the direction of the arrow to remove drive belt (A).

A—Drive Belt
B—Spring
C—Hydraulic Motor
D—Suction Fan

ZX204709 —UN—06AUG13



ZX204704 —UN—06AUG13



ZX204705 —UN—06AUG13

OUCC002,0003D73 -19-01AUG13-1/1

Air Cleaner Elements (8100— 8600 Only)

IMPORTANT: The air cleaner primary element (D) can be cleaned several time before it has to be replaced. Always use compressed air to clean air cleaner primary element (D). Always replace the air cleaner safety element (E), when the air cleaner primary element (D) is replaced.

Clean air cleaner primary element (D) regularly according to working conditions (dusty). Never run engine without air cleaner elements installed.

Remove/Install Air Cleaner Elements:

Replace air cleaner elements as follows:

1. Open right door to access air cleaner elements.
2. Unlock all clamps (A).
3. Release hose clamp (B).
4. Remove filter cover (C).
5. Pull out air cleaner primary element (D).
6. Pull out air cleaner safety element (E).

IMPORTANT: Never attempt to clean safety element (E).

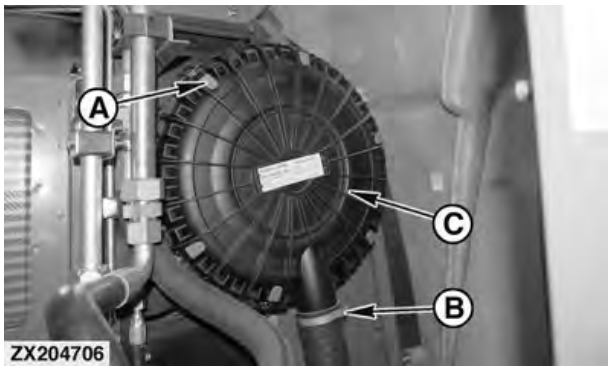
Before installing new or cleaned element, thoroughly clean inside of air cleaner housing (F) with a clean, dry cloth.

7. Install cleaner elements and filter cover in reverse order.

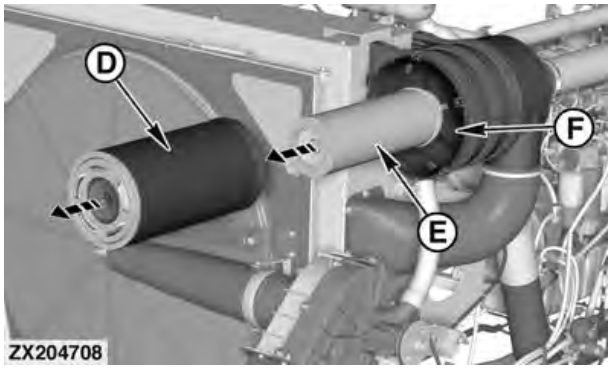
IMPORTANT: Never use a wet or damp element. Make sure that rear rubber sealing rings (G) are absolutely clean and seated correctly.

A—Clamps
B—Hose Clamp
C—Filter Cover
D—Air Cleaner Primary Element
E—Air Cleaner Safety Element
F—Air Cleaner Housing
G—Rubber Sealing Ring

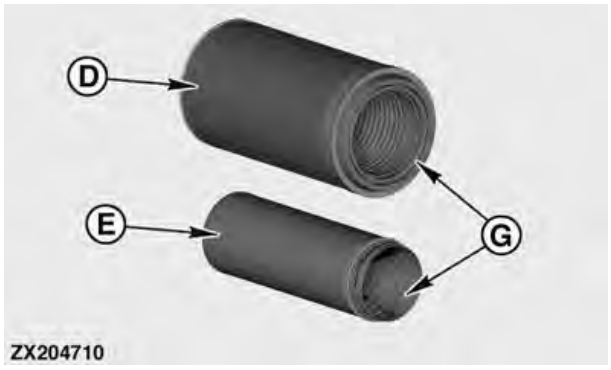
ZX204707 —UN—06AUG13



ZX204706 —UN—06AUG13



ZX204708 —UN—06AUG13



ZX204710 —UN—06AUG13

OUCC002,00046F1 -19-07SEP15-1/1

Air Cleaner Elements (8700 and 8800 Only)

IMPORTANT: The air cleaner primary element (B) can be cleaned several time before it has to be replaced. Always use compressed air to clean air cleaner primary element (B). Always replace the air cleaner safety element (D), when the air cleaner primary element (B) is replaced.

Clean air cleaner primary element (B) regularly according to working conditions (dusty). Never run engine without air cleaner elements installed.

Remove/Install Air Cleaner Elements:

Replace air cleaner elements as follows:

1. Open left door to access air cleaner elements.
2. Loosen wing nut (A).
3. Pull out air cleaner primary element (B).
4. Remove wing nut (C).
5. Pull out air cleaner safety element (D).

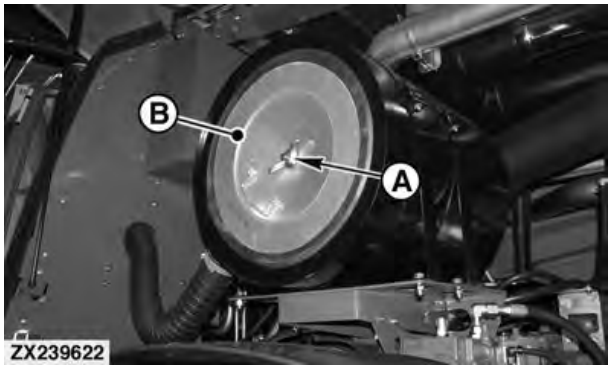
IMPORTANT: Never attempt to clean safety element (D).

Before installing new or cleaned element, thoroughly clean inside of air cleaner housing (E) with a clean, dry cloth.

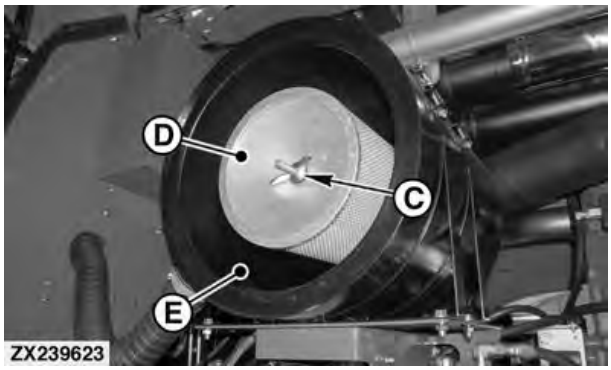
6. Install cleaner elements in reverse order.

IMPORTANT: Never use a wet or damp element. Make sure that all rubber sealing rings (F) are absolutely clean and seated correctly.

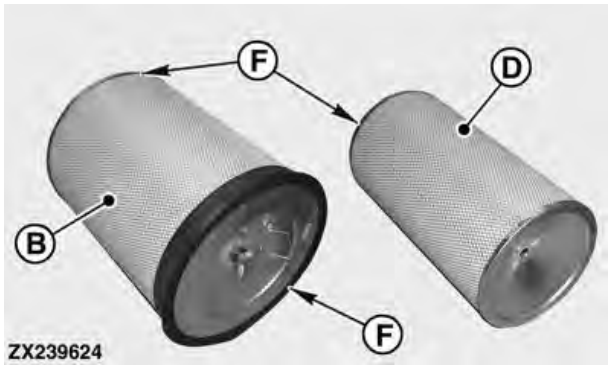
A—Wing Nut
B—Air Cleaner Primary Element
C—Wing Nut
D—Air Cleaner Safety Element
E—Air Cleaner Housing
F—Rubber Sealing Ring



ZX239622 —UN—23MAR15



ZX239623 —UN—23MAR15



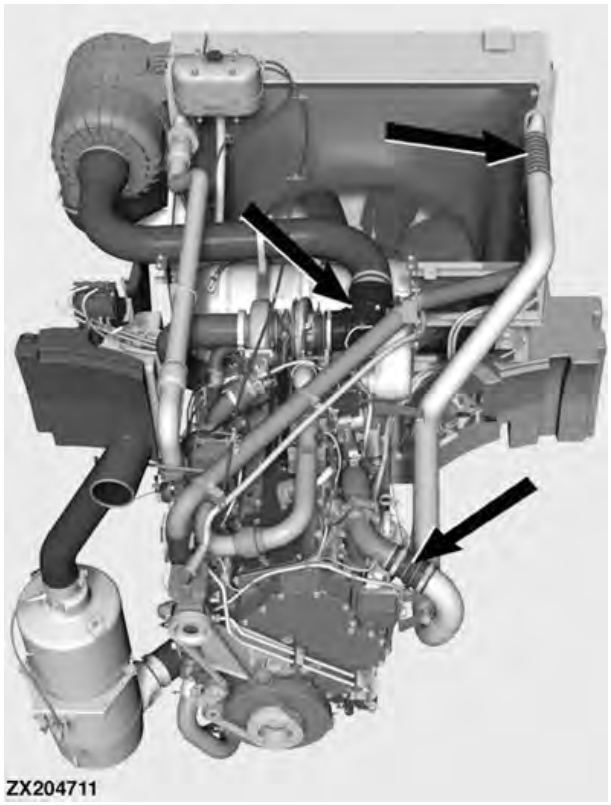
ZX239624 —UN—23MAR15

OUCC002,00046C9 -19-04SEP15-1/1

Air Intake Lines

Connections between steel tubes and rubber hoses are sealed by hose clamps (see arrows).

At least once a year, check and make sure that all hose clamps are seated and tightened correctly. When necessary, replace hoses or clamps.



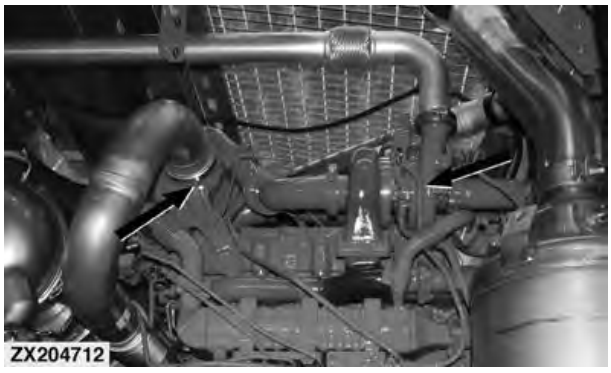
ZX204711 —UN—06AUG13

Air Intake Lines - 13.5 L Engine Shown

OUCC002,00046F2 -19-07SEP15-1/1

Turbocharger

Carefully inspect all connections and attaching points of the turbocharger every 250 hours of operation. Make sure there are no oil leaks at turbocharger or lubrication oil feed line.



ZX204712 —UN—06AUG13

OUCC002,0003D75 -19-01AUG13-1/1

Diesel Particulate Filter Maintenance and Service

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 will require professional service to remove the accumulated ash. The exact number of hours of operation before service is required will vary depending upon the 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 is required.

ZX204713 —UN—06AUG13

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. Generally, DPFs will require servicing at about 4,500 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 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 local hazardous waste laws, along with damage to 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 servicing.

OUCC002,0004143 -19-25AUG14-1/1

Exhaust Filter/Diesel Particulate Filter Ash Handling and Disposal

CAUTION: Under federal, state, and/or local laws or regulations, Diesel Particulate Filter ash may be classified as a hazardous waste. Hazardous wastes 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.

OUCC002,0004144 -19-25AUG14-1/1

Exhaust Filter Disposal

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 Filters, which include the Diesel Particulate Filter, may be exchanged at any John Deere dealer or qualified service provider.

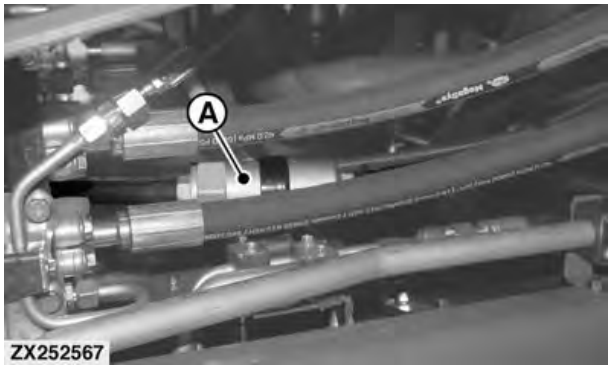
OUCC002,0004145 -19-25AUG14-1/1

Diesel Exhaust Fluid (DEF) Tank Header Filter

The purpose of the filter (A) is to prevent contamination in the coolant from damaging the coolant control valve in the Diesel Exhaust Fluid (DEF) header.

IMPORTANT: The filter (A) is designed for lifetime and no regular service is required.

A—Filter



ZX252567 —UN—09SEP15

OUCC002,00046CF -19-04SEP15-1/1

Clean 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 (A), drain the DEF tank (A), flush, and fill with new DEF.

If DEF quality is in question, pull a sample out of the DEF tank (A) 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 (B) located underneath DEF tank (A), and drain bad DEF from DEF tank.

NOTE: Do not lose O-ring (C).

2. Clean DEF tank (A) with new DEF.

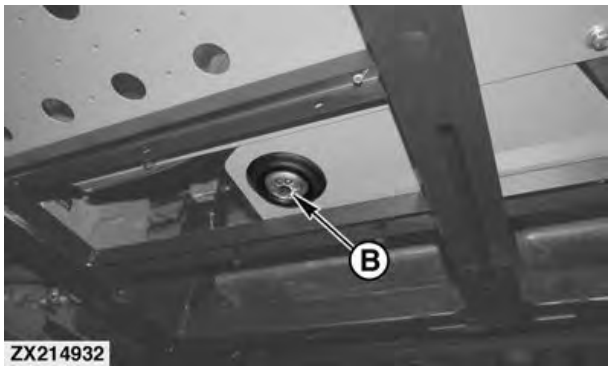
   DEF must pass visual, smell, and concentration checks before the engine can be ran. See Diesel Exhaust Fluid (DEF) – For Use In Selective Catalytic Reduction (SCR) Equipped Engines in this Section for more information.

3. Drain DEF tank (A).

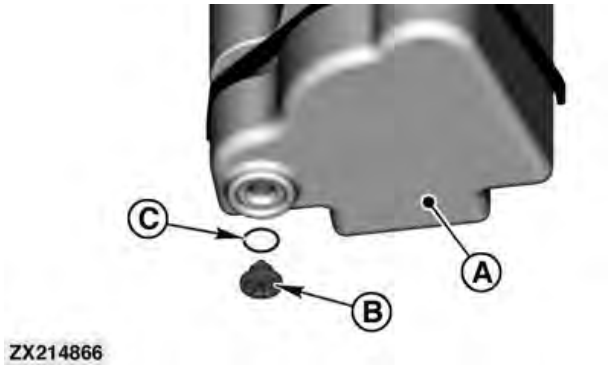
NOTE: Repeat steps 2—3 until DEF tank (A) has been cleaned.

4. Change DEF dosing unit filter.
5. Install drain plug (B) with its O-ring (C) in DEF tank (A).
6. Fill DEF tank (A) with new DEF.
7. 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.
8. If DEF is not within specification, does not appear clear, or does not have a slight ammonia smell, contact your authorized dealer.

ZX214864 —UN—06OCT14



ZX214932 —UN—06OCT14



ZX214866 —UN—06OCT14

A—DEF Tank
B—Drain Plug
C—O-Ring

OUCC002,0004171 -19-27AUG14-1/1

Clean Diesel Exhaust Fluid (DEF) Tank Filler Neck Filter

NOTE: If DEF fill slows, tank filler neck filter will need to be cleaned.

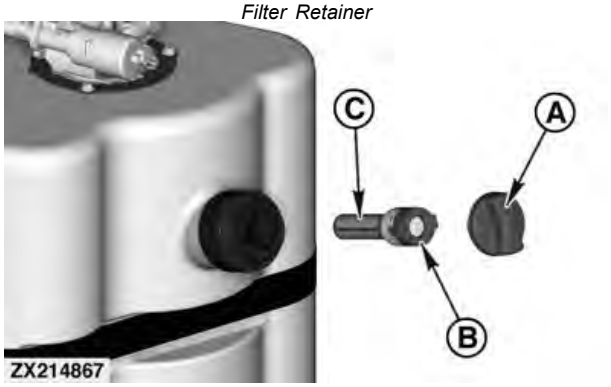
1. Shut engine off.
2. Open DEF tank cap (A).
3. Turn filter retainer (B) counterclockwise until it unlocks, then pull straight out of DEF tank.
4. Clean filler neck filter (C) with warm water to remove any debris.
5. Install in reverse order.

A—DEF Tank Cap
B—Filter Retainer
C—Filler Neck Filter

ZX214864 —UN—06OCT14

ZX214868 —UN—06OCT14

Filter Retainer



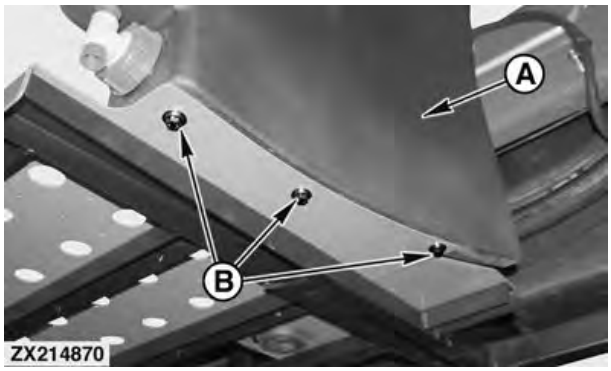
ZX214867 —UN—06OCT14

Filler Neck Filter

OUCC002,0004147 -19-25AUG14-1/1

Replace Diesel Exhaust Fluid (DEF) Tank Header Suction Filter

ZX214869 —UN—06OCT14



ZX214870 —UN—06OCT14

CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Material 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 may distort some plastic and rubber components.

If diagnostic code **ECU 004334-1 or ECU 004334-18** is displayed, perform following procedure:

1. Drain water and remove water tank (A).

NOTE: Three attaching screws (B) are located underneath water tank.

2. Disconnect electrical and fluid connections (C).

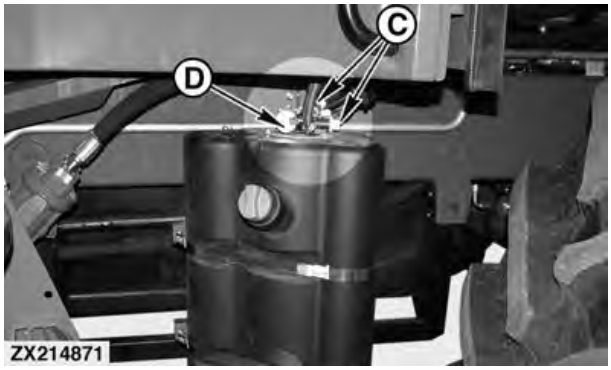
IMPORTANT: Mark all electrical and fluid connections (C) for reinstallation purpose.

3. Remove header assembly (D).

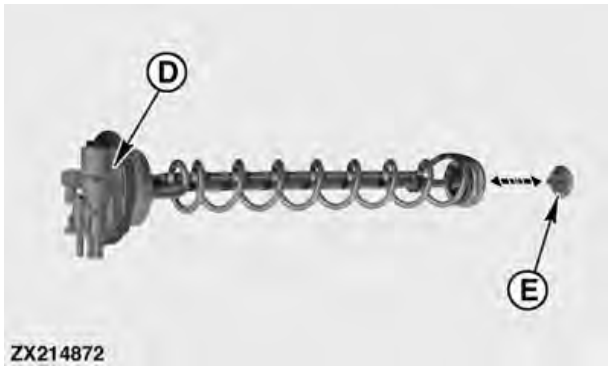
IMPORTANT: Note orientation of header assembly (D) for reinstallation purpose.

4. Remove the attaching screw and replace header suction filter (E).

A—Water Tank
B—Attaching Screw
C—Electrical and Fluid Connections
D—Header Assembly
E—Suction Filter

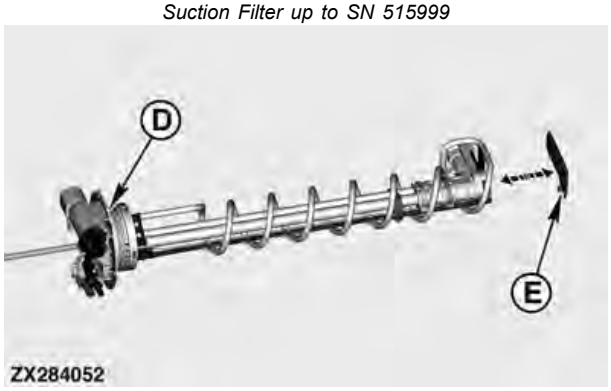


ZX214871 —UN—06OCT14



ZX214872 —UN—06OCT14

Suction Filter up to SN 515999



ZX284052 —UN—18JUN16

Suction Filter From SN 516000

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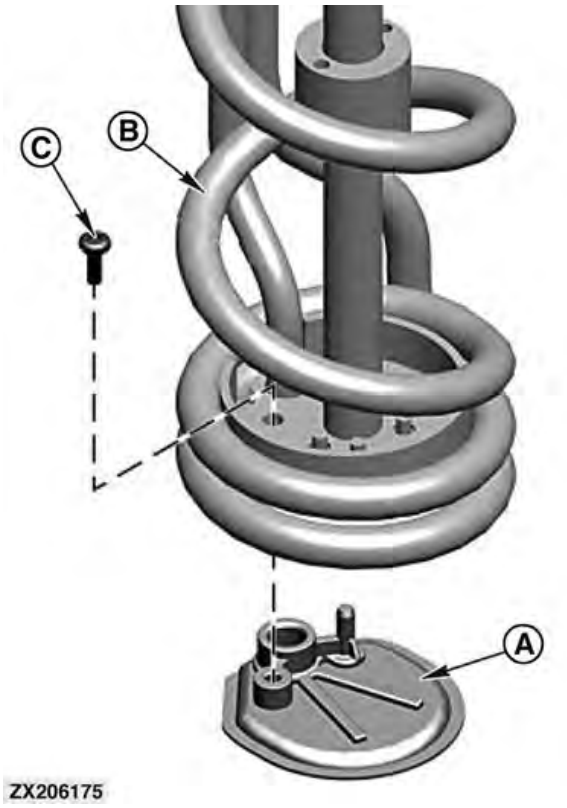
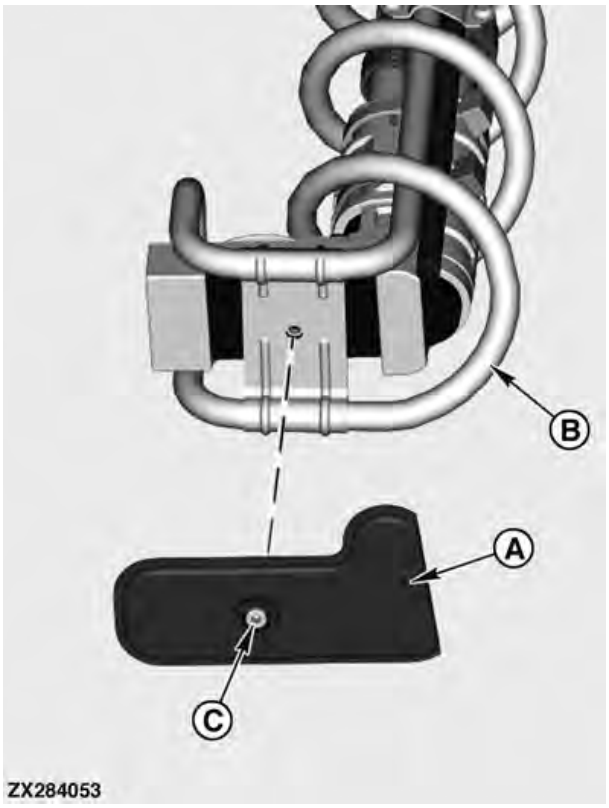
OUCC002,0004C95 -19-21JUN16-1/3



ZX206175 —UN—16OCT13

Suction Filter up to SN 515999

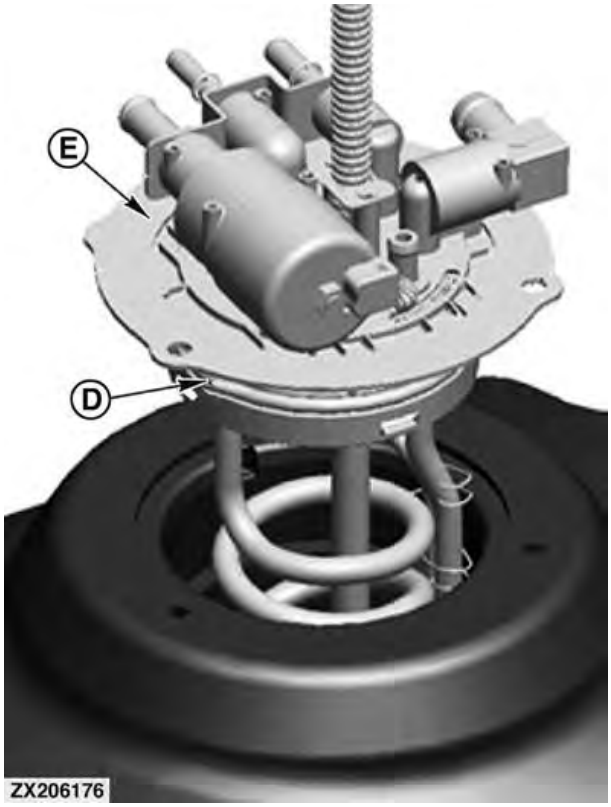


ZX284053 —UN—18JUN16

Suction Filter From SN 516000

5. Install suction filter (A) to suction tube (B).
6. Attach filter (A) with the screw (C) to header as shown. Tighten screw (C) to 1 N·m (11 lb.-ft.).
7. Lubricate O-ring (D) at bottom of header assembly flange (E).

A—Suction Filter
B—Suction Tube
C—Screw
D—O-Ring
E—Flange



ZX206176 —UN—16OCT13

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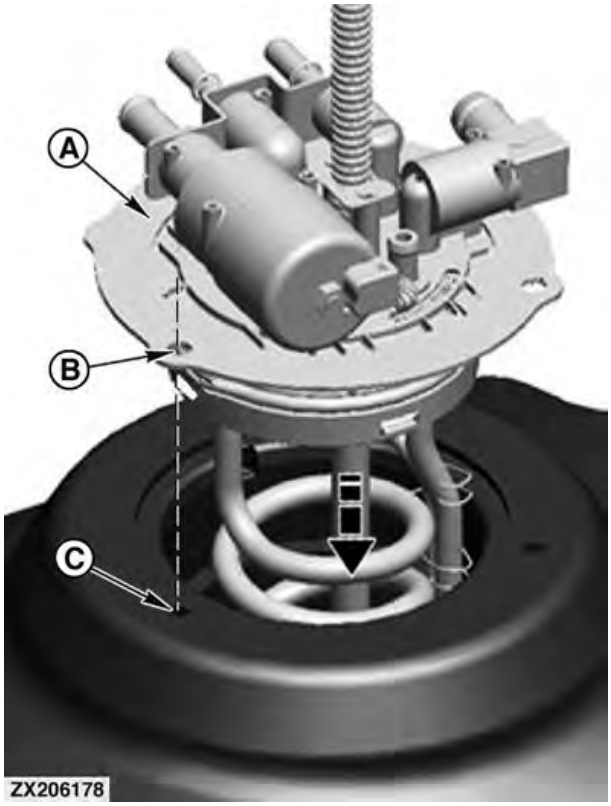
8. Insert header assembly (A) into tank and align holes (B) on locking ring with holes (C) in tank.

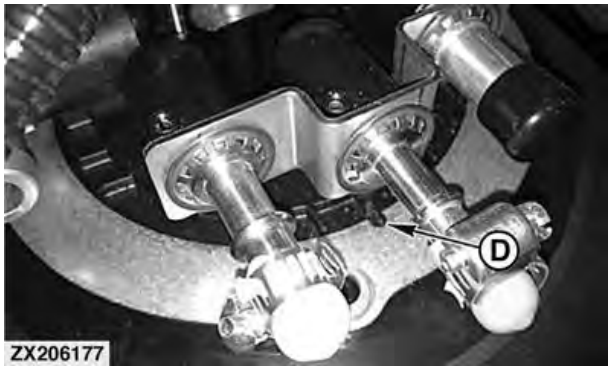
IMPORTANT: Ensure alignment notch on ring is properly aligned with plastic tab (D) on header assembly.

9. Install the three fixing screws and tighten to 9 N·m (80 lb·in).
10. Install all parts in reverse order of removal process then reconnect electrical and fluid connections at their relevant location.

A—Header Assembly
B—Locking Ring Hole
C—Tank Hole
D—Plastic Tab



ZX206178 —UN—16OCT13



ZX206177 —UN—16OCT13

OUCC002,0004C95 -19-21JUN16-3/3

Replace Diesel Exhaust Fluid (DEF) Dosing Unit Filter and Equalizing Element

CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Material Safety Data Sheet (MSDS) for additional information.

IMPORTANT: Replace filter after first year of operation and every THREE years thereafter.

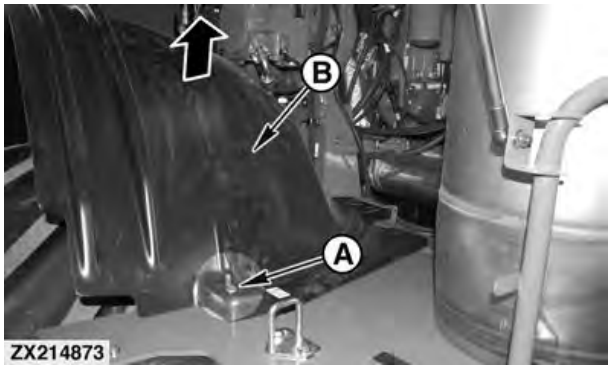
IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and may distort some plastic and rubber components.

NOTE: The diesel exhaust fluid (DEF) line connecting the DEF dosing unit to the DEF dosing valve is under low pressure and should not be disconnected while the engine is running or before the system has completed the purge process after engine shutdown. Disconnecting the DEF line while under low pressure could cause DEF to spray.

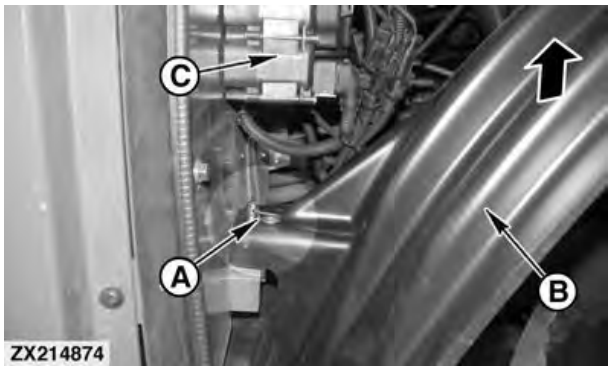
If diagnostic code **ECU 003361-31** is displayed, perform following procedure:

1. Open left-hand side door.
2. Remove the two quick-lock pins (A) then remove left-hand rear wheel fender (B) to ease access DEF dosing unit (C).
3. Remove filter cover (D).

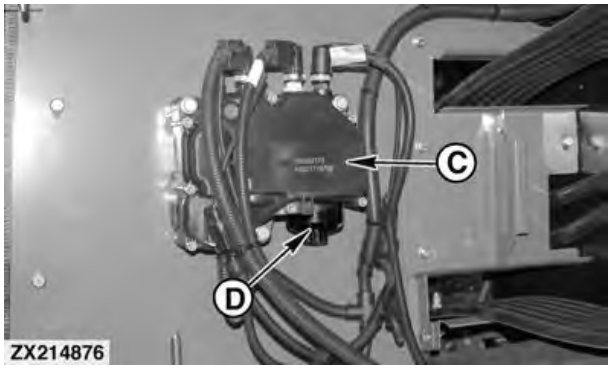
A—Quick-Lock Pin
B—Fender
C—DEF Dosing Unit
D—Filter Cover



ZX214873 —UN—06OCT14



ZX214874 —UN—06OCT14



ZX214876 —UN—04NOV14

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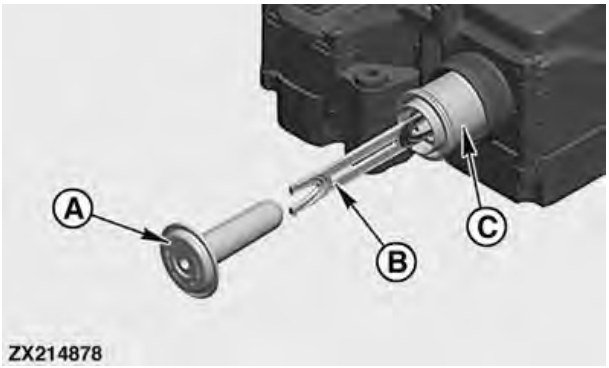
OUCC002,0004149 -19-16DEC14-1/2

4. Remove and discard equalizing element (A).
5. Insert **black** end of tool (B) into filter body (C) until “click” is felt or heard indicating tool is fully engaged.
6. Pull tool and filter from dosing unit housing. If necessary, a tool such as a screwdriver may be inserted into slot of tool (B) to assist removal. Discard filter (C) and tool (B).
7. Clean filter housing threads and mating surfaces with distilled water only.

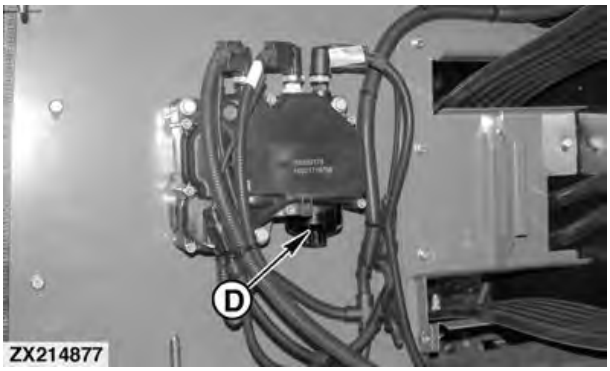
IMPORTANT: Use only distilled water to rinse components that will be used to deliver DEF. Tap water can contaminate DEF.

8. Install filter O-rings. Carefully and fully insert filter (C) into housing.
9. Install new equalizing element (A) into filter (C).
10. Install filter cover (D) and tighten to 20—25 N·m (15—18 lb.-ft.).
11. Install rear wheel fender back in place.

A—Equalizing Element
B—Filter Tool
C—DEF Filter
D—Filter Cover



ZX214878 —UN—04NOV14



ZX214877 —UN—04NOV14

OUCC002,0004149 -19-16DEC14-2/2

Replace Diesel Exhaust Fluid (DEF) Tank Vent Filter

CAUTION: DEF contains urea. Do not get the substance in eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Do not take internally. In event DEF is ingested, contact a physician immediately. Reference Material Safety Data Sheet (MSDS) for additional information.

IMPORTANT: Replace filter after first year of operation and every THREE years thereafter.

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 may distort some plastic and rubber components.

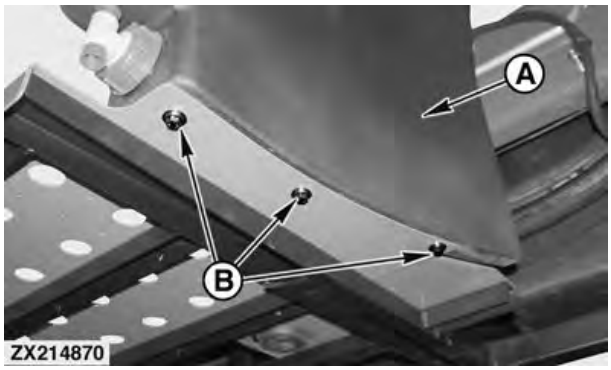
1. Drain water and remove water tank (A).

NOTE: Three attaching screws (B) are located underneath water tank.

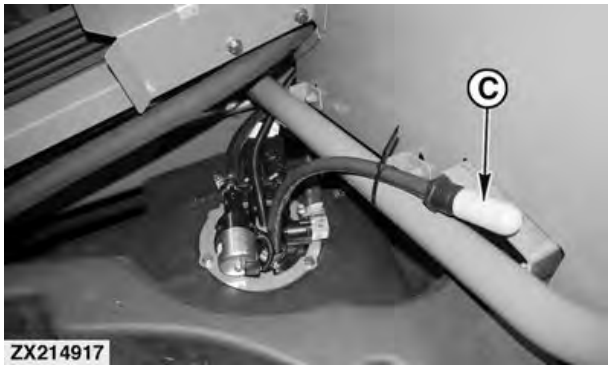
2. Remove DEF tank vent filter (C) and install new filter.
3. Reinstall water tank back in place.

A—Water Tank
B—Attaching Screw
C—Filter

ZX214869 —UN—06OCT14



ZX214870 —UN—06OCT14



ZX214917 —UN—06OCT14

OUCC002,0004173 -19-27AUG14-1/1

Open/Close Feed Roll Housing

CAUTION: Avoid personal injuries. Never attempt to open the feed roll housing in horizontal axis without a header attached to the machine. Always open the feed roll housing horizontally with a header attached to the machine. Opening the feed roll housing horizontally without header attached to the machine causes the feed roll housing to fold down faster than you can move away.

Before servicing or adjusting the machine, always disengage all drives, shut off engine and wait until all moving parts have stopped.

While opening or closing the feed roll housing, make sure that no one stays in the vicinity until feed roll housing is latched in opened or closed position.

Feed roll housing can be opened in two different manners. Refer to the relevant procedure outlined below:

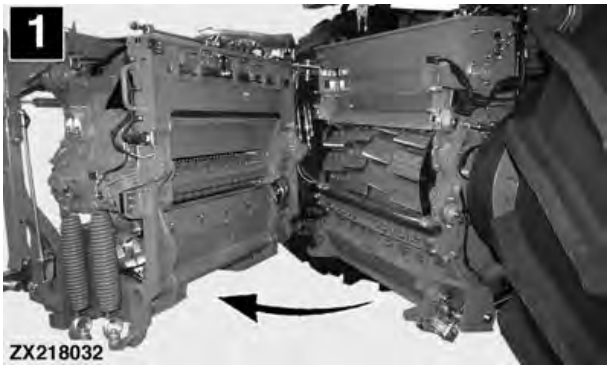
1. **Vertically:** Open feed roll housing in that manner when full access to the cutterhead knives, stationary knife, or the back of feed roll housing is required.

   IMPORTANT: To secure the feed roll housing after a vertical axis opening, a latch (A) stored on top of feed roll housing is provided.

2. **Horizontally:** Open feed roll housing in that manner to create sufficient space between top of cutterhead and rear top of feed roll housing. This position is useful for cleaning this area, checking knives and stationary knife or for daily service.

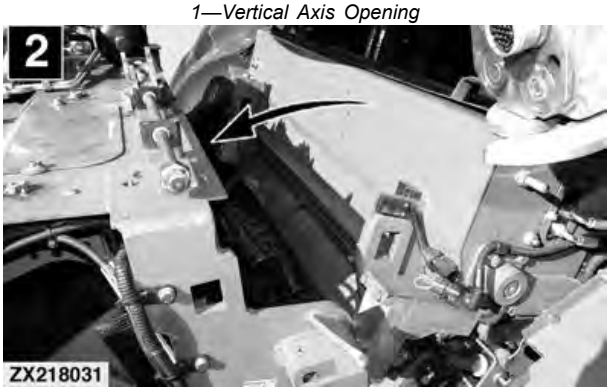
   IMPORTANT: Attach a header to the machine before opening feed roll housing in horizontal manner. Refer to Attach and Detach Header in Field Operation section.

   IMPORTANT: Open feed roll housing horizontally on flat ground only so that header can be fully lowered. The lateral tilt frame must be locked or on machine with Advanced Header Control (AHC) option, ensure that lateral tilt frame is parallel to the ground (see Lateral Tilt Frame Locking Device in Field Operation section).



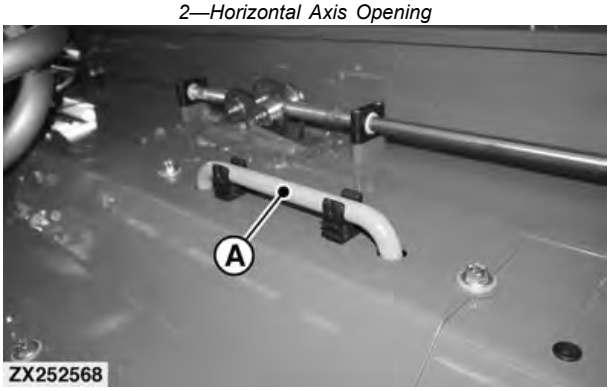
ZX218032 —UN—06OCT14

1—Vertical Axis Opening



ZX218031 —UN—06OCT14

2—Horizontal Axis Opening



ZX252568 —UN—09SEP15

1— Vertical Axis Opening
2— Horizontal Axis Opening
A—Latch

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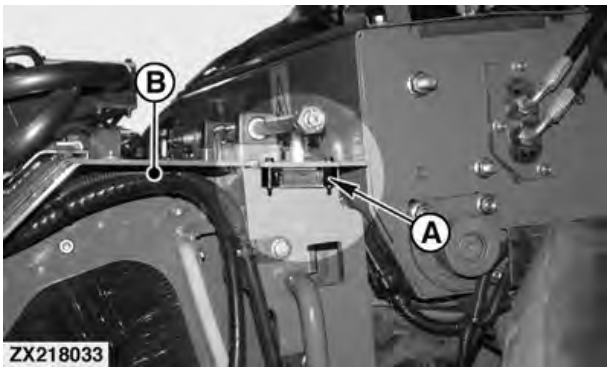
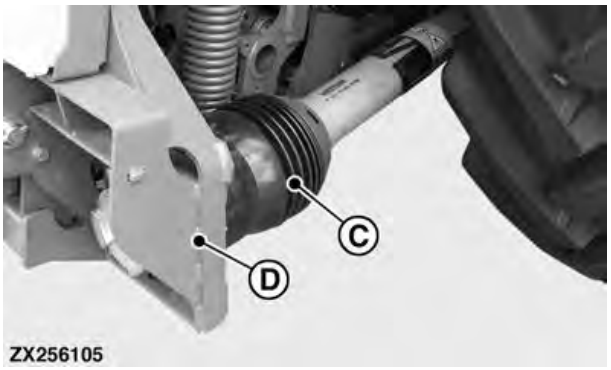
OUCC002,0004C87 -19-13JUN16-1/10



ZX218033 —UN—06OCT14



ZX256105 —UN—09SEP15

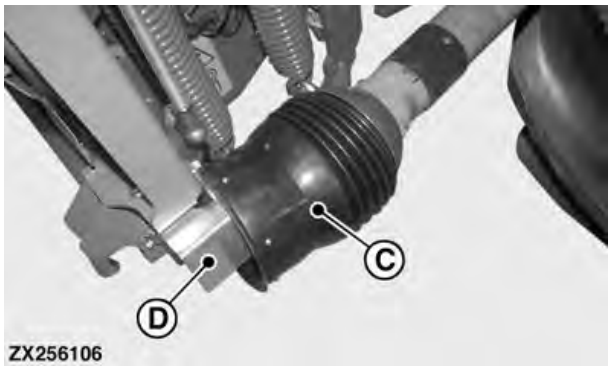
With Automatic Driveline Coupler (Option)

Open Feed Roll Housing Vertically:

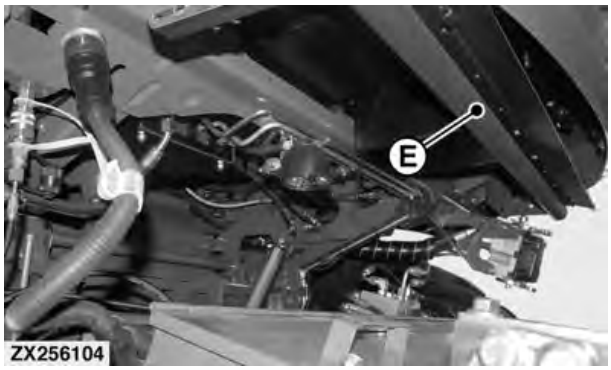
Open feed roll housing as follows:

1. Detach header.
2. Use spirit level (A) to move feed roll housing (B) into horizontal position.
3. Shut off engine.
4. Remove header driveline (C) from its front support (D).
5. If necessary, roll in pull-out curtain (E).
6. Unlock feed roll housing (B) first at lower locking device (1) then at top locking device (2), as follows:

1— Lower Locking Device
2— Upper Locking Device
A—Spirit Level
B—Feed Roll Housing
C—Header Driveline
D—Support
E—Pull-Out Curtain



ZX256106 —UN—09SEP15



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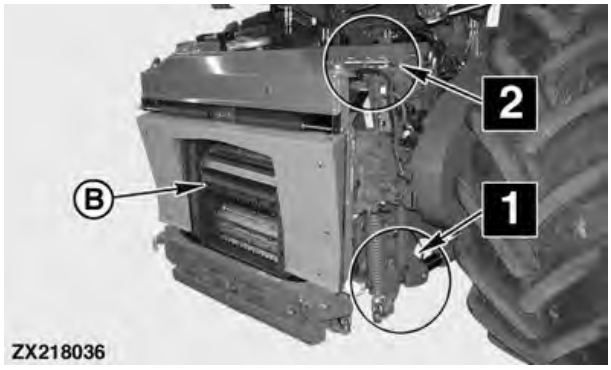

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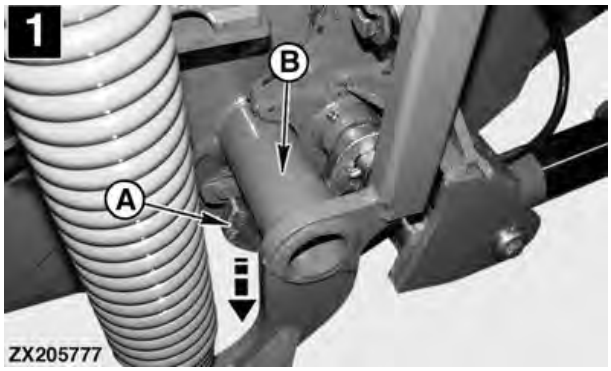
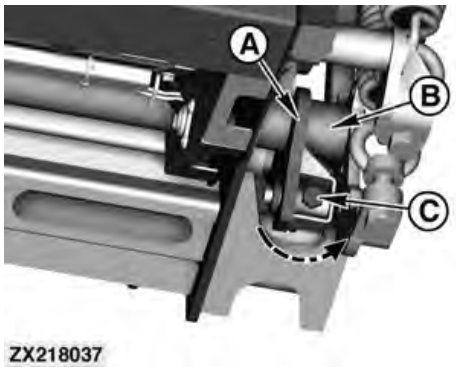


ZX205777 —UN—16OCT13



ZX218037 —UN—06OCT14

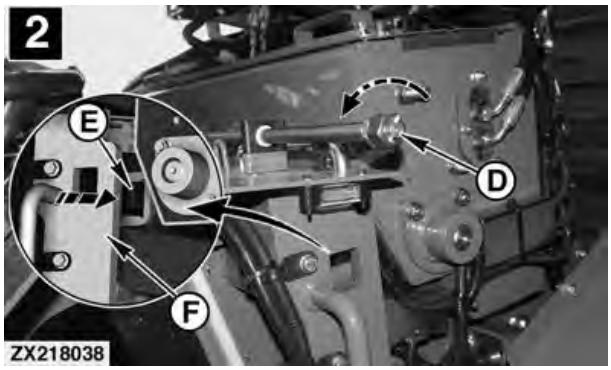
Unlock Lower Locking Device

1. Release lower locking device hook (A) from feed roll housing tube (B). Unscrew cap screw (C) until hook (A) is fully away from tube (B).
2. Release upper locking device lock (E) from feed roll housing frame (F). Unscrew nut (D) until lock (E) is fully retracted.

Open feed roll housing (G) and secure in position with latch (H), as shown.

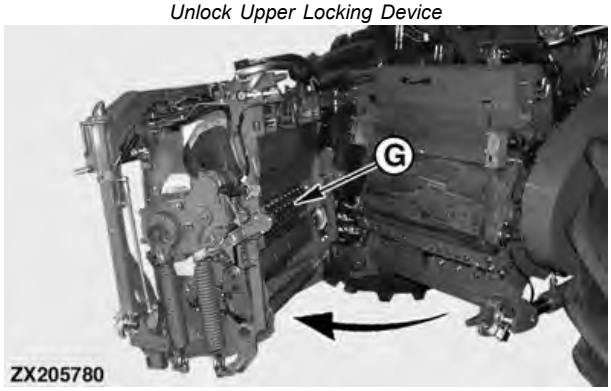
CAUTION: Avoid personal injuries. Before servicing or adjusting the machine, always secure feed roll housing with latch (H).

1— Lower Locking Device
2— Upper Locking Device
A—Hook
B—Tube
C—Cap Screw
D—Nut
E—Lock
F— Frame
G—Feed Roll Housing
H—Latch



ZX218038 —UN—06OCT14

Unlock Upper Locking Device



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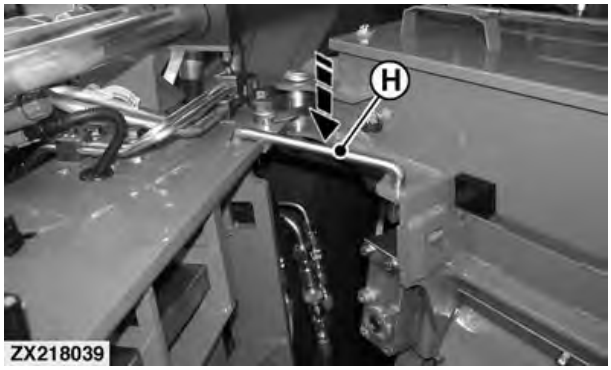

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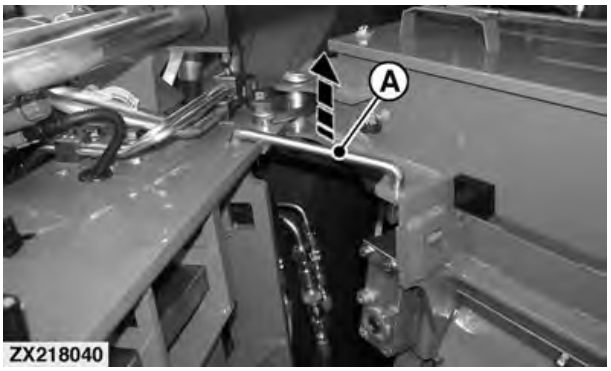

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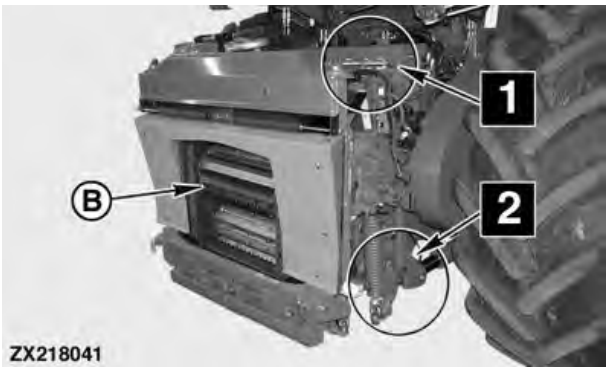


ZX218041 —UN—06OCT14

To close feed roll housing, proceed in reverse order of the opening process.

1. Remove and store latch (A).
2. Close feed roll housing (B).
3. Engage upper locking device lock (C) into feed roll housing frame (B). Screw nut (D) until lock (C) is fully extended.

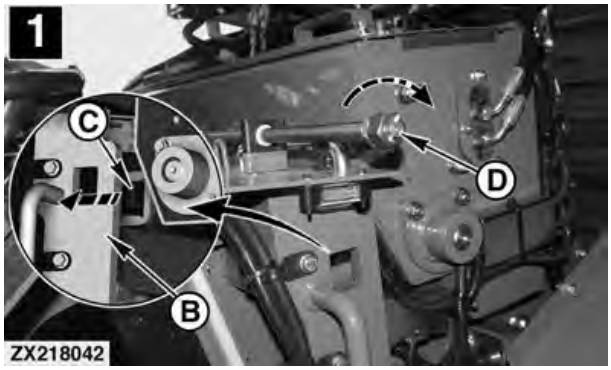
IMPORTANT: Do not overtighten nut (D).

4. Engage lower locking device hook (E) on feed roll housing tube (F). Screw cap screw (G) until hook (E) is firmly against tube.

IMPORTANT: Do not overtighten cap screw (G).

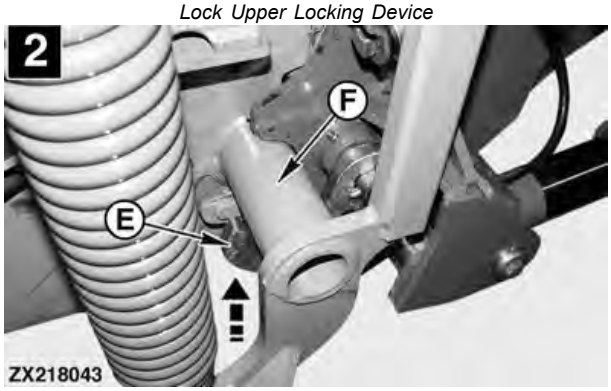
Reinstall header driveline on its front support.

1— Upper Locking Device
2— Lower Locking Device
A—Latch
B—Feed Roll Housing
C—Lock
D—Nut
E—Hook
F— Tube
G—Cap Screw



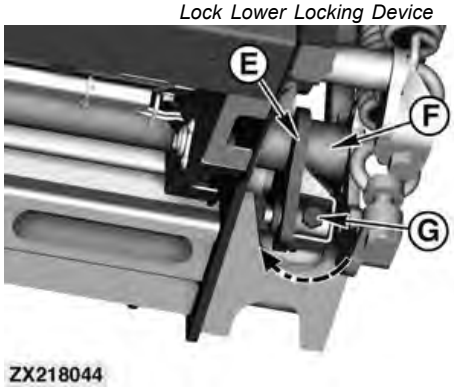
ZX218042 —UN—06OCT14

Lock Upper Locking Device



ZX218043 —UN—06OCT14

Lock Lower Locking Device



ZX218044 —UN—06OCT14

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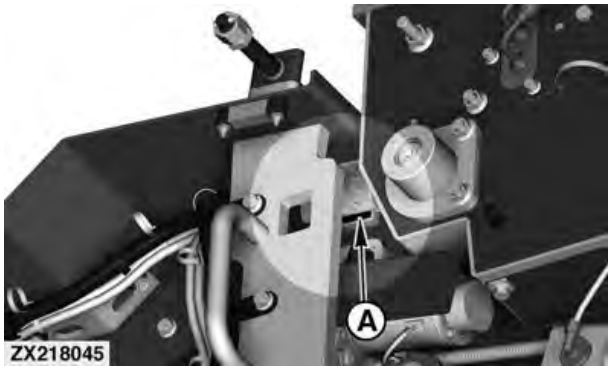
OUCC002,0004C87 -19-13JUN16-4/10

For safety reasons, it is not possible to engage main clutch and reverse cutterhead when feed roll housing is open.

NOTE: After feed roll housing has been closed again and all parts are reinstalled, the main clutch switch (B) must be OFF or turned OFF before main clutch can be engaged.

A—Safety Switch **B—Main Clutch Switch**



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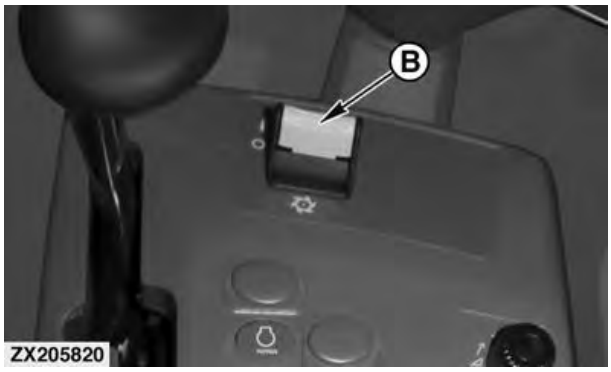

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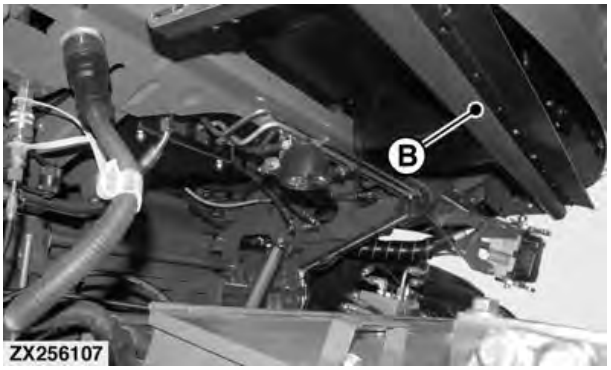
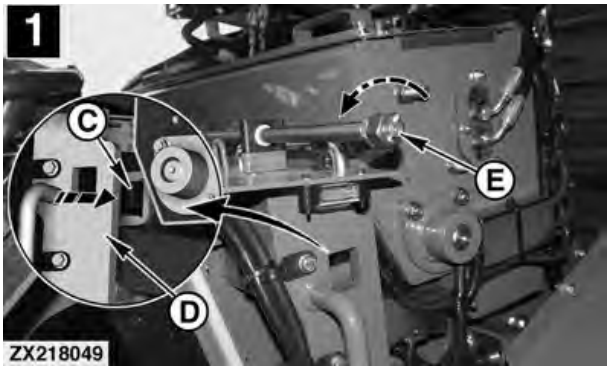
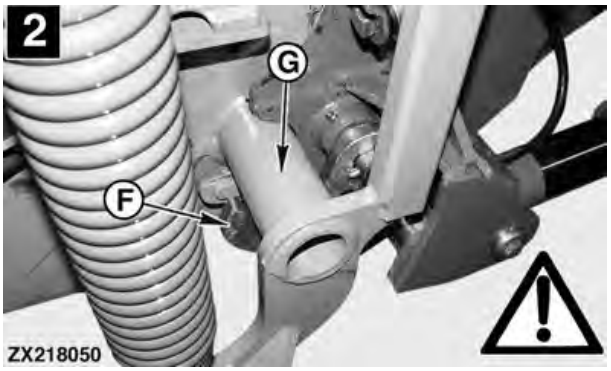
ZX218046 —UN—06OCT14



ZX256107 —UN—09SEP15



ZX218049 —UN—06OCT14



ZX218050 —UN—06OCT14

1— Upper Locking Device
2— Lower Locking Device
A—Feed Roll Housing
B—Pull-Out Curtain
C—Lock
D—Frame
E—Nut
F— Hook
G—Tube

Open Feed Roll Housing Horizontally:

Open feed roll housing as follows:

1. Attach a header to machine (see **Attach and Detach Header** in Field Operation section).
2. Lower feed roll housing (A) so that header is touching the ground.
   a. If a pickup is attached, lower the feed roll housing until gauge wheels are touching the ground. Do not lower the pickup jackstand.
   b. If a rotary harvesting unit is attached, fold out outer rows then lower the feed roll housing until the drum skids are touching the ground. Do not lower the rotary harvesting unit jackstand.

IMPORTANT: Do not perform feed roll housing horizontal opening with a rotary harvesting unit on concrete or any other hard surface.

To avoid unexpected movement of the feed roll housing when rotary harvesting unit is touching the ground, do not select header height control floating mode (see **Automatic Header Control** in Operating the Controls and Displays section).

3. Shut off engine.

Continued on next page

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4. If necessary, roll in pull-out curtain (B).
5. Release upper locking device lock (C) from feed roll housing frame (D). Unscrew nut (E) until lock (C) is fully retracted.

IMPORTANT: Keep the lower locking device engaged. Do not release lower locking device.

Make sure that hook (F) is in contact with frame tube (G), as shown.

If necessary, while releasing upper locking device lock (C), slightly move the feed roll housing up or down to relief pressure on lock (C).

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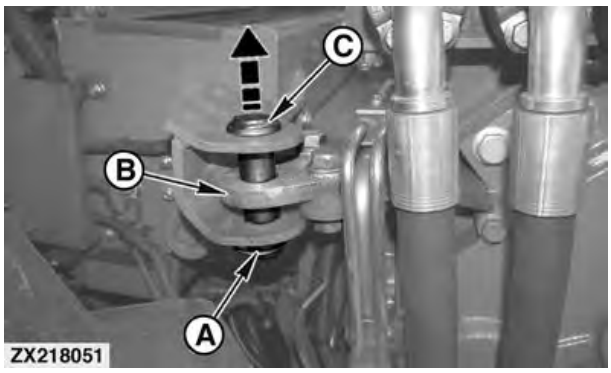
6. Remove quick-lock pin (A).

⚠ CAUTION: Before opening the feed roll housing, make sure that no one stays in the vicinity especially in front of the feed roll housing.

IMPORTANT: Do not loosen attaching screws of plate (B).

7. Remove pin (C).
8. Start engine.
9. Slowly raise the cutterhead until required space between top of cutterhead and rear top of feed roll housing is achieved.
10. Shut off engine.

A—Quick-Lock Pin
B—Plate
C—Pin



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ZX218052 —UN—31OCT14

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OUCC002,0004C87 -19-13JUN16-8/10

To close feed roll housing, proceed in reverse order of the opening process.

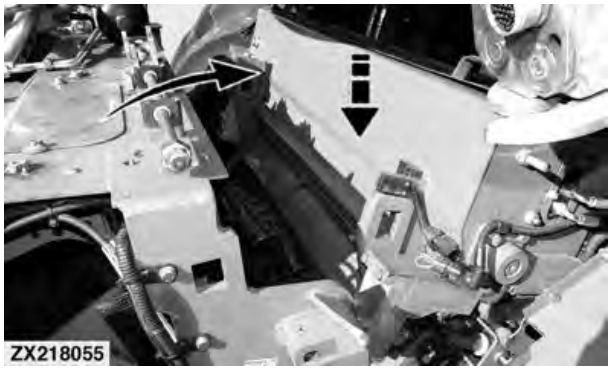
CAUTION: Before closing the feed roll housing, make sure that no one stays in the vicinity, between the moving components, or in front of the feed roll housing.

1. Start engine.
2. Slowly lower the cutterhead until pin (A) can be inserted into plate (B).
3. Shut off engine.
4. Engage upper locking device lock (D) into feed roll housing frame (E). Screw nut (F) until lock (D) is fully extended.

IMPORTANT: Do not overtighten nut (F).

5. Secure plate pin (A) with quick-lock pin (C).
6. If necessary, detach header from machine (see **Attach and Detach Header** in Field Operation section).

A—Pin
B—Plate
C—Quick-Lock Pin
D—Lock
E—Frame
F—Nut



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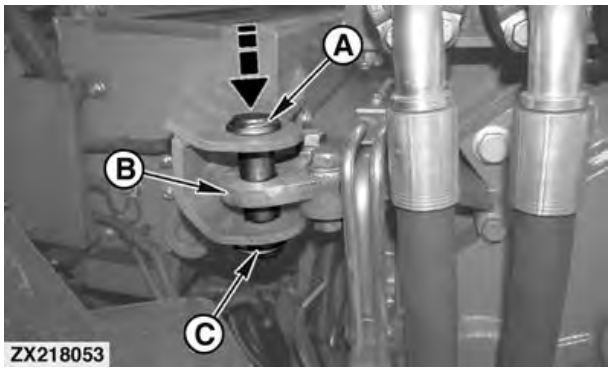

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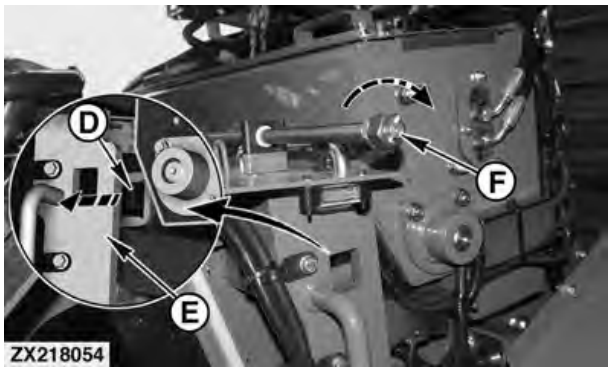

ZX218054 —UN—06OCT14

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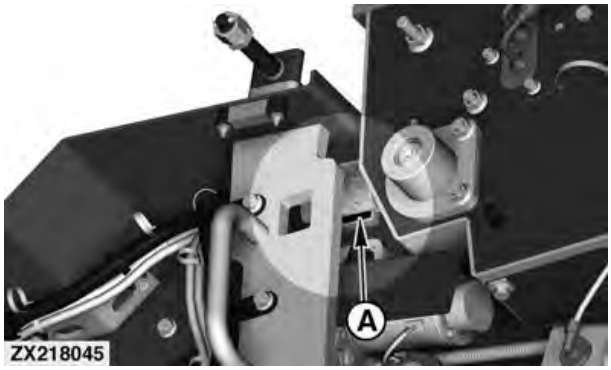
OUCC002,0004C87 -19-13JUN16-9/10

For safety reasons, it is not possible to engage main clutch and reverse cutterhead when feed roll housing is open.

NOTE: After feed roll housing has been closed again and all parts are reinstalled, the main clutch switch (B) must be OFF or turned OFF before main clutch can be engaged.

A—Safety Switch **B—Main Clutch Switch**



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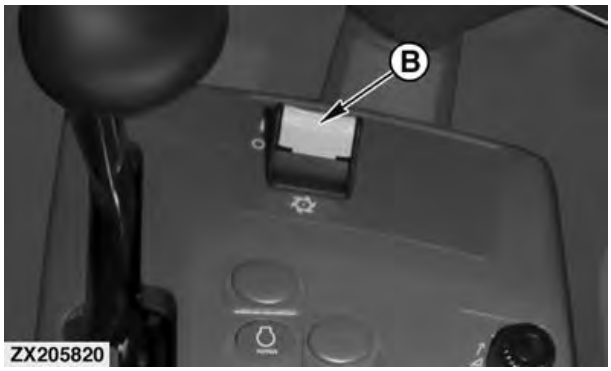
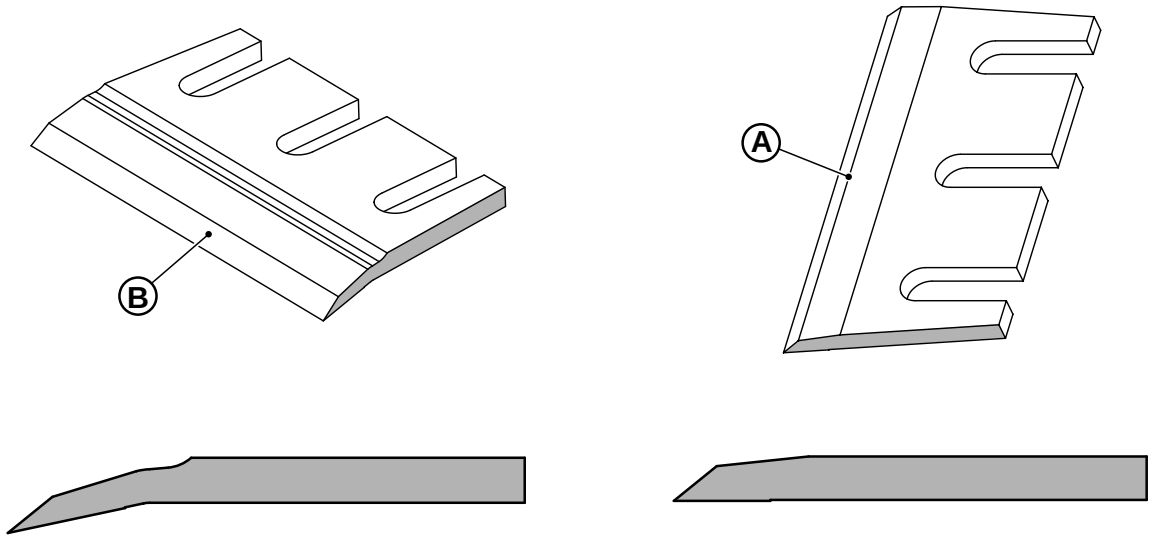


ZX205820 —UN—16OCT13

OUCC002,0004C87 -19-13JUN16-10/10

Cutterhead Knives—General



ZX205772 —UN—17OCT13

ZX205772

A—Straight Knife B—Curved Knife

IMPORTANT: Knife width for 8100—8500 Forage Harvesters is about 180 mm (7.09 in).

Knife width for 8600—8800 Forage Harvesters is about 220 mm (8.66 in).

IMPORTANT: To avoid cutterhead imbalance, NEVER install different types or sizes of knives (straight or curved) on the cutterhead.

Depending on the crop and the machine model different types of cutterhead knives are available:

- Straight knives (A) for grass and whole plant silage.
- Curved knives (B) for corn.

Continued on next page

OUCC002,00046F4 -19-07SEP15-1/3

Number and Arrangement of Knives:

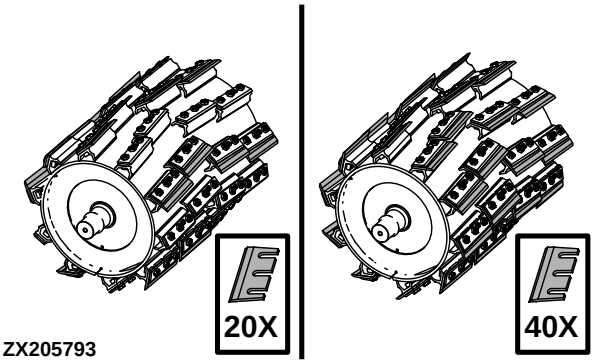
IMPORTANT: To avoid damage by cutterhead imbalance, make sure that number and arrangement of knives are correct.

A half set of knives can be used on each type of cutterhead. Make sure knives are arranged as shown on illustration.

IMPORTANT: Remove half a set of knives ONLY if kernel processor is not used.

IMPORTANT: To prevent damage to the knife beds (of removed knives), chamfered side of clamp bars must be oriented toward the knife cutting edge. Tighten clamp bar attaching screws to 50 N·m (37 lb·ft).

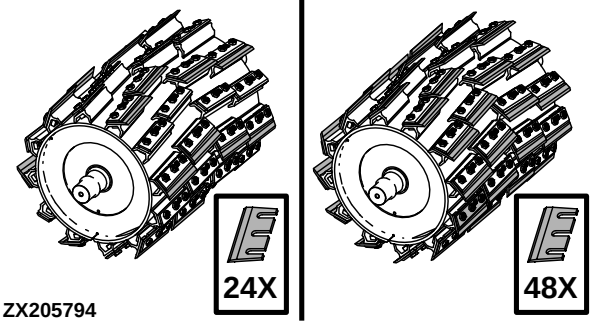
If removing a half set of knives, make sure to enter the correct number of knives as described under Cutterhead Assembly Setup Page in Operating the Controls and Displays section.



ZX205793

ZX205793 —UN—17OCT13

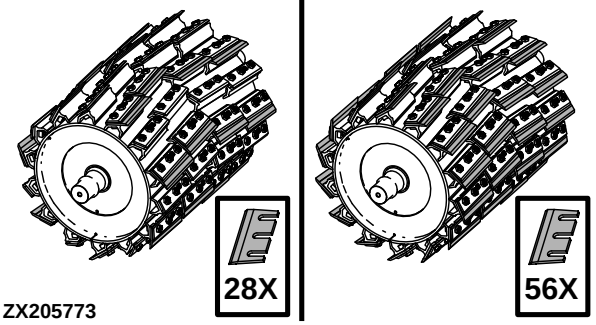
Number of Knives—20/40 Knives



ZX205794

ZX205794 —UN—17OCT13

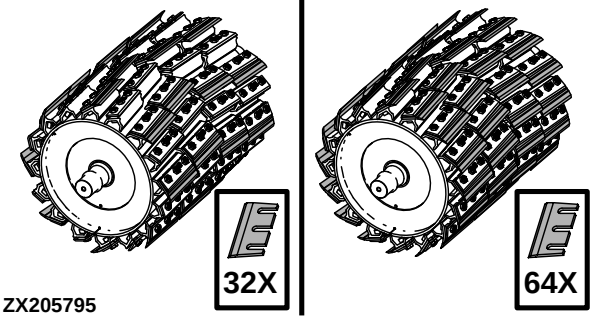
Number of Knives—24/48 Knives



ZX205773

ZX205773 —UN—17OCT13

Number of Knives—28/56 Knives



ZX205795

ZX205795 —UN—17OCT13

Number of Knives—32/64 Knives

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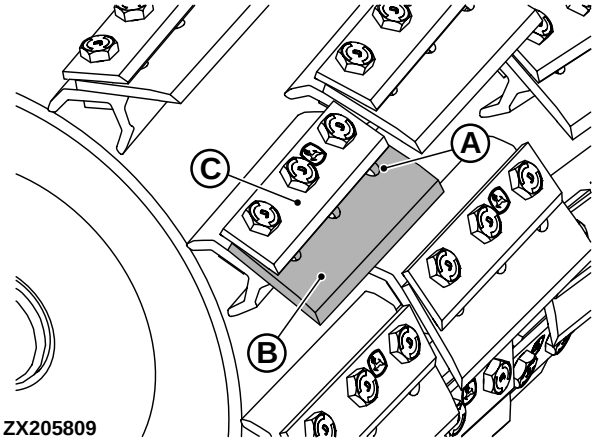
IMPORTANT: Always check that the slots (A) in the cutterhead knives (B) are not visible in front of clamp bar (C). If this is the case, replace the knives (B). See Replace Cutterhead Knives in this section.

If worn knives must be reinstalled (that is grass-to-corn cutterhead conversion), check that length of coating (D) is above 3 mm (0.12 in). Do not reinstall knives if coating (D) is less than 3 mm (0.12 in). If this is the case, replace the knives (B). See Replace Cutterhead Knives in this section.

A—Slot
B—Knife
C—Clamp Bar
D—Coating



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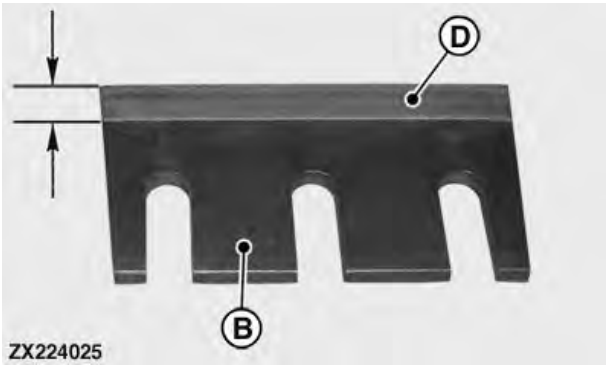
ZX205809 —UN—17OCT13



ZX224025

ZX224025 —UN—13NOV14

OUCC002,00046F4 -19-07SEP15-3/3

Replace Cutterhead Knives

Knives (A) can be replaced individually or as a complete set. Refer to the relevant procedure.

CAUTION: Before servicing or adjusting the machine, always disengage all drives, shut off engine and wait until all moving parts have stopped.

Prevent personal injury by wearing safety gloves to handle knives.

NOTE: Use the same procedure for replacing and adjusting cutterhead knives for all types of knives.

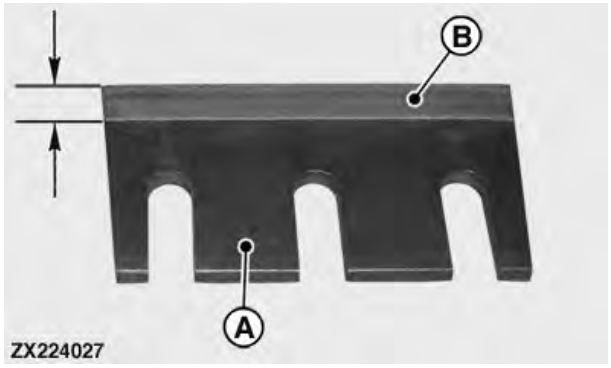
NOTE: Check stationary knife for wear (a new cutting edge is required for cutterhead knife alignment). If necessary, turn end over end or replace (see Stationary Knife in this section).

If worn knives must be reinstalled (for example, grass-to-corn cutterhead knife conversion), check that length of coating (B) is above 3 mm (0.12 in).

IMPORTANT: Do not reinstall knives with coating (B) less than 3 mm (0.12 in).

Open feed roll housing vertically (see **Open/Close Feed Roll Housing** in this section).

ZX205796 —UN—16OCT13



ZX224027 —UN—13NOV14

Check Knife Coating

A—Knife **B—Coating**

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OUCC002,00046F5 -19-07SEP15-1/10

Replace Individual Knives

To replace individual knives, proceed as follows:

1. Loosen the three attaching screws (B) of knife (A).
2. Pull out knife (A), then remove attaching screws (B), clamp bar (C), and threaded bar (D).

IMPORTANT: Thoroughly clean knife bed area of knife retainer and threaded bar (D).

Before installing a new knife, check knife bed area of knife retainer using a straight edge (no deformation in this area is allowed). The knife must make good contact over the entire knife bed area.

3. Use stationary knife (E) to align knife, that is, slide knife forward until a clearance of 0.2—0.4 mm (0.008—0.016 in) is obtained.
4. Tighten attaching screws (B) finger tight and mark knife (A).

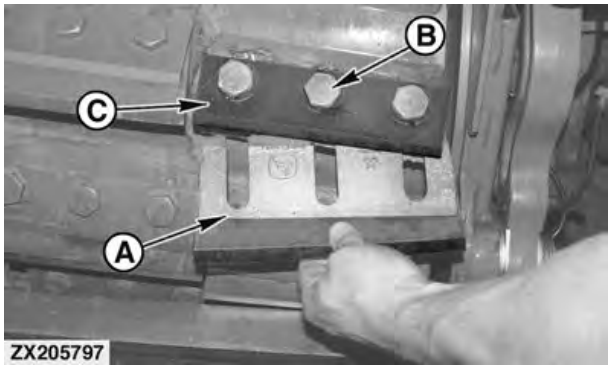
IMPORTANT: Rotate cutterhead by hand to check clearance.

5. Tighten screws (B) to 280 N·m (206 lb·ft).

IMPORTANT: To avoid major damage to the cutterhead assembly use only genuine John Deere screws (B). Do not use other screws (B) than those designed for the 8000 Series forage harvester.

NOTE: If torque is too high, frequent knife breakage can occur.

A—Knife
B—Screw
C—Clamp Bar
D—Threaded Bar
E—Stationary Knife



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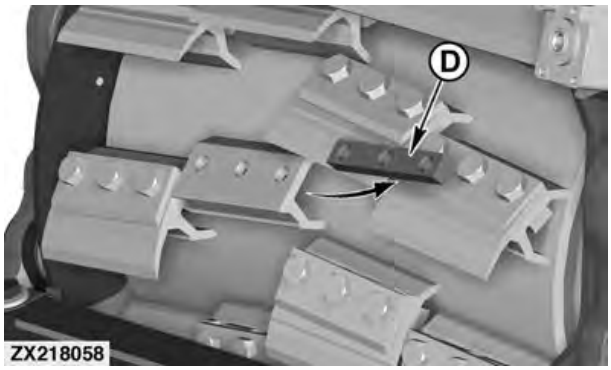

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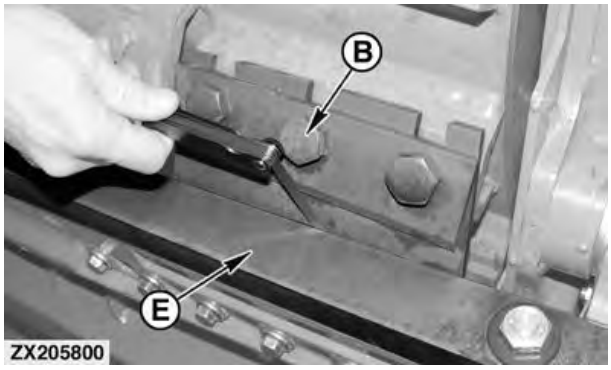
ZX205799 —UN—16OCT13



ZX205800 —UN—16OCT13

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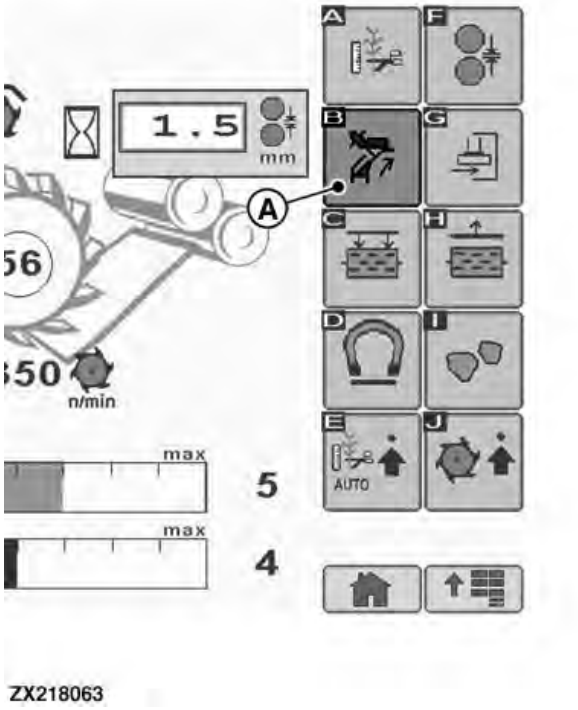
6. Close feed roll housing and prepare machine for knife sharpening.

   a. Access the Cutterhead Assembly Setup Page and press knife sharpening wizard button (A) to initiate a sharpening knife cycle (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section).

NOTE: After sharpening cycle is finished, a stationary knife adjustment cycle is automatically initiated.

   b. If necessary, adjust spiral/recutter floor (see **Adjust Spiral/Recutter Floor** in Field Operation section).

A—Knife Sharpening Wizard Button



ZX218063 —UN—13NOV14

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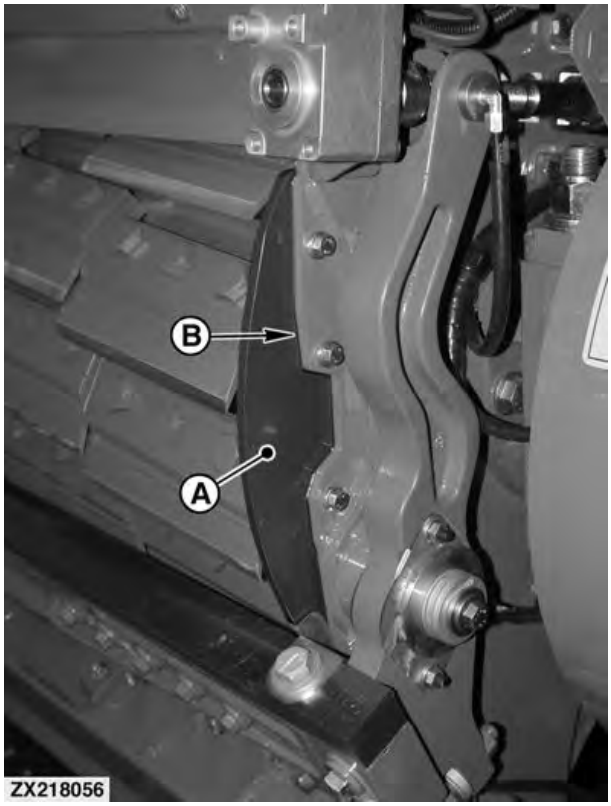
OUCC002,00046F5 -19-07SEP15-3/10

Replace Complete Set of Knives

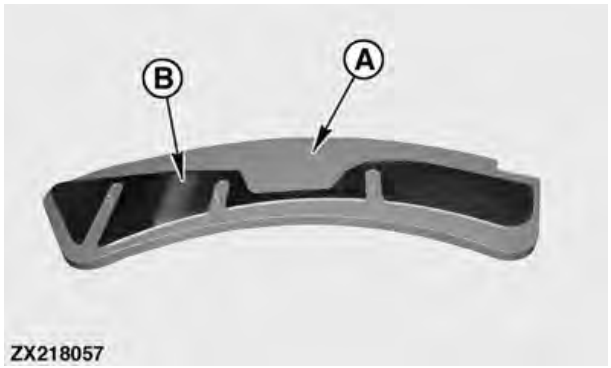
1. Remove deflector (A) and shims (B) on both sides of cutterhead.

IMPORTANT: Note amount and location of shims (B) when removing deflector (A).

A—Deflector **B—Shim**



ZX218056 —UN—17JUN16



ZX218057 —UN—06OCT14

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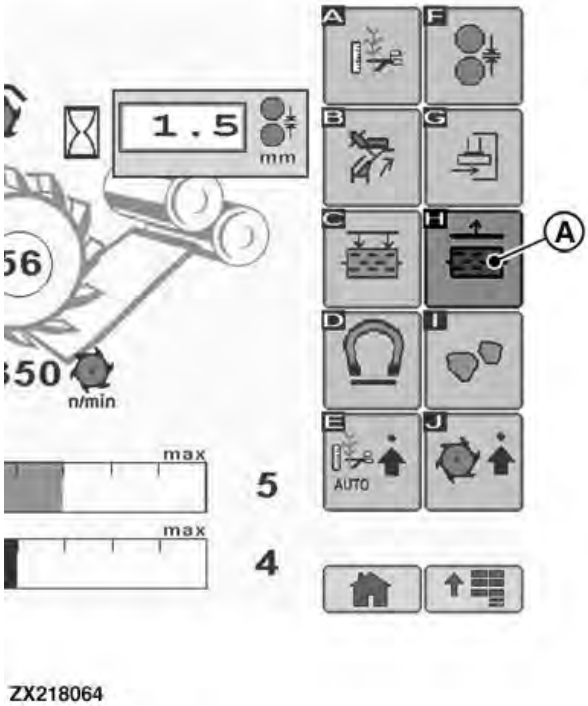
OUCC002,00046F5 -19-07SEP15-4/10

2. Access the **Cutterhead Assembly Setup Page** then press and hold stationary knife away button (A) to put stationary knife away from rotor.
3. Disconnect and remove both stationary knife electrical motors (B) from adjusting rod (C).

A—Stationary Knife Away Button
B—Electrical Motor
C—Adjusting Rod



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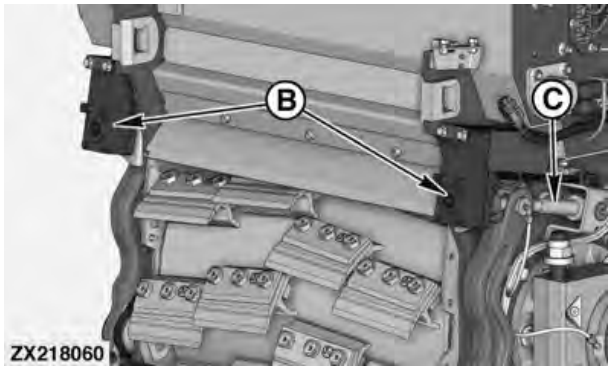

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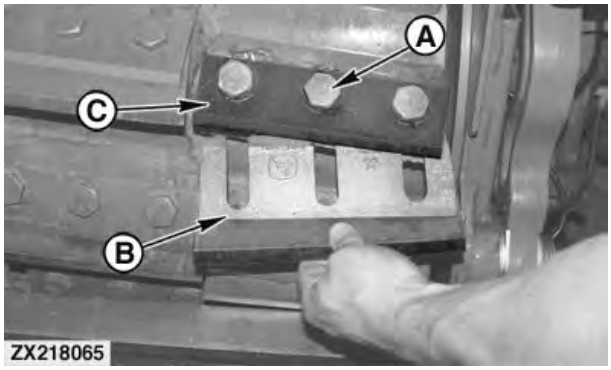
OUCC002,00046F5 -19-07SEP15-5/10

4. Loosen the three attaching screws (A) of all knives.
5. Remove all cutterhead knives. Pull knives (B) out, then remove attaching screws (A), clamp bars (C), and threaded bars (D).

IMPORTANT: Thoroughly clean knife bed area of knife retainer and threaded bar (D).

Before installing new knives, check knife bed area of knife retainers using a straight edge (no deformation in this area is allowed). The knives must make good contact over the entire knife bed area.

A—Screw
B—Knife
C—Clamp Bar
D—Threaded Bar



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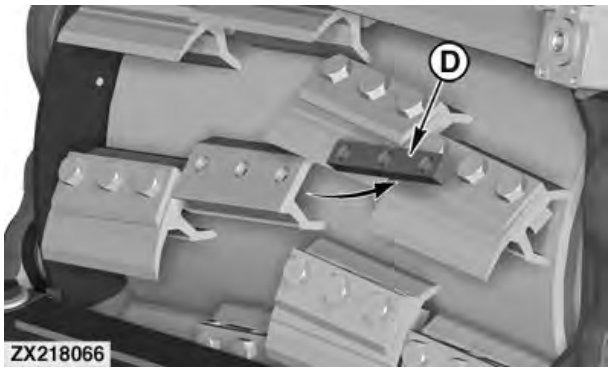

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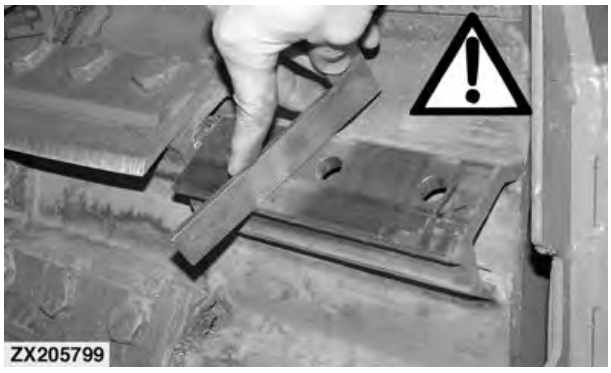

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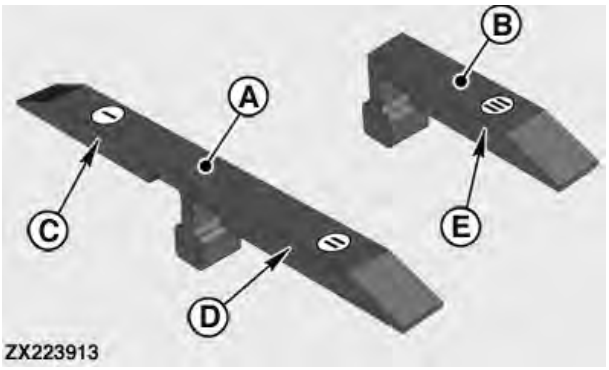

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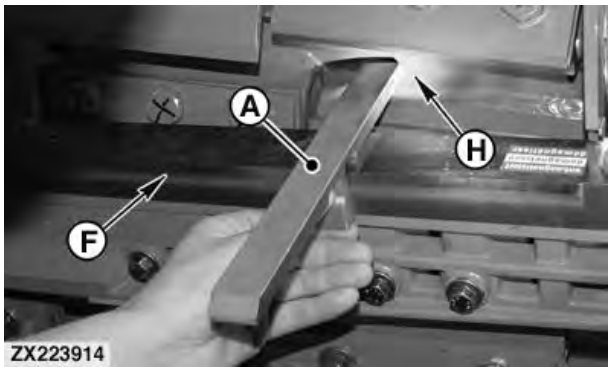


ZX223914 —UN—13NOV14

6. **Set Stationary Knife Position with Special Tool**

   To quickly align knife cutting edge with the stationary knife, special tools (A) and (B) are available. Use special tool (A) or (B) as follows:

   a. Depending on the knife coating length (see chart), use the relevant section (C), (D) or (E) of special tool (A) or (B) to set stationary knife (F) position.

Tool usage	Section marked (I)	Section marked (II)	Section marked (III)
Grass	New knives	Knives with coating of 10—16 mm (0.39—0.63 in)	Knives with coating of 3—9 mm (0.12—0.35 in)
Corn	New knives	Knives with coating of 12—20 mm (0.47—0.78 in)	Knives with coating of 3—11 mm (0.12—0.43 in)

   b. Alternately turn adjusting rods (G) **counterclockwise** until tip of tool (A) or (B) is touching rotor body (H) on each side of the rotor, as shown.

IMPORTANT: Inner face of tool (A) or (B) must stay in contact with respective face of stationary knife (F), as shown.

Make sure that tip of tool (A) or (B) is not touching any welding of rotor body.

   c. Install knife (I) and align cutting edge with stationary knife (F).

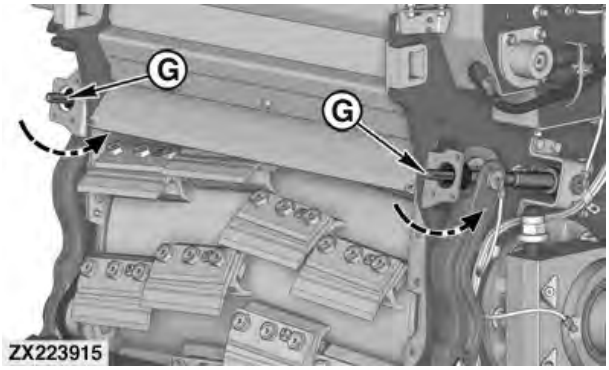
   d. Tighten the three screws (J) finger tight.

   e. Repeat procedure for all knives.

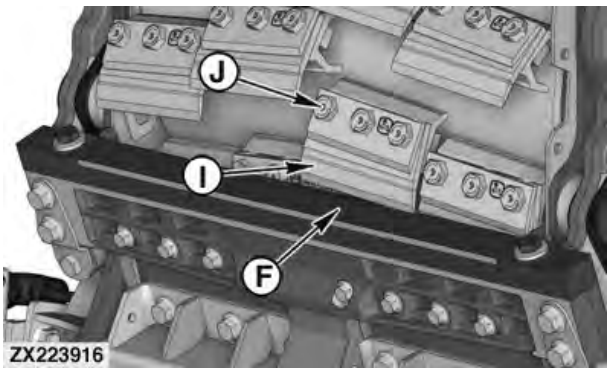
IMPORTANT: To ensure that no unusual resistance occurs, turn cutterhead manually.

   f. Recheck adjustment and tighten screws (J) to 280 N·m (206 lb·ft).

IMPORTANT: To avoid major damage to the cutterhead assembly use only original John Deere screws. Do not use other screws (J) than those designed for the 8000 Series forage harvester.



ZX223915 —UN—13NOV14



ZX223916 —UN—13NOV14

A—Special Tool
B—Special Tool
C—Section for New Knife—Marked I
D—Section for Worn Knife—Marked II
E—Section for Worn Knife—Marked III
F—Stationary Knife
G—Adjusting Rod
H—Rotor Body
I— Knife
J— Screw

NOTE: If torque is too high, frequent knife breakage can occur.

NOTE: Mark knives after tightening screws to make sure that you do not forget to tighten any screws.

Continued on next page

7. **Set Stationary Knife Position without Special Tool**

   To align knife cutting edge with the stationary knife, proceed as follows:

   a. Depending on the knife coating length (see chart), alternately turn adjusting rods (A) **counterclockwise** until distance (X) between cutting edge of stationary knife (B) and rotor body (C) on each side of the rotor, is:

Distance (X)	81.5 mm (3.208 in)	76.5 mm (3.011 in)	72.0 mm (2.834 in)
Grass	New knives	Knives with coating of 10—16 mm (0.39—0.63 in)	Knives with coating of 3—9 mm (0.12—0.35 in)
Corn	New knives	Knives with coating of 12—20 mm (0.47—0.78 in)	Knives with coating of 3—11 mm (0.12—0.43 in)

IMPORTANT: Do not measure distance (X) on a cutterhead body welding.

   b. Install knife (D) and align cutting edge with stationary knife (B).

   c. Tighten the three screws (E) finger tight.

   d. Repeat procedure for all knives.

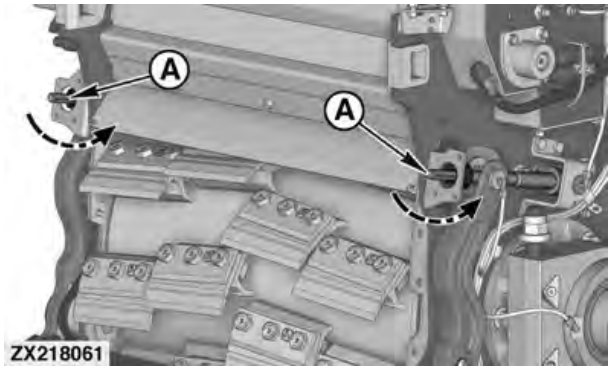
IMPORTANT: To ensure that no unusual resistance occurs, turn cutterhead manually.

   e. Recheck adjustment and tighten screws (E) to 280 N·m (206 lb·ft).

IMPORTANT: To avoid major damage to the cutterhead assembly use only original John Deere screws. Do not use other screws (E) than those designed for the 8000 Series forage harvester.

NOTE: If torque is too high, frequent knife breakage can occur.

NOTE: Mark knives after tightening screws to make sure that you do not forget to tighten any screws.



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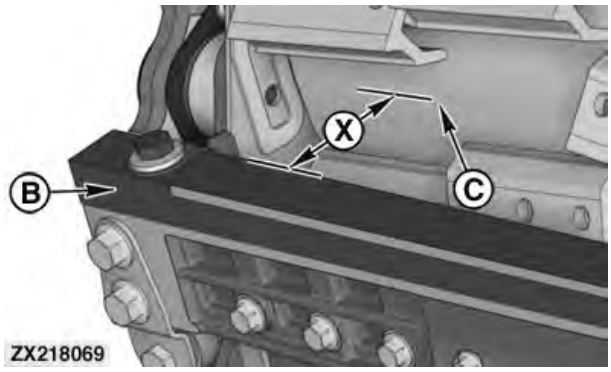
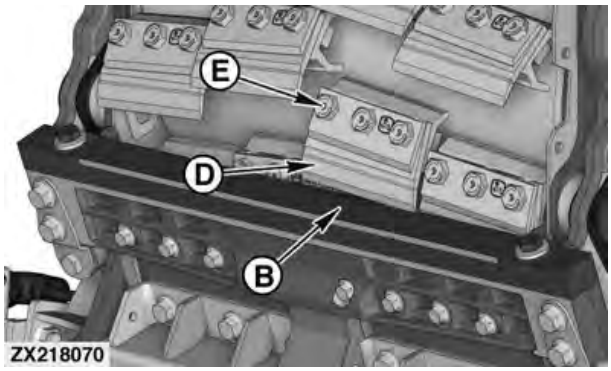


ZX218069 —UN—17DEC14



ZX218070 —UN—06OCT14

A—Adjusting Rod
B—Stationary Knife
C—Rotor Body
D—Knife
E—Screw
X—Distance

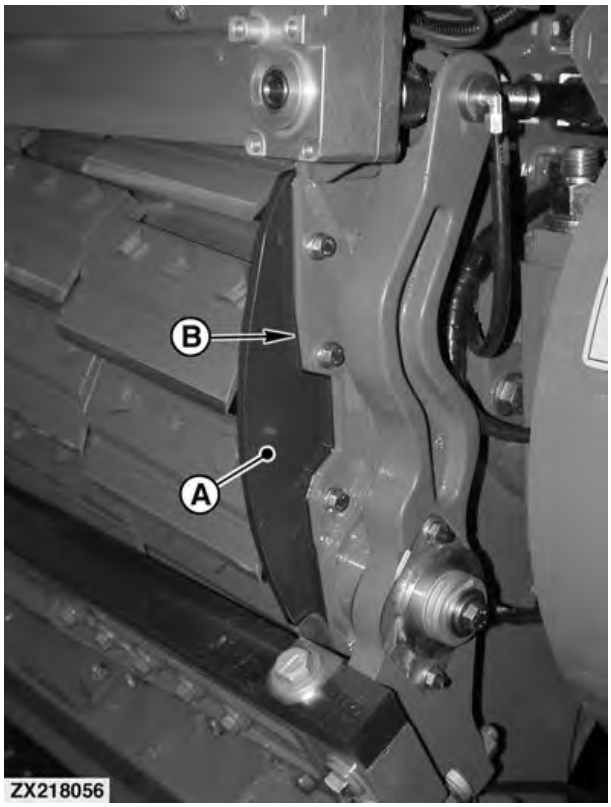
Continued on next page

8. Install and connect both stationary knife electrical motors to their respective adjusting rod.
9. Install deflector (A) and shims (B) on both sides of cutterhead.

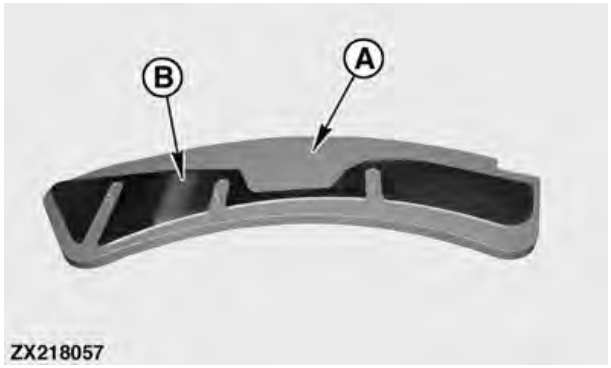
IMPORTANT: Adjust position of deflector (A) as close as possible to the tip of the side knives. Add or remove shims (B) accordingly.

A—Deflector **B—Shim**

ZX205796 —UN—16OCT13



ZX218056 —UN—17JUN16



ZX218057 —UN—06OCT14

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OUCC002,00046F5 -19-07SEP15-9/10

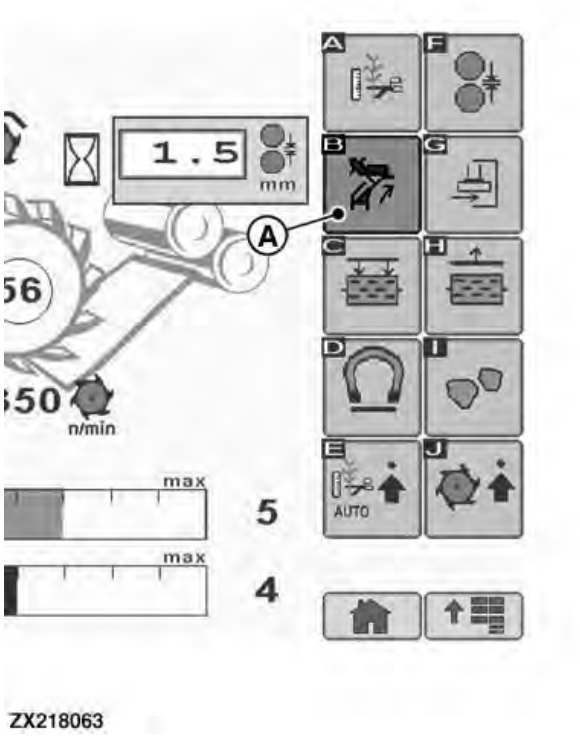
10. Close feed roll housing and prepare machine for knife sharpening.

    a. Access the Cutterhead Assembly Setup Page and press knife sharpening wizard button (A) to initiate a sharpening knife cycle (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section).

NOTE: After sharpening cycle is finished, a stationary knife adjustment cycle is automatically initiated.

    b. If necessary, adjust spiral/recutter floor (see **Adjust Spiral/Recutter Floor** in Field Operation section).

A—Knife Sharpening Wizard Button



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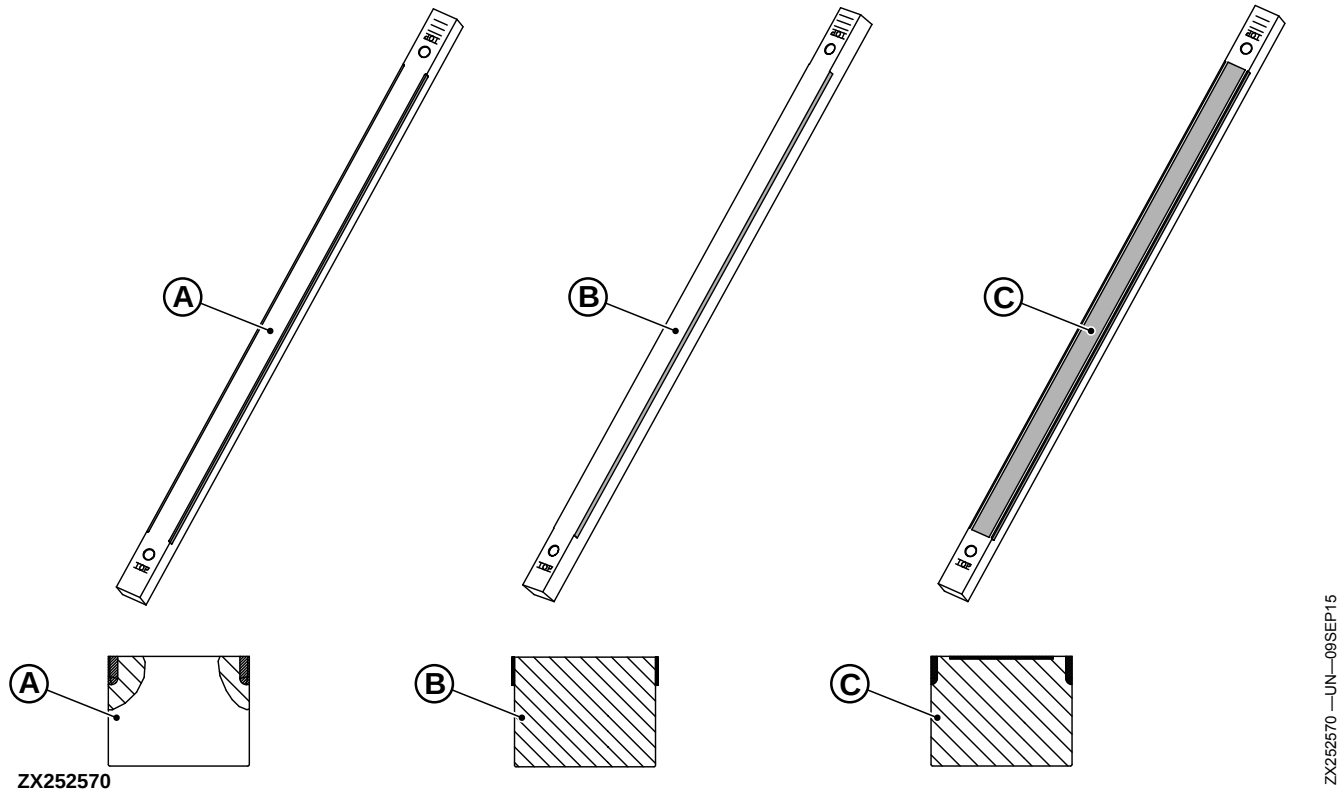
OUCC002,00046F5 -19-07SEP15-10/10

Stationary Knife—General



A—Stationary Knife—Grass **B—Stationary Knife—Corn** **C—Stationary Knife—Universal**

Different types of stationary knives are available:

- Stationary knife for **Grass** (A).
- Stationary knife for **Corn** (B).
- Heavy-duty (Duraline™ Plus) stationary knife for **universal** use (C).

IMPORTANT: Readjust stationary knife after each knife sharpening process. Adjust stationary knife twice a day, even if cutterhead knives have not been sharpened. This will increase knife service life and reduce power requirements.

The stationary knife has two cutting edges. They can be identified by the word “TOP” stamped on the knife.

IMPORTANT: The stationary knife must be installed with the cutting edges in the up position.

When one cutting edge is worn, the stationary knife can be removed and turned end for end (see **Replace Stationary Knife** in this section).

IMPORTANT: Never turn the stationary knife over.

Check stationary knife adjustment and wear as follows.

Continued on next page

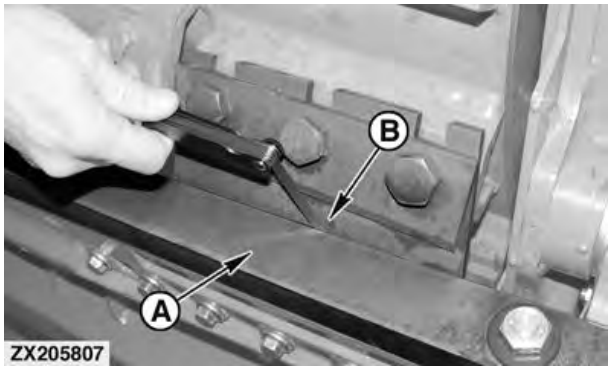
OUCC002,00041C0 -19-05SEP15-1/3

Check Stationary Knife Adjustment:

⚠ CAUTION: Before carrying out this check, disengage all drives, shut off engine and wait until all moving parts have stopped.

To increase service life and reduce power requirements, it is important that a clearance of 0.2—0.4 mm (0.008—0.016 in.) is maintained between stationary knife and cutterhead knives.

1. Open feed roll housing (see **Open/Close Feed Roll Housing** in this section).
2. Using a feeler gauge, check clearance between stationary knife (A) and cutterhead knives (B). Adjust clearance if it exceeds 0.4 mm (0.016 in.) (see **Replace Stationary Knife** in this section).



ZX205807 —UN—16OCT13

A—Stationary Knife **B—Cutterhead Knife**

OUCC002,00041C0 -19-05SEP15-2/3

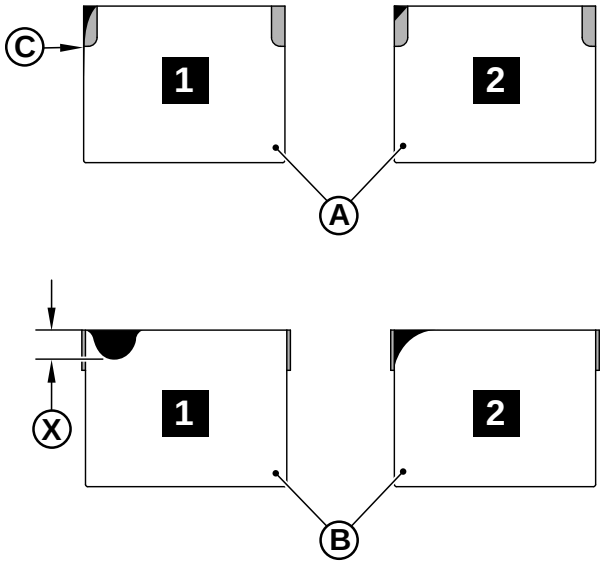
Check Stationary Knife Wear:

⚠ CAUTION: Before carrying out this check, disengage all power, shut off engine and wait until all moving parts have stopped rotating.

- Figures (1) show the wear pattern of a stationary knife with tungsten carbide edge (B) and hard-faced edge (A) on a well maintained machine.
  Turn stationary knife (B) end for end when 10 mm (0.38 in.) (X) is worn off edge.
  Turn stationary knife (A) end for end when wear reaches lower edge (C) of hard-faced area.
- Figures (2) show abnormal wear or rounding of a stationary knife with tungsten carbide edge (B) and hard-faced edge (A) that can occur due to excessive cutterhead knife-to-stationary knife clearance.

  NOTE: Insufficient clearance between cutterhead knives and stationary knife causes chamfering of stationary knife cutting edge.

  Adjust stationary knife accordingly (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section).



ZX205808 —UN—27OCT14

1— Normal Wear Pattern **B—Tungsten Carbide Edge**
2— Abnormal Wear Pattern **C—Lower Edge**
A—Hard Faced Edge **X—10 mm (0.38 in.)**

ZX205808

OUCC002,00041C0 -19-05SEP15-3/3

Replace Stationary Knife

CAUTION: Before carrying out this service, disengage all drives, shut off engine and wait until all moving parts have stopped rotating.

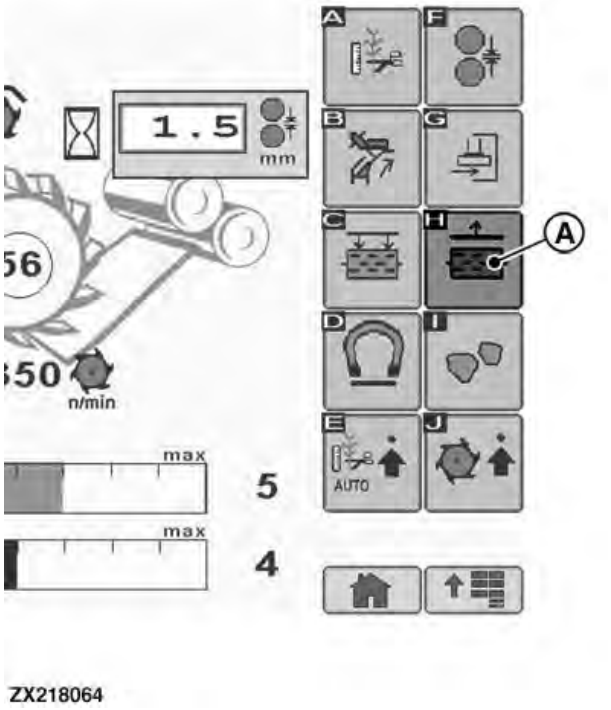
Check stationary knife for wear. If necessary, turn end over end or replace (see **Stationary Knife—General** in this section).

Prepare the Machine

1. Access the Cutterhead Assembly Setup Page then press and hold stationary knife away button (A) to put stationary knife away from rotor.
2. Open feed roll housing (see **Open/Close Feed Roll Housing** in this section).

A—Stationary Knife Away Button

ZX205796 —UN—16OCT13



ZX218064 —UN—13NOV14

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OUCC002,00046F6 -19-07SEP15-1/6

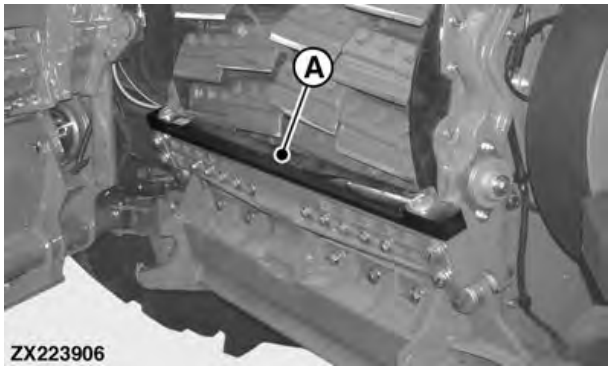
Replace stationary knife (A) as follows:

Remove Stationary Knife

1. Remove shield (B).
2. Remove lower attaching screw (C) with washers (D) and (E).

IMPORTANT: Pay attention to the location of washers (D) and (E).

A—Stationary Knife
B—Shield
C—Lower Attaching Screw
D—Washer—Thick
E—Washer—Slim



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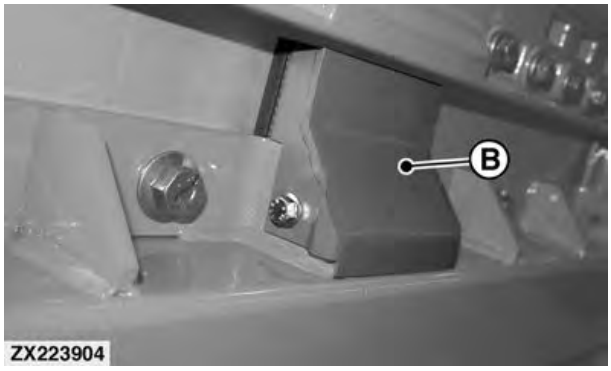

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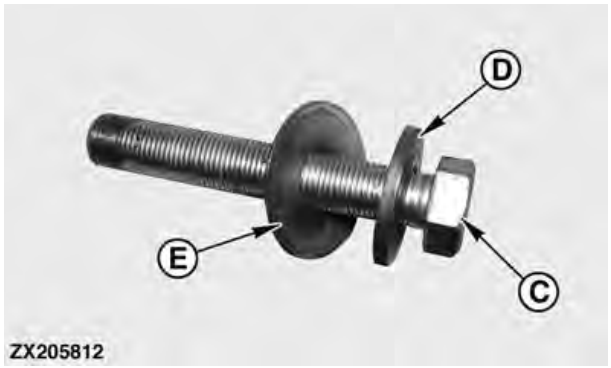

ZX205812 —UN—27OCT14

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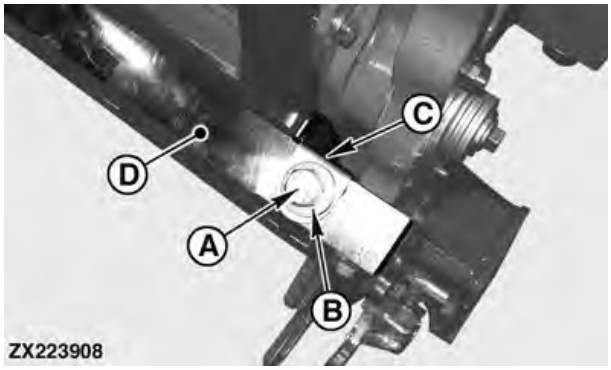
3. On both sides, remove the upper attaching screw (A), washer (B) and strap (C).
4. Remove stationary knife (D).

A—Upper Attaching Screw (2 used)
B—Washer
C—Strap
D—Stationary Knife



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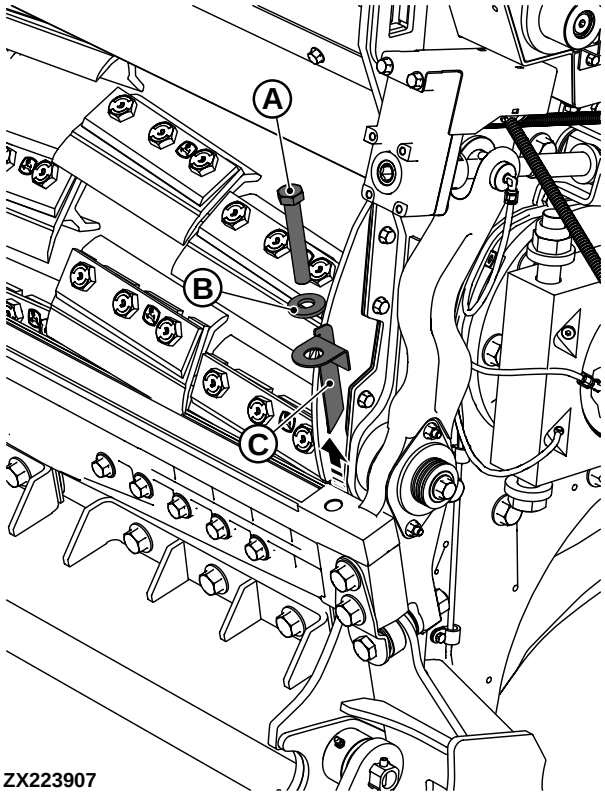

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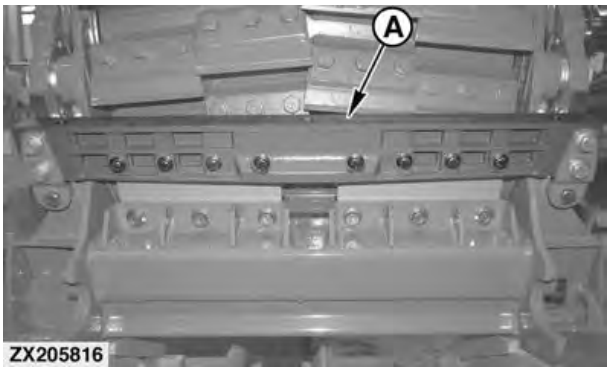
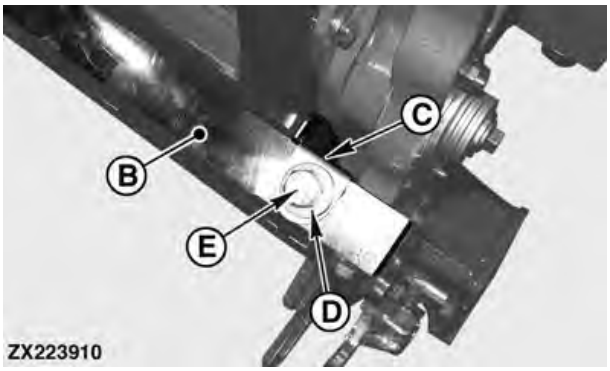


ZX205816 —UN—27OCT14



ZX223910 —UN—27OCT14

Install Stationary Knife

IMPORTANT: The stationary knife is held to the knife retainer by highly torqued bolts. The contact produces friction to hold the knife during operation. Do not lubricate stationary knife or knife retainer, because lubrication decreases the friction holding the knife. With insufficient friction, the stationary knife vibrates and may damage the stationary knife itself, adjusting device, and cutterhead.

1. Thoroughly clean stationary knife retainer (A) top surface.

IMPORTANT: The stationary knife (B) can be turned end-for-end to use the second cutting edge, but should NEVER be turned over.

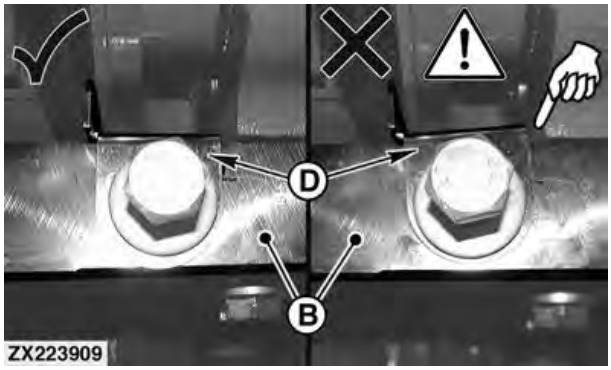
NOTE: The stationary knife (B) has two cutting edges. They can be identified by the word "TOP" stamped on the knife. The stationary knife must be installed with the cutting edges in the up position.

2. Position stationary knife (B) with cutting edges up on retainer and align with screw holes.
3. On both sides, attach stationary knife with the strap (C), washer (D), and upper attaching screw (E). Tighten screw (E) to 260 N·m (192 lb·ft).

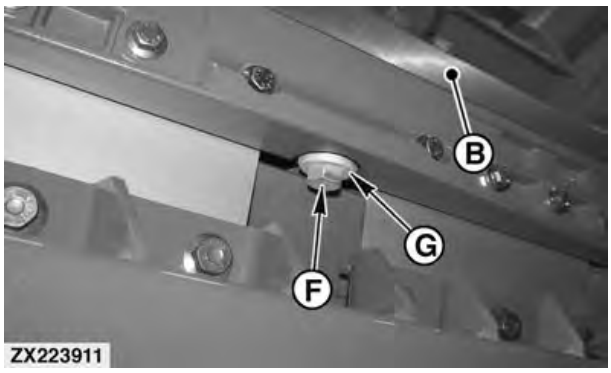
IMPORTANT: Make sure to install the strap (C) correctly back in place. The inner side of strap (C) must be fully in contact with back side of stationary knife (B) and the strap (C) surface aligned with the cutterhead side wall (not at an angle) as shown.

4. Underneath the knife retainer, install lower screw (F) and the two washers (G) and (H). Tighten screw (F) to 260 N·m (192 lb·ft).

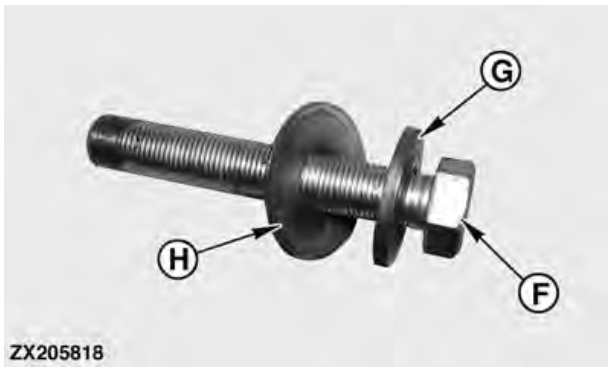
IMPORTANT: Rotate cutterhead by hand to check knife clearance. Cutterhead knives must not contact stationary knife.



ZX223909 —UN—27OCT14



ZX223911 —UN—27OCT14



ZX205818 —UN—27OCT14

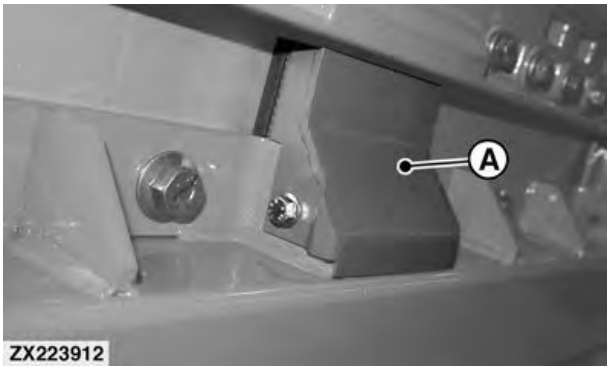
A—Stationary Knife Retainer
B—Stationary Knife
C—Strap
D—Washer
E—Upper Attaching Screw (2 used)
F—Lower Attaching Screw
G—Washer—Thick
H—Washer—Slim

Continued on next page

OUCC002,00046F6 -19-07SEP15-4/6

5. Install shield (A) back in place.
6. Close feed roll housing and prepare machine for knife sharpening.

A—Shield



ZX223912 —UN—27OCT14

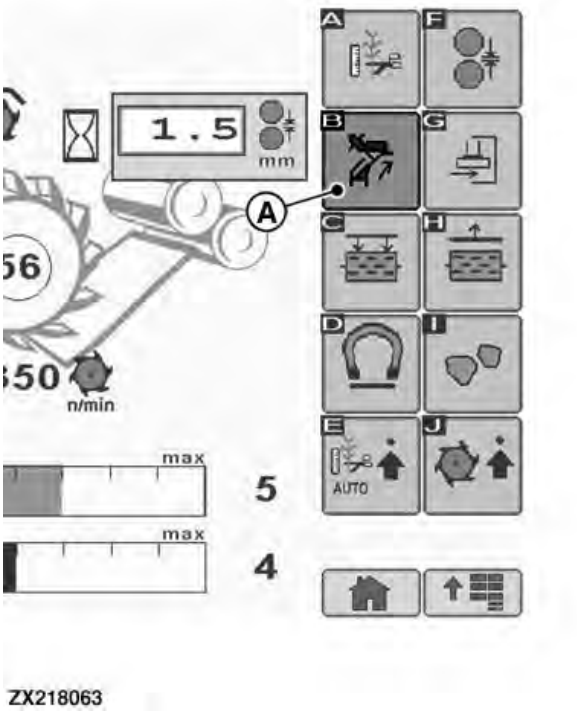
OUCC002,00046F6 -19-07SEP15-5/6

7. Access the Cutterhead Assembly Setup Page and press knife sharpening wizard button (A) to initiate a sharpening knife cycle (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section).

NOTE: After sharpening cycle is finished, a stationary knife adjustment cycle is automatically initiated.

8. If necessary, adjust spiral floor or recutter floor (see **Adjust Spiral/Recutter Floor** in Field Operation section).

A—Knife Sharpening Wizard Button



ZX218063 —UN—13NOV14

OUCC002,00046F6 -19-07SEP15-6/6

Knife Sharpening Device—General

Knife sharpening device (A) is driven by hydraulic motor (B) and moved to the left and the right across cutterhead which is turning backwards. Knife sharpening is a fully automated process.

On the Cutterhead Assembly Setup Page press the knife sharpening wizard button (D) to initiate the knife sharpening wizard and stationary knife adjust processes (see Cutterhead Assembly Setup Page in Operating the Controls and Displays section).

CAUTION: Never initiate a sharpening procedure in area with inflammable particles or while driving the machine.

Thoroughly clean cutterhead assembly before starting sharpening procedure. In particular the following areas:

- Behind the cutterhead.

- Around the feed rolls.

- Under the stationary knife.

- On both sides, under the knife adjusting arm assembly.

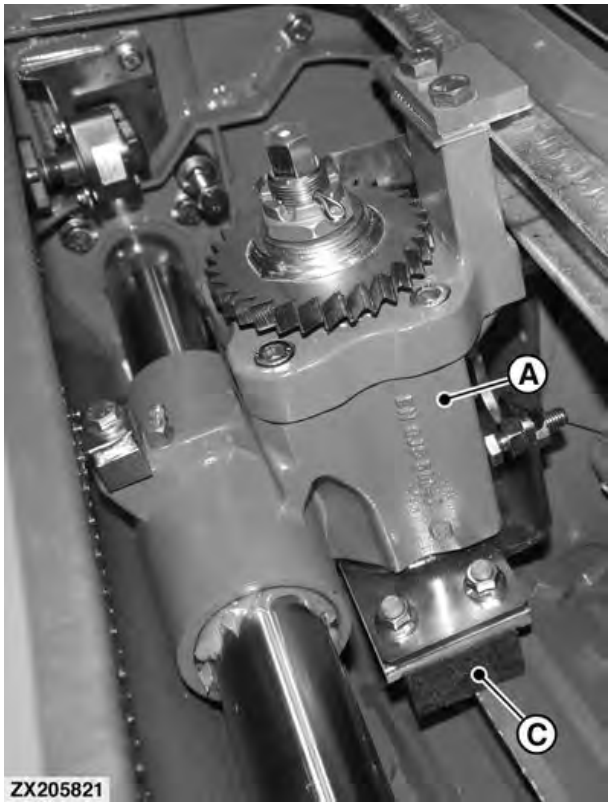
- Hydraulic hoses, lubrication lines, and wiring harnesses.

- Above and under the transition chute assembly.

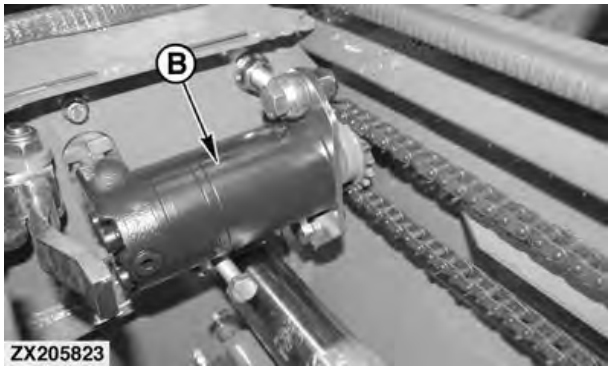
- Around the spiral floor.

IMPORTANT: During sharpening process, the number of grinding cycles left before the sharpening stone (C) must be replaced is indicated. If necessary, replace the sharpening stone (see Replace Sharpening Stone in this section).

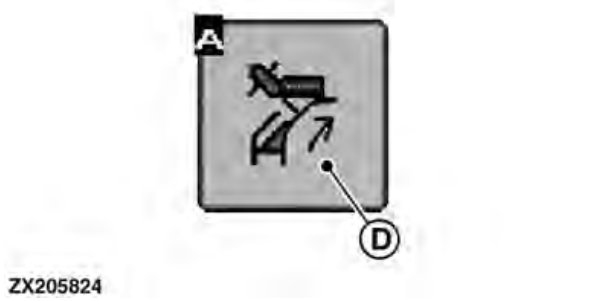
A—Knife Sharpening Device
B—Hydraulic Motor
C—Sharpening Stone
D—Knife Sharpening Wizard Button



ZX205821 —UN—27OCT14



ZX205823 —UN—27OCT14



ZX205824 —UN—16OCT13

OUCC002,00041C5 -19-27OCT14-1/1

Replace Sharpening Stone

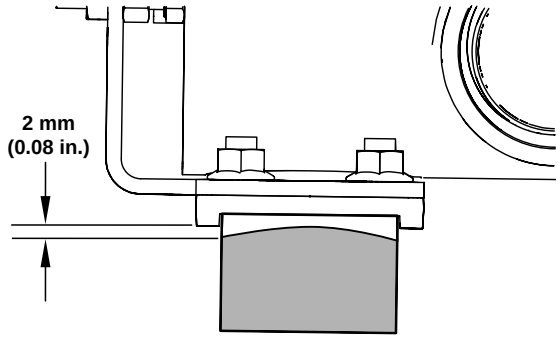
CAUTION: To avoid bodily injury, do not open or remove any doors or shields until all rotating parts have stopped completely.

NOTE: When replacing sharpening stone, make sure that removed parts will not drop into cutterhead.

Replace sharpening stone when the distance between sharpening stone and bracket is 2 mm (0.08 in.) at the most worn point or when the Cutterhead Assembly Advanced Settings Page indicates an overdue of grinding cycles (see **Cutterhead Assembly Setup Page** in Operating the Controls and Displays section). Proceed as follows:

1. Open or remove sharpening device top guard (A).
2. Apply grease at fitting (B) until grease becomes visible around sharpening stone rod guide.
3. Remove ratchet stop (C) then turn ratchet assembly (D) clockwise as far as possible so that a new stone can be installed.
4. Remove four sharpening stone fixing screws (E).

A—Guard
B—Grease Fitting
C—Ratchet Stop
D—Ratchet Assembly
E—Fixing Screws



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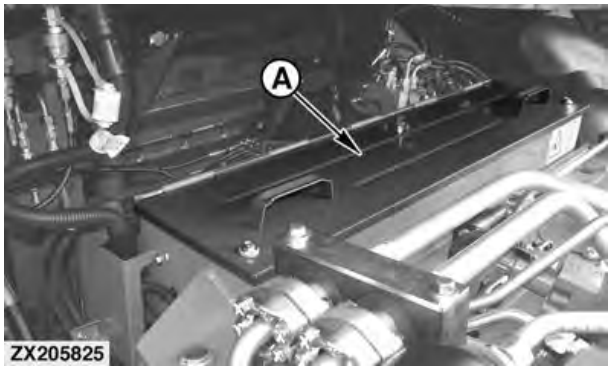
ZX205827 —UN—17OCT13



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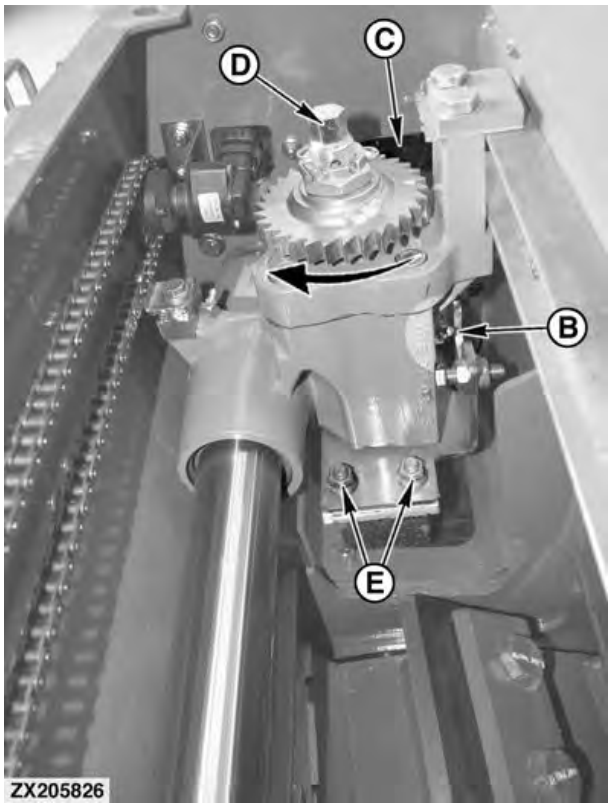
ZX205825 —UN—27OCT14



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ZX205826 —UN—16OCT13

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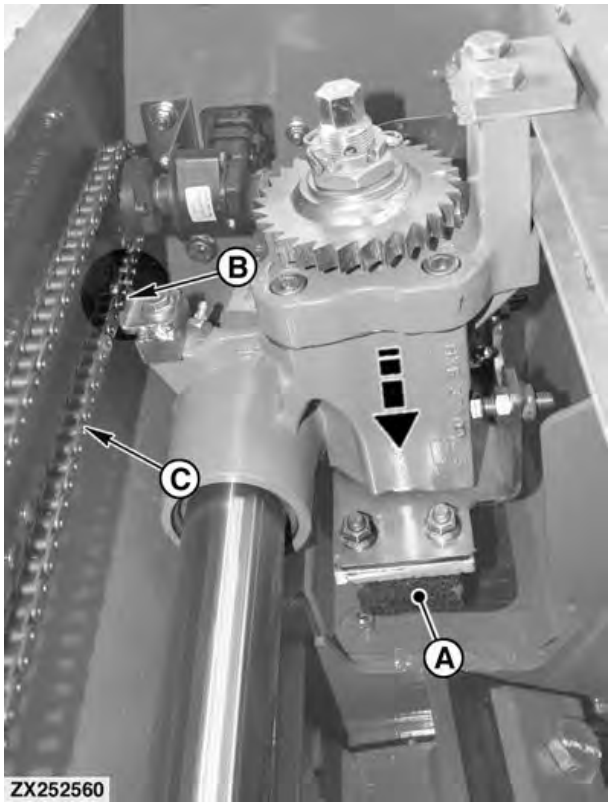
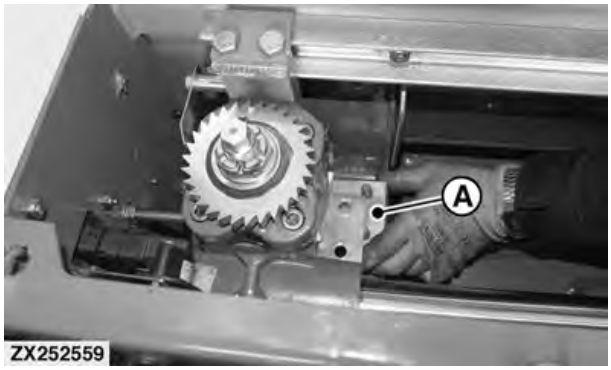
OUCC002,00046C7 -19-04SEP15-1/2

5. To remove sharpening stone (A), open chain link (B) to disconnect sharpening device from drive chain (C) then slide device to the right so that sharpening stone (A) can be removed from the top.
6. Install new sharpening stone (A) then install all removed parts in reverse order of removal.

A—Sharpening Stone
B—Chain Link
C—Drive Chain



ZX252560 —UN—09SEP15



ZX252559 —UN—09SEP15

OUCC002,00046C7 -19-04SEP15-2/2

Replace Spiral/Recutter Floor

CAUTION: To avoid bodily injury, do not open or remove any doors, shields or covers until all rotating parts have stopped completely.

Spiral/Recutter floor (A) is a heavy assembly. Pay extreme attention during removal and installation processes. As soon as the attaching screws of spiral/recutter floor (A) are removed, the spiral/recutter floor (A) can fall down.

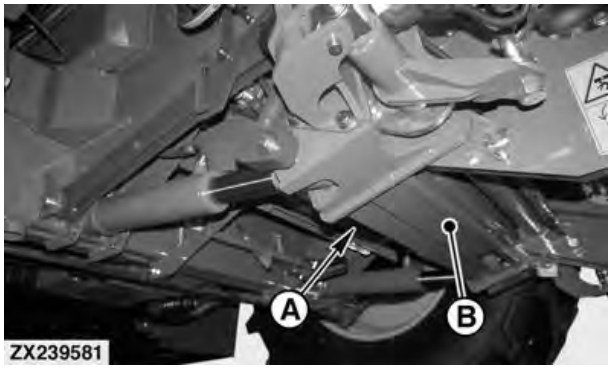
Remove spiral/recutter floor (A) as follows:

1. Fully raise cutterhead assembly (B).

CAUTION: Before working under raised cutterhead, secure cutterhead with locking beam (C) in lock position as shown.

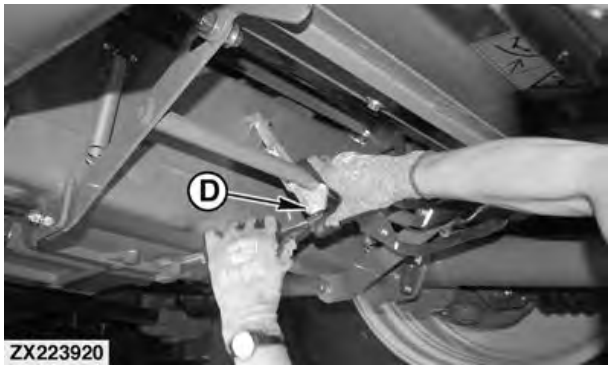
2. On the right-hand side of the cutterhead, place locking beam (C) in lock position as shown (see **Secure Cutterhead Lift Lock** in this section).
3. Slightly unscrew discharge chute locking device (D) and check that while discharge chute (E) is lowering the safety hook (F) has engaged on rod (G) as shown.

A—Spiral/Recutter Floor
B—Cutterhead Assembly
C—Locking Beam
D—Locking Device
E—Discharge Chute
F—Safety Hook
G—Rod

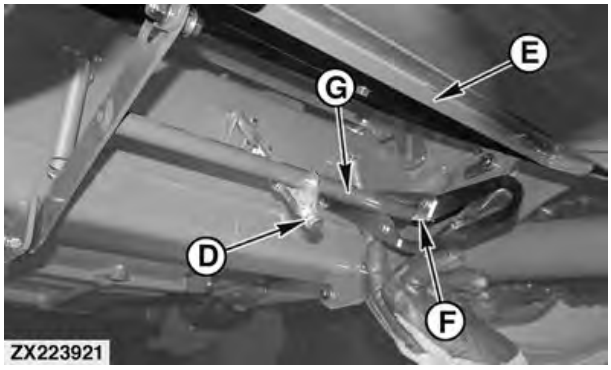


ZX239581 —UN—23MAR15

ZX237562 —UN—23MAR15



ZX223920 —UN—27OCT14



ZX223921 —UN—27OCT14

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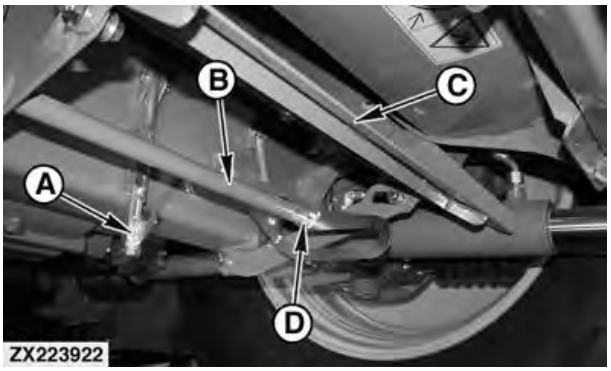
OUCC002,00046F7 -19-07SEP15-1/4



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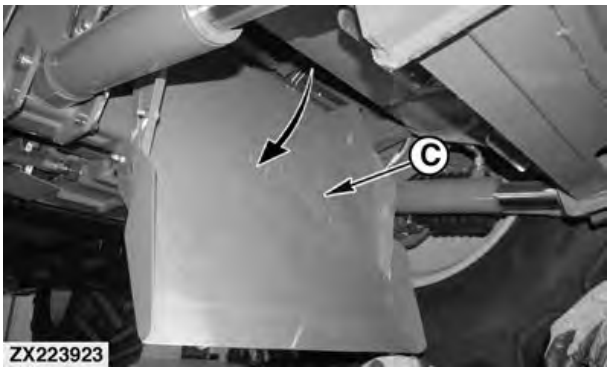


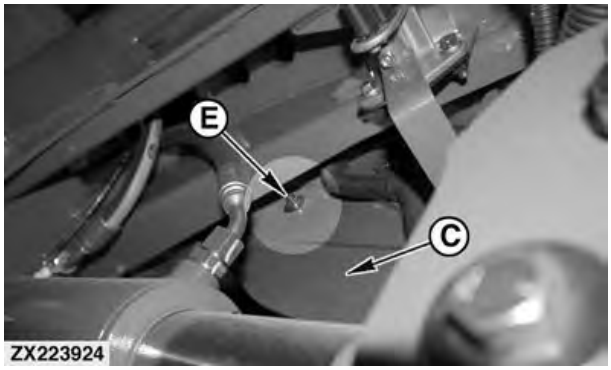
ZX223923 —UN—27OCT14

4. Continue unscrewing locking device (A) until it disengages from the rod (B).
5. Slowly raise discharge chute (C) until safety hook (D) can be unhooked from rod (B) then lower discharge chute (C).
6. On both sides of cutterhead frame, unscrew screw (E).

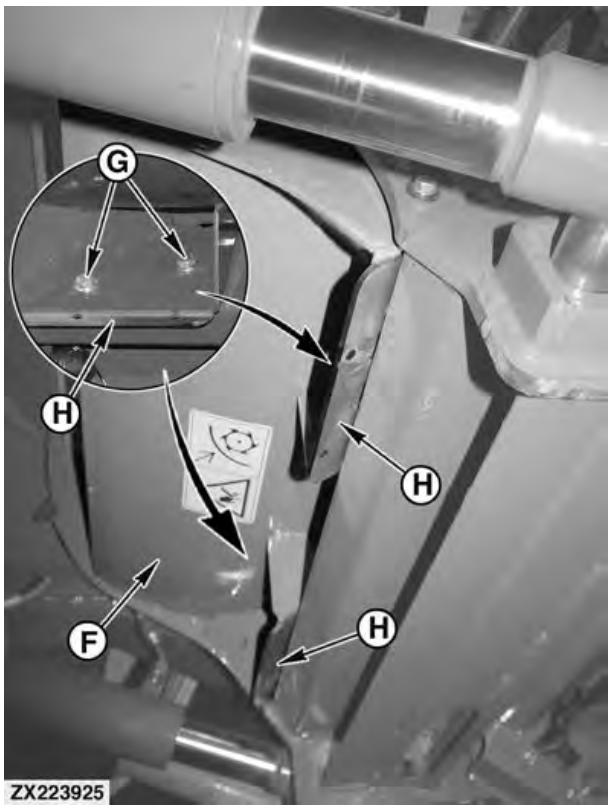
IMPORTANT: Do not take off screw (E).

7. Underneath the spiral/recutter floor (F), remove the four screws (G) then the shims (H).
8. Carefully support spiral/recutter floor (F) then remove screws (E).
9. Remove spiral/recutter floor (F).

A—Locking Device
B—Rod
C—Discharge Chute
D—Safety Hook
E—Screw (2 used)
F—Spiral/Recutter Floor
G—Screw (4 used)
H—Shim



ZX223924 —UN—27OCT14



ZX223925 —UN—27OCT14

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OUCC002,00046F7 -19-07SEP15-2/4

Install spiral/recutter floor (A) as follows:

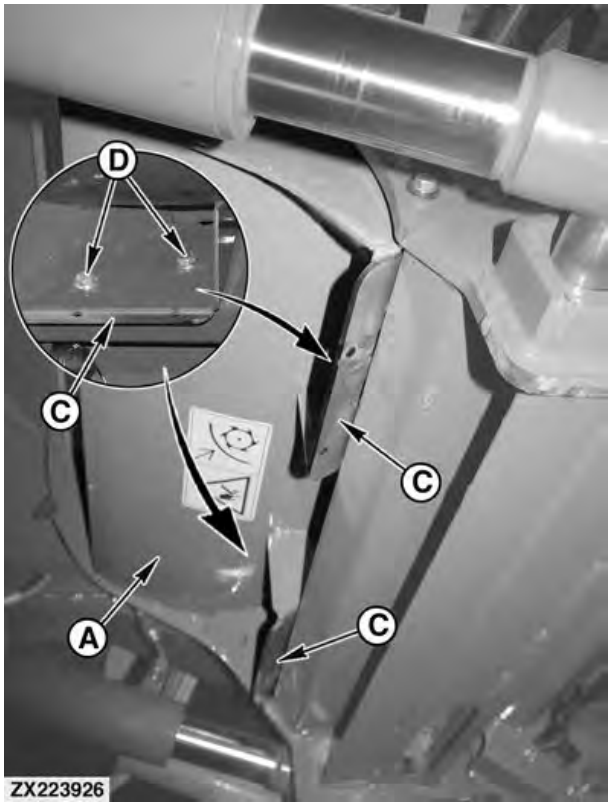
1. Place spiral/recutter floor (A) back in place and secure with attaching screws (B) on both sides. Do not tighten screws (B) at this stage.
2. Insert required amount and thickness of shims (C) to set a clearance of 2-3 mm (0.08-0.12 in) between tip of cutterhead knives and floor, then secure with attaching screws (D).

NOTE: Shims with different thickness are available in the tool box.

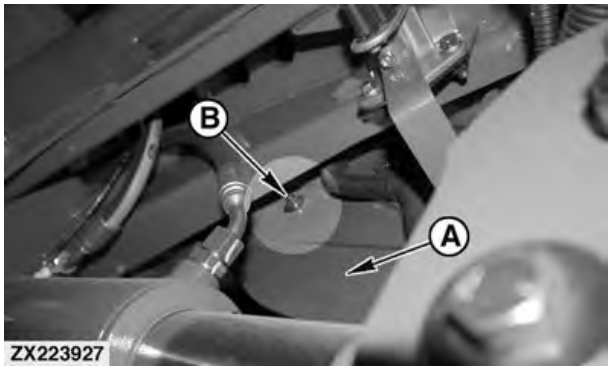
3. Tighten attaching screws (D) to 140 N·m (103 lb·ft).
4. Tighten attaching screws (B) to 30 N·m (22 lb·ft).
5. Close discharge chute (E) then engage safety hook (F) on rod (G) as shown.

IMPORTANT: While closing the discharge chute (E), make sure that the side panels of the discharge chute (E) are inserted inside the upper part of transition chute.

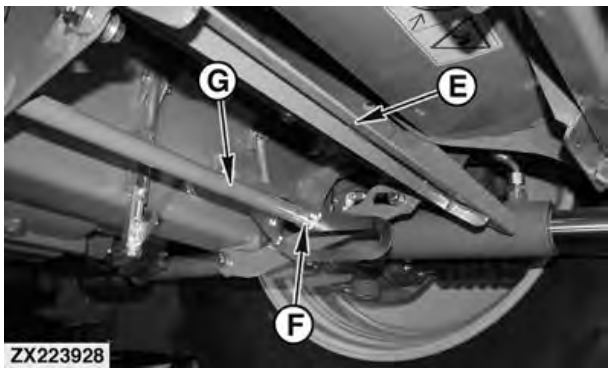
A—Spiral/Recutter Floor
B—Attaching Screw (2 used)
C—Shim
D—Attaching Screw (4 used)
E—Discharge Chute
F—Safety Hook
G—Rod



ZX223926 —UN—27OCT14



ZX223927 —UN—27OCT14



ZX223928 —UN—27OCT14

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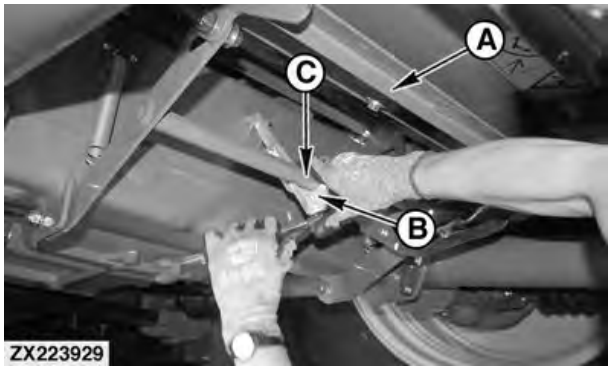
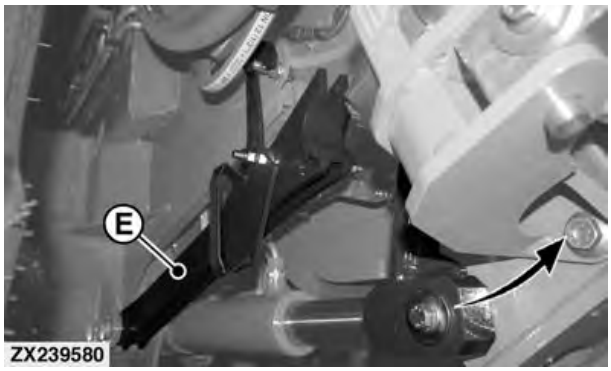
OUCC002,00046F7 -19-07SEP15-3/4

6. Continue raising discharge chute (A) until locking device (B) can be engaged on rod (C) then fully tighten locking device screw.
7. Fully raise cutterhead.
8. On the right-hand side of the cutterhead, place locking beam (D) in unlock position as shown.
9. Lower cutterhead.

A—Discharge Chute
B—Locking Device
C—Rod
D—Locking Beam



ZX223929 —UN—27OCT14



ZX239580 —UN—23MAR15

OUCC002,00046F7 -19-07SEP15-4/4

Replace Recutter Floor Knives

CAUTION: To avoid bodily injury, do not open or remove any doors, shields or covers until all rotating parts have stopped completely.

Recutter floor (A) is a heavy assembly. Pay extreme attention during removal and installation processes. As soon as the attaching screws of recutter floor (A) are removed, recutter floor (A) can fall down.

CAUTION: Before working under raised cutterhead, secure cutterhead with locking beam in lock position (see Secure Cutterhead Lift Lock in this section).

Replace recutter floor knives (B) as follows:

1. Remove recutter floor (A) from cutterhead (see **Replace Spiral/Recutter Floor** in this section).
2. Remove self-locking nuts (C) then knife cassettes (D).

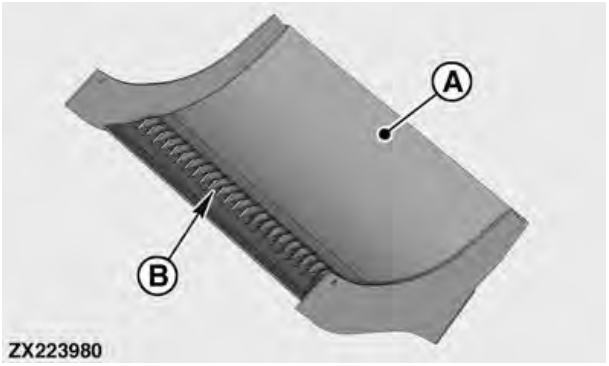
NOTE: To increase service life, knives (B) can be removed and individually replaced.

3. Insert and orientate knives (B) on their cassette (D) as shown (refer to direction of travel arrow).
4. Make sure that the knife holding rods (E) are correctly oriented when installing knife cassette (D) on recutter floor, as shown (hook oriented toward outside).

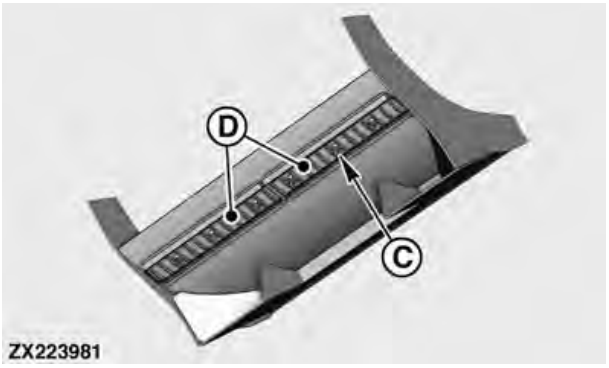
IMPORTANT: When not used, replace knife cassettes (D) with covers (F).

5. Firmly tighten all self-locking nuts (C).
6. Install recutter floor back in place then adjust as necessary (see **Replace Spiral/Recutter Floor** in this section and **Adjust Spiral/Recutter Floor** in Field Operation section).

A—Recutter Floor
B—Knife
C—Self-Locking Nut
D—Knife Cassette
E—Holding Rod
F—Cover



ZX223980 —UN—04NOV14



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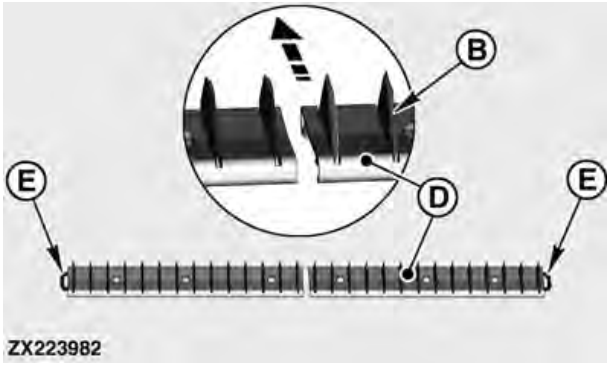

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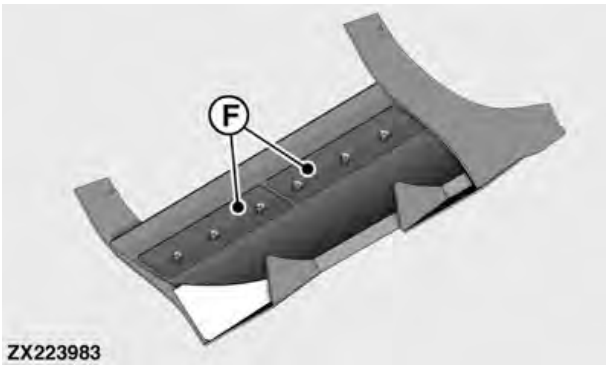


ZX223983 —UN—04NOV14

OUCC002,00042F3 -19-12FEB15-1/1

Replace Cutterhead Wear Plate

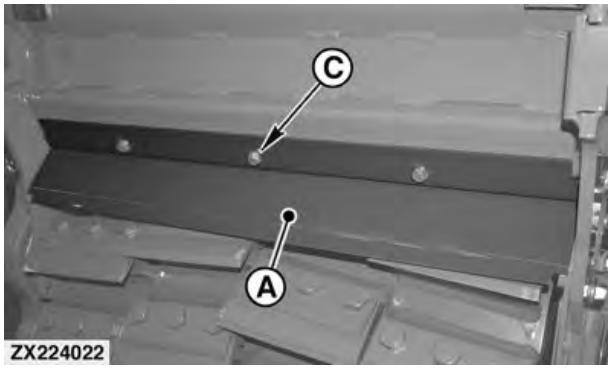
Two wear plates are located on top front and rear of cutterhead. Check the top front wear plate (A) for wear conditions and replace, if necessary.

IMPORTANT: Replacing the rear wear plate (B) requires the cutterhead to be removed from the machine. To remove the cutterhead and rear wear plate (B) assembly, contact your John Deere dealer.

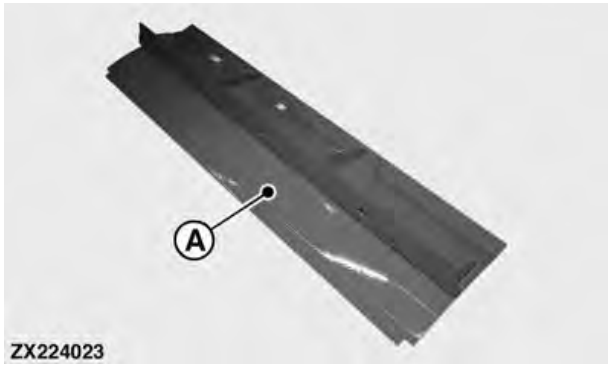
Replace top front wear plate (A) as follows:

1. Open feed roll housing (see **Open/Close Feed Roll Housing** in this section).
2. Remove attaching screws (C).
3. Remove wear plate (A).
4. Install wear plate (A) in reverse removal order.

A—Top Front Wear Plate
B—Rear Wear Plate
C—Screw



ZX224022 —UN—08NOV14



ZX224023 —UN—08NOV14

ZX224024 —UN—08NOV14

OUCC002,00041F9 -19-11NOV14-1/1

Weld Near Electronic Control Units

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. Short the positive and negative machine battery cables together. Do not attach to machine 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 the repair area is complete and all components are back in their proper locations, connect positive (+) battery cable(s) first, then connect negative (-) battery cable(s).

TS953 —UN—15MAY90

OUCC002,0003D8D -19-05AUG13-1/1

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 -19-11JUN09-1/1

Observe Electrical Precautions (8100—8600 Only)

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.

ZX220647 —UN—06OCT14

8100 and 8200

ZX220648 —UN—06OCT14

8300—8600

OUCC002,00046F8 -19-07SEP15-1/1

Observe Electrical Precautions (8700 and 8800 Only)

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.

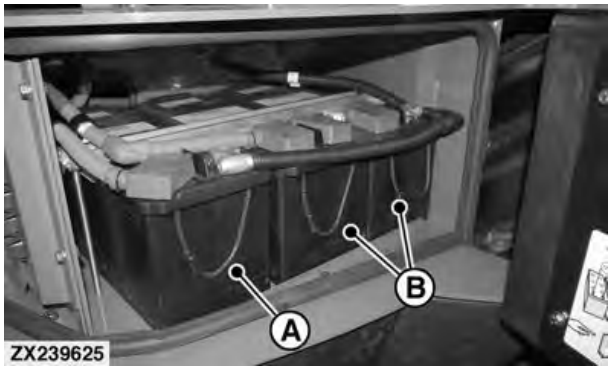
Keep all sparks and flames away from batteries as gas given off by electrolyte is explosive. To avoid sparks, connect ground cable last and disconnect it first. To avoid shocks and burns, turn battery disconnect switch OFF before servicing any part of the electrical system or when removing batteries.

The forage harvester is equipped with three 12 V (174 AH) batteries:

- One 12 V battery (A) for the main electrical system.
- Two 12 V batteries (B) connected in series (24 V) for the starter motor and for the engine Control Unit (ECU).

A—12 V Battery

B—12 V Batteries in Series (24 V)



ZX239625 —UN—23MAR15

ZX239626 —UN—23MAR15

OUCC002,0004520 -19-23MAR15-1/1

Basic Electrical Component Handling - Precautions for Machines 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 control units 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.

OUCC002,0003D8F -19-05AUG13-1/1

Battery Disconnect Switch

IMPORTANT: Do not disconnect battery until Selective Catalyst Reduction (SCR) system has had enough time to automatically purge system of Diesel Exhaust Fluid (DEF). If adequate time is not allowed for system to be purged, any DEF remaining can crystallize and plug system. At temperatures below -15°C (5°F), unpurged DEF will freeze and damage system components. Wait at least 4 minutes after machine stops before disconnecting battery.

CAUTION: Never turn power off on the battery disconnect switch while the engine is running. This could result in serious damage to the machine's electrical components.

IMPORTANT: During a long storage period, always turn battery disconnect switch to OFF position.

ZX214861 —UN—06OCT14

Open Battery Box Cover

The battery could lose power if the battery disconnect switch is left ON.

Continued on next page

OUCC002,00046F9 -19-07SEP15-1/3

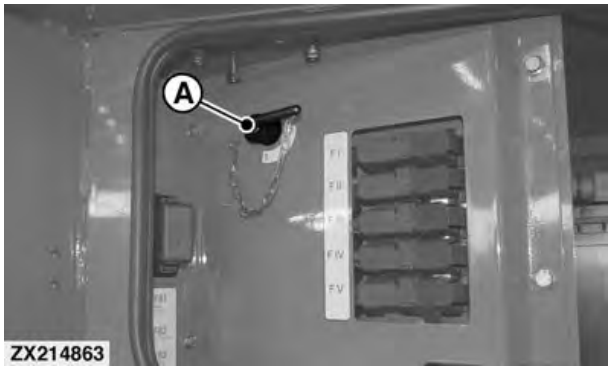
8100—8600:

With battery disconnect switch lever in “OFF” position (A) the battery is electronically disconnected from the machine and the entire electrical and electronic system of the machine is disabled.

Turn battery disconnect switch lever to “ON” position (B) to activate the electrical and electronic system of the machine.

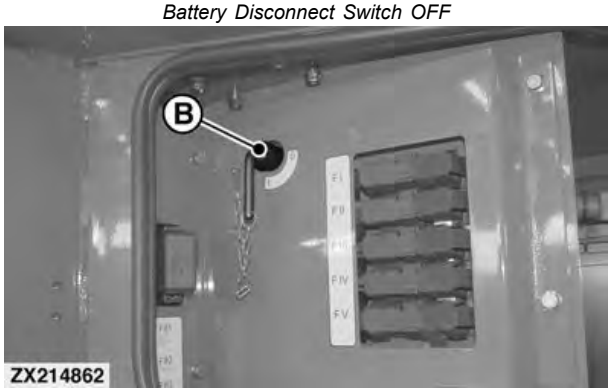
A—Battery Disconnect Switch Lever “OFF”

B—Battery Disconnect Switch Lever “ON”



ZX214863 —UN—06OCT14

Battery Disconnect Switch OFF



ZX214862 —UN—06OCT14

Battery Disconnect Switch ON

OUCC002,00046F9 -19-07SEP15-2/3

8700 and 8800:

With battery disconnect switch lever in “OFF” position (A) the battery is electronically disconnected from the machine and the entire electrical and electronic system of the machine is disabled.

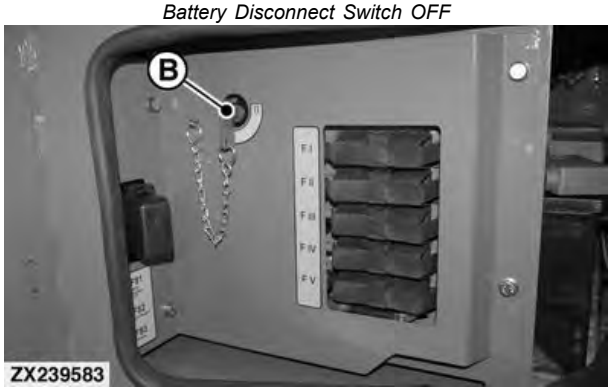
Turn battery disconnect switch lever to “ON” position (B) to activate the electrical and electronic system of the machine.

A—Battery Disconnect Switch Lever “OFF”

B—Battery Disconnect Switch Lever “ON”

ZX239582 —UN—23MAR15

Battery Disconnect Switch OFF



ZX239583 —UN—23MAR15

Battery Disconnect Switch ON

OUCC002,00046F9 -19-07SEP15-3/3

Fuse Center Cover

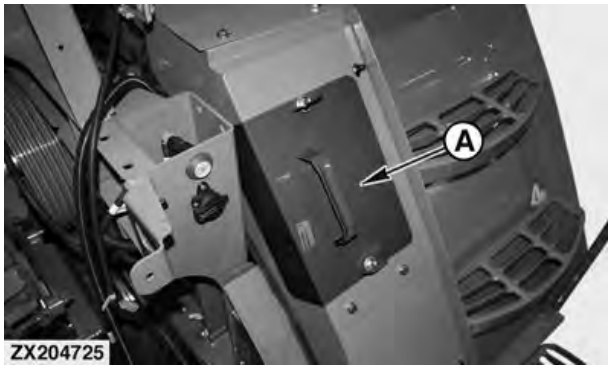
NOTE: Fuse center is located on right side in the central service compartment.

Spare fuses (D) and fuse puller (E) are located underneath cover.

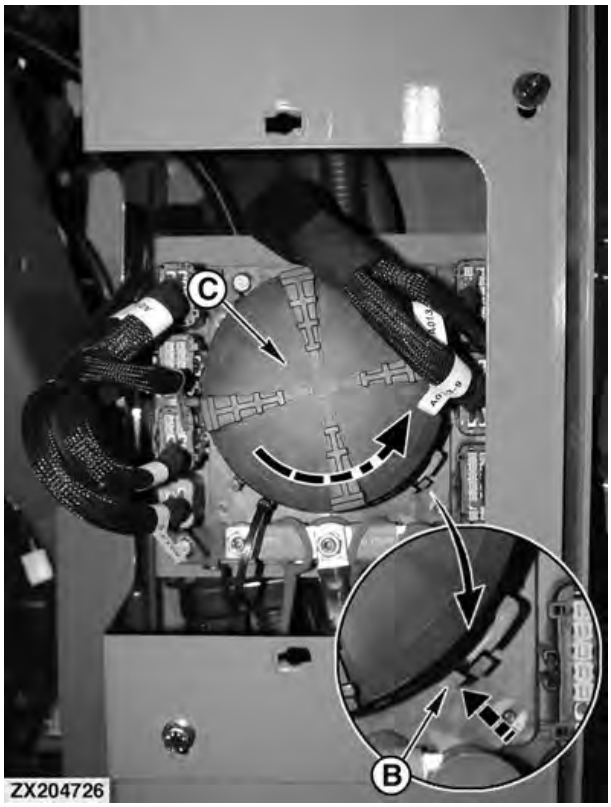
Unlock and remove shield (A).

Press lock tab (B) and turn cover (C) counterclockwise to open fuse center.

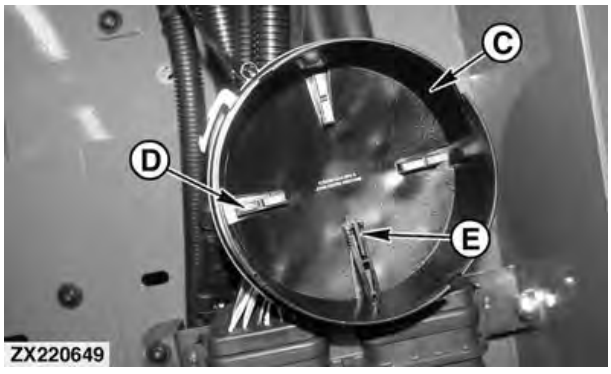
A—Shield
B—Lock Tab
C—Cover
D—Spare Fuses
E—Fuse Puller



ZX204725 —UN—06AUG13



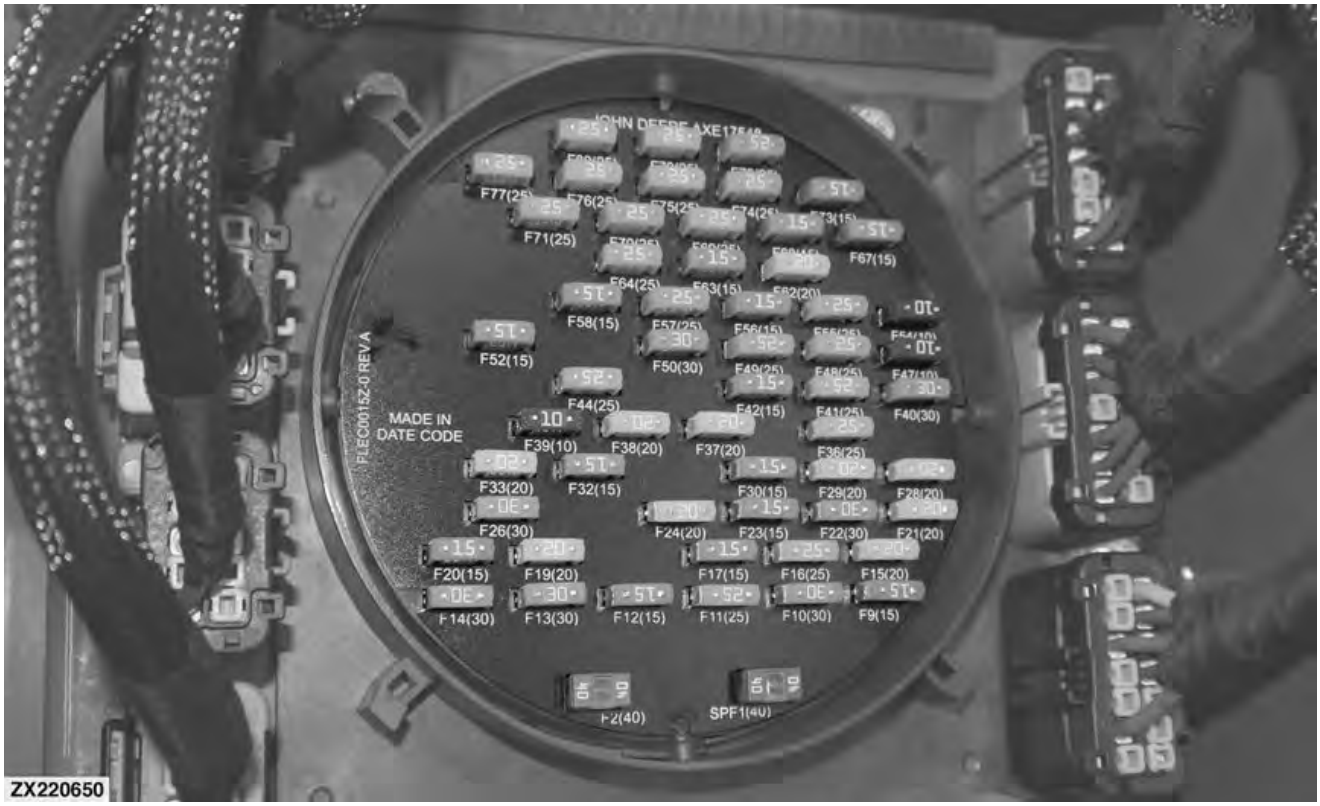
ZX204726 —UN—06AUG13



ZX220649 —UN—06OCT14

OUCC002,00041AB -19-25SEP14-1/1

Fuse Center



ZX220650 —UN—06OCT14

NOTE: Fuse center is located on right side in the central service compartment.

- SPF1 (40A / Spare Fuse)
- F02 (40A / Spare Fuse)
- F09 (15A / 12 V Outlet in Service Compartment)
- F10 (30A / Cab Control Unit [CAB] Fuse 2)
- F11 (25A / Additive Dosing System High Volume)
- F12 (15A / External Additive Dosing System Low Volume)
- F13 (30A / Spare Fuse)
- F14 (30A / Cab Power Module [CPMA] Fuse 1)
- F15 (20A / 12 V Outlet in Toolbox Compartment)
- F16 (25A / Spare Fuse)
- F17 (15A / HarvestLab™ [NIR] Moisture Sensor)
- F19 (20A / Cab Power Module [CPMA] Fuse 3)
- F20 (15A / Dome Light and Power Mirrors)
- F21 (20A / Cutterhead Control Unit [CHC] Fuse 2)
- F22 (30A / Cab Control Unit [CAB] Fuse 1)
- F23 (15A / Cutterhead Control Unit [CHC] Fuse 1)
- F24 (20A / Spare Fuse)
- F26 (30A / Cab Power Strip, Front Wiper)
- F28 (20A / Recirculation Fan Power Fuse 2)
- F29 (20A / Recirculation Fan Power Fuse 1)
- F30 (15A / Auxiliary Power Outlets Armrest)
- F32 (15A / Spare Fuse)
- F33 (20A / Key Switch)
- F36 (25A / Spare Fuse)
- F37 (20A / ActiveSeat™ Compressor)
- F38 (20A / CommandCenter™, CommandARM™, Steering Column Lever, Subwoofer)
- F39 (10A / AutoTrac™ Control Unit [SBBC])
- F40 (30A / Cab Power Module [CPMA] Fuse 4)
- F41 (25A / Cab Power Module [CPMA] Fuse 2)
- F42 (15A / GreenStar™ GPS Receiver, Printer, PDU)
- F44 (25A / Forage Harvester Power Module 1 [CPM1] Fuse 1)
- F47 (10A / Automatic Temperature Control Unit [ATC])
- F48 (25A / Engine Control Unit [ECU] Fuse 2) **8100—8600 Only**
- F49 (25A / Cab Power Module [CPMA] Fuse 5)
- F50 (30A / Spare Fuse)
- F52 (15A / Spare Fuse)
- F54 (10A / ProDrive™ Transmission Control Unit [PTP])
- F55 (25A / Spare Fuse)
- F56 (15A / Low Pressure Fuel Pump)
- F57 (25A / Forage Harvester Power Module 2 [CPM2] Fuse 1)
- F58 (15A / Spare Fuse/AFC [IPM] is equipped)
- F62 (20A / Rear Wiper)
- F63 (15A / Fuel Dosing Pump)
- F64 (25A / Forage Harvester Power Module 1 [CPM1] Fuse 2)
- F67 (15A / Harvest Doc™)
- F68 (15A / Spare Fuse)
- F69 (25A / Engine Control Unit [ECU] Fuse 1)
- F70 (25A / Forage Harvester Power Module 1 [CPM1] Fuse 4)

Continued on next page

OUCC002,0004524 -19-23MAR15-1/2

- F71 (25A / Forage Harvester Power Module 2 [CPM2] Fuse 2)
- F73 (15A / Spare Fuse)
- F74 (25A / Spare Fuse)
- F75 (25A / Forage Harvester Power Module 2 [CPM2] Fuse 4)
- F76 (25A / Forage Harvester Power Module 2 [CPM2] Fuse 3)
- F77 (25A / Forage Harvester Power Module 1 [CPM1] Fuse 3)
- F78 (25A / Spare Fuse)
- F79 (25A / Forage Harvester Power Module 2 [CPM2] Fuse 5)
- F80 (25A / Forage Harvester Power Module 1 [CPM1] Fuse 5)

OUCC002,0004524 -19-23MAR15-2/2

Inline Fuses

NOTE: Inline fuses are located at the rear of battery box. Inline fuse cover removed for illustration purpose only.

- F81 (10A / Permanent Power Radio [CRU], Displays, MTG)
- F82 (30A / Permanent Power Engine Control Unit [ECU] Power 3)
- F83 (10A / Permanent Power ProDrive™ Transmission Control Unit [PTP])

ZX214861 —UN—06OCT14

Open Battery Box Cover

ZX220651 —UN—06OCT14

OUCC002,00041AD -19-25SEP14-1/1

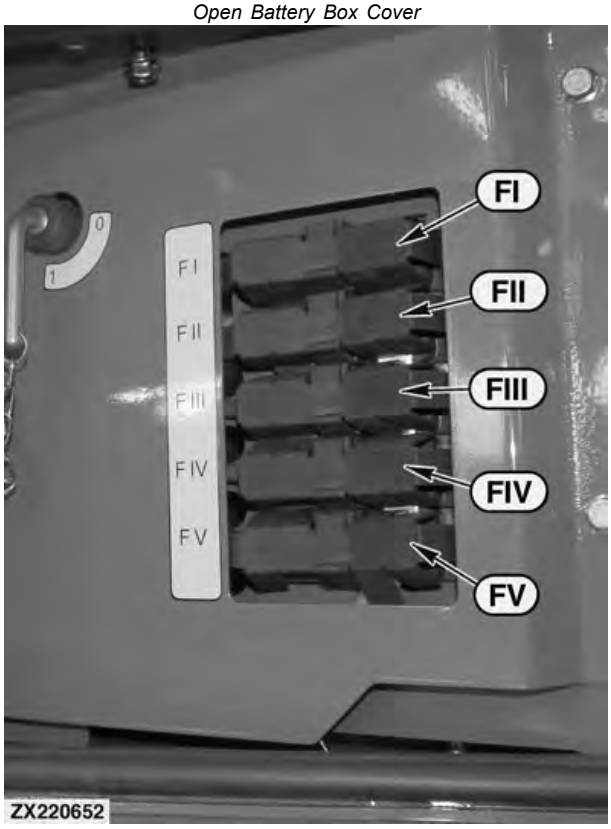
Master Fuses

NOTE: Master fuses are located at the rear of battery box.

- FI (250A / Starter Motor)
- FII (200A / Fuse Center)
- FIII (125A / Chassis Control Unit 1 [FH1])
- FIV (125A / Chassis Control Unit 2 [FH2])
- FV (125A / Kernel Processor Winch)

ZX214861 —UN—06OCT14

Open Battery Box Cover



ZX220652 —UN—06OCT14

OUCC002,00041AE -19-25SEP14-1/1

Cab Fuse (Diode Module Fuse)

NOTE: Diode module fuse is located inside cab underneath the bottle holder on right hand side.

- F85 (5A / Diode Module Fuse)

ZX204733 —UN—06AUG13

OUCC002,0003D96 -19-06AUG13-1/1

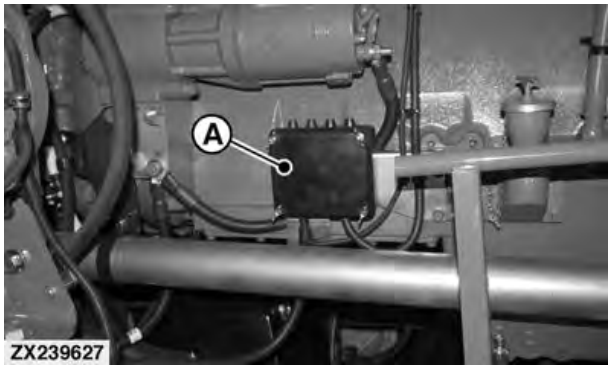
Engine Control Unit (ECU) Fuses (8700 and 8800 Only)

NOTE: Fuses F92 and F93 are located in electronic box (A) on the left side of the engine.

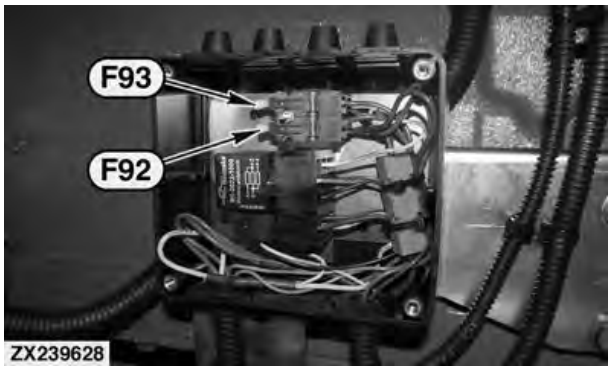
Fuses F101 and F102 are located on the right side of the engine.

- F92 (24 V - 15A / Power Relay)
- F93 (24 V - 15A / ECU)
- F101 (24 V - 10A / ECU)
- F102 (24 V - 10A / ECU)

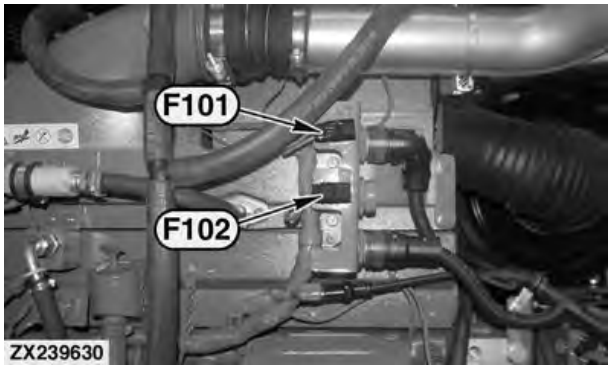
A—Electronic Box



ZX239627 —UN—23MAR15



ZX239628 —UN—23MAR15



ZX239630 —UN—23MAR15

OUCC002,0004526 -19-23MAR15-1/1

Starter Relay (8100—8600 Only)

NOTE: Starter relay is located on right hand side of the engine underneath the starter motor.

- K001 (Starter Relay)

ZX204734 —UN—06AUG13

OUCC002,00046FA -19-07SEP15-1/1

Starter Relay (8700 and 8800 Only)

- K001 (Starter Relay)

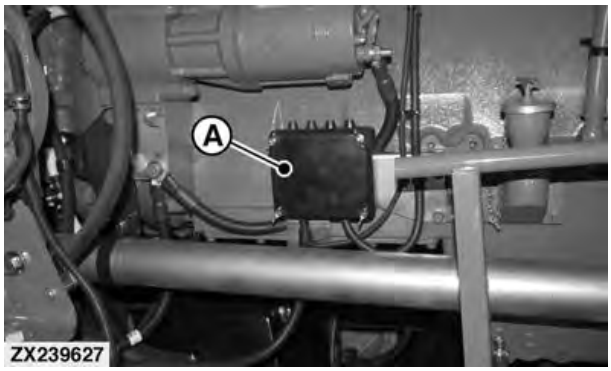
ZX239629 —UN—23MAR15

OUCC002,0004528 -19-23MAR15-1/1

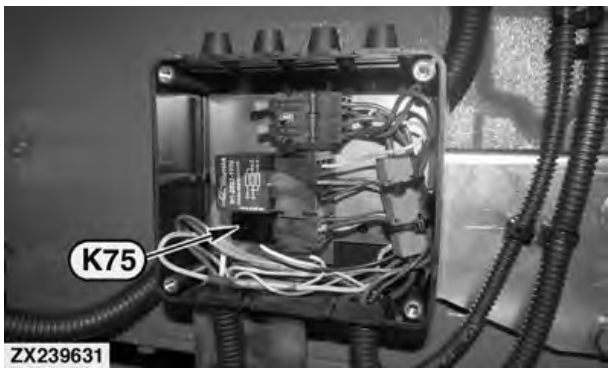
Switched Power Relay (8700 and 8800 Only)

NOTE: Switched power relay K75 is located in electronic box (A) on the left side of the engine.

- K75 (Switched Power Relay)



ZX239627 —UN—23MAR15



ZX239631 —UN—23MAR15

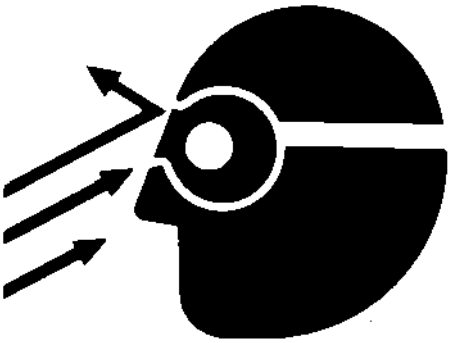
OUCC002,000452A -19-23MAR15-1/1

Safety Rules When Replacing Halogen Bulbs

CAUTION: Halogen bulbs (A) contain gas under pressure. Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- **Turn light switch OFF and allow bulb to cool before changing bulbs. Leave switch OFF until bulb change is complete.**
- **Wear eye protection when changing bulb.**
- **Handle bulb by its base. Wear protective gloves or avoid touching light bulb surface.**
- **Use a clean cloth and alcohol to remove any fingerprints from glass bulb before installing. Skin oil deposited on bulb will cause overheating and premature failure.**
- **Do not drop or scratch bulb.**
- **Keep moisture away from bulb.**
- **Do not operate bulb outside of enclosure. Bulb has a high internal pressure and if cracked or broken it could explode and cause injury.**
- **Place used bulb in new bulb carton and dispose of properly. Keep out of reach of children.**

A—Halogen Bulb



TS266 —UN—23AUG88

H59774 —UN—30AUG99

OUCC002,0003D98 -19-06AUG13-1/1

Replace Cab Headlight Bulb

Disconnect wiring harness connector (A) from headlight assembly (B).

Rotate light housing toward outside of cab.

Turn bulb assembly (C) counterclockwise and remove.

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

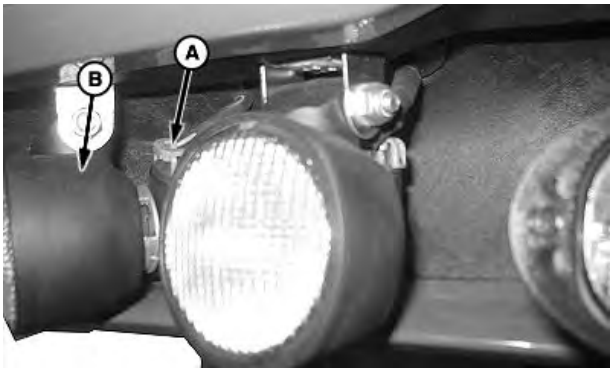
Replace bulb.

Push in bulb assembly and turn clockwise to install into housing.

Rotate light housing to previous operating position and connect wiring harness.

Repeat on remaining lights as needed.

A—Connector
B—Headlight Assembly
C—Bulb Assembly



H96621 —UN—25MAY10

H96622 —UN—25MAY10

OUCC002,0003D99 -19-06AUG13-1/1

Adjust Cab Headlights

NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.

Vertical Adjustment: Loosen cap screw (A). Rotate light assembly up or down to desired position and tighten cap screw. Repeat on remaining lights as needed.

Horizontal Adjustment: Rotate light assembly left or right to desired position. Repeat on remaining lights as needed.

A—Cap Screw

H96624 —UN—25MAY10

OUCC002,0003D9A -19-06AUG13-1/1

Replace Cab Halogen Light Bulb

Remove screws (A) and face plate lens (B) from housing.

Squeeze clips (C) to remove bulb assembly (D).

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Remove and replace bulb.

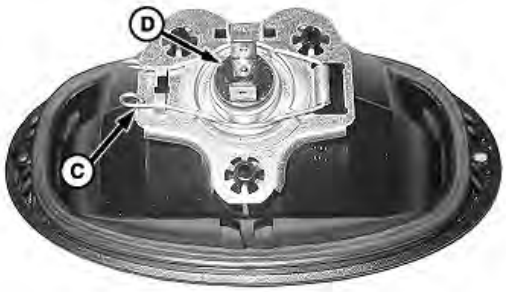
Attach bulb assembly using clips on light bulb base.

Align face plate lens with connector inside housing and retain with screws.

Repeat on remaining lights as needed.

A—Screws
B—Face Plate Lens
C—Clip
D—Bulb Assembly

H96625 —UN—25MAY10



H96626 —UN—25MAY10

OUCC002,0003D9B -19-06AUG13-1/1

Adjust Cab Halogen Lights

NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.

Loosen cap screw (A). Rotate light assembly up or down to desired position and tighten cap screw. Repeat on remaining lights as needed.

A—Cap Screw

H96628 —UN—25MAY10

OUCC002,0003D9C -19-06AUG13-1/1

Replace Fascia or Side Finder Light Bulb (If Equipped)

NOTE: Use the same procedure for fascia light (A) and row finder light (B).

Disconnect wiring harness connector (C) from bulb assembly (D).

Turn bulb assembly counterclockwise and remove.

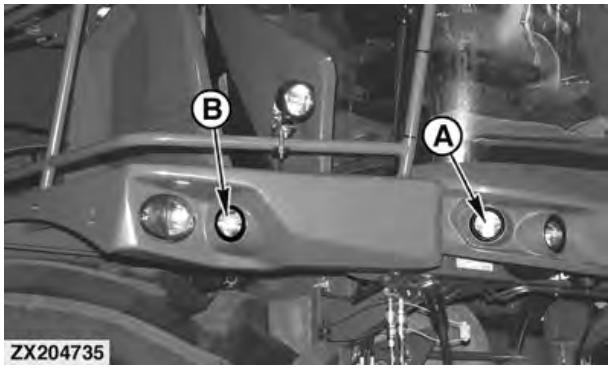
NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Remove and replace bulb.

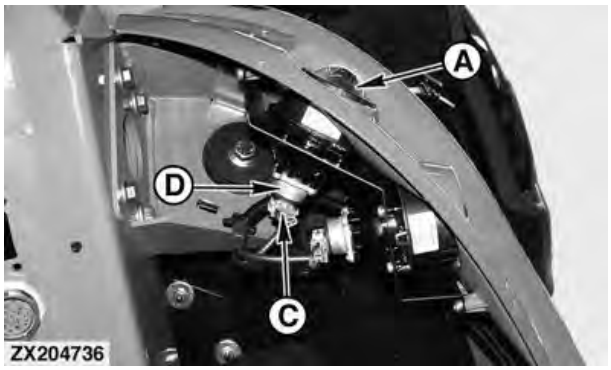
Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

Repeat on remaining lights as needed.

A—Fascia Light
B—Row Finder Light
C—Connector
D—Bulb Assembly



ZX204735 —UN—06AUG13



ZX204736 —UN—06AUG13

OUCC002,0003D9D -19-06AUG13-1/1

Replace Lower Driving or Lower Work Light Bulb (If Equipped)

Disconnect wiring harness connector (B) from bulb assembly (C).

Turn bulb assembly counterclockwise and remove.

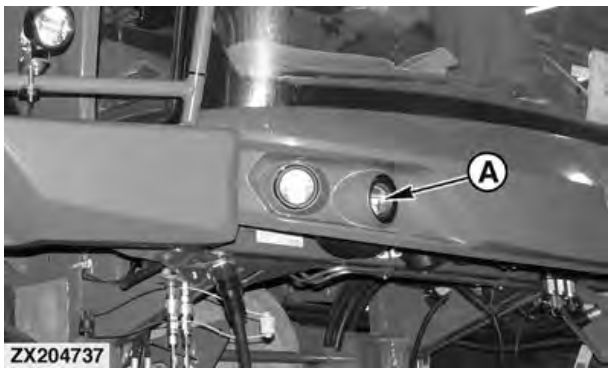
NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Remove and replace bulb.

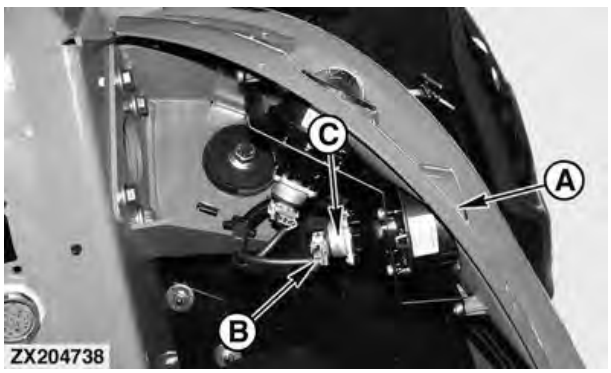
Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

Repeat on remaining lights (A) as needed.

A—Lower Driving/Work Light
B—Connector
C—Bulb Assembly



ZX204737 —UN—06AUG13



ZX204738 —UN—06AUG13

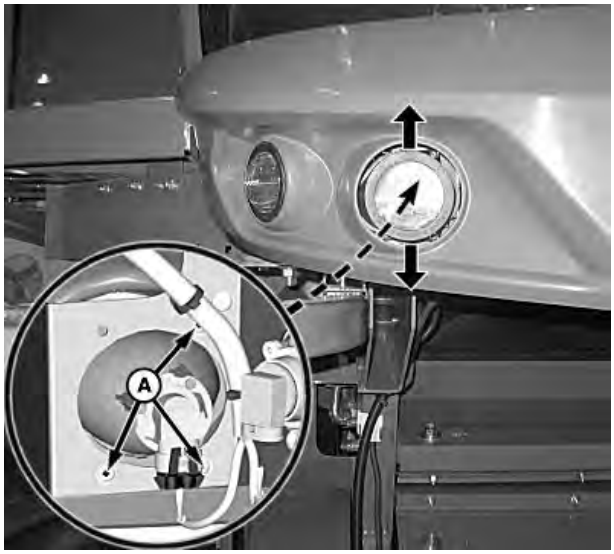
OUCC002,0003D9E -19-06AUG13-1/1

Adjust Lower Driving or Lower Work Lights (If Equipped)

NOTE: Light assemblies can be adjusted as needed to achieve correct lighting angles.

Adjust screws (A) to rotate light assembly up or down to desired position and tighten screws. Repeat on remaining lights as needed.

A—Screws



H98977 —UN—02NOV10

OUCC002,0003D9F -19-06AUG13-1/1

Replace Beacon Light Bulb

Push down on lens (A) and turn counterclockwise to remove.

Pry clip (B) from locking tab (C).

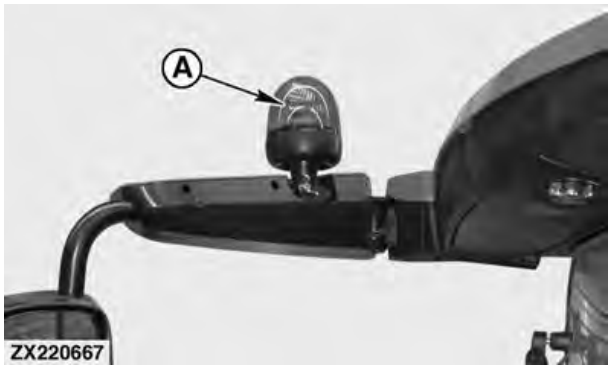
Remove bulb assembly (D) from connector (E).

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

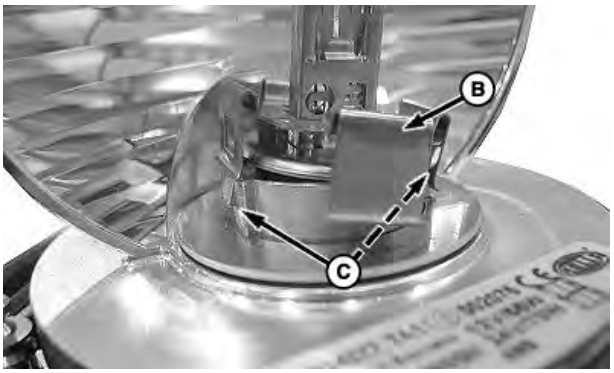
Replace bulb and install in reverse order.

Repeat on other beacon light as needed.

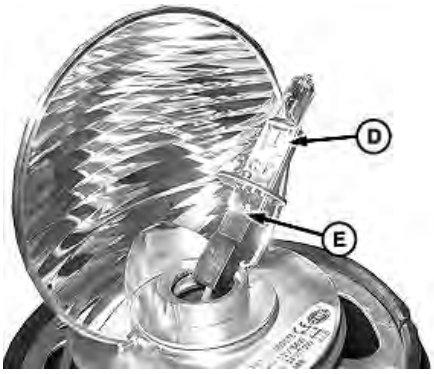
A—Lens
B—Clip
C—Locking Tab
D—Bulb Assembly
E—Connector



ZX220667 —UN—06OCT14



H96614 —UN—25MAY10

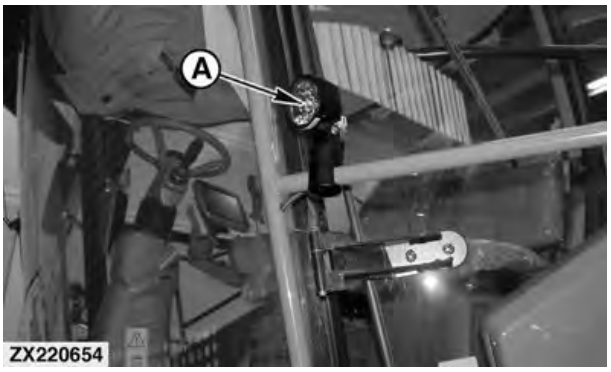


H96615 —UN—25MAY10

OUCC002,00041B5 -19-26SEP14-1/1

Replace Work Lights (If Equipped)

ZX220653 —UN—06OCT14



ZX220654 —UN—06OCT14

Disconnect wiring harness connector from bulb assembly.

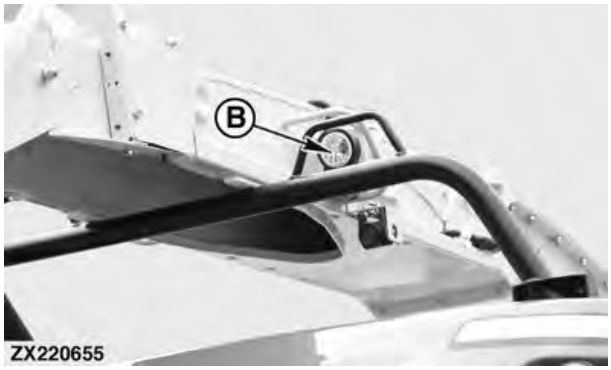
Turn bulb assembly counterclockwise and remove.

Remove and replace bulb.

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

A—Work Lights—Cab Platform
B—Work Lights—Spout
C—Work Lights—Rear
D—Work Lights—Side



ZX220655 —UN—06OCT14

ZX220656 —UN—06OCT14

ZX220657 —UN—06OCT14

OUCC002,00041AF -19-25SEP14-1/1

Replace Service Lights

Disconnect wiring harness connector from bulb assembly.

Turn bulb assembly counterclockwise and remove.

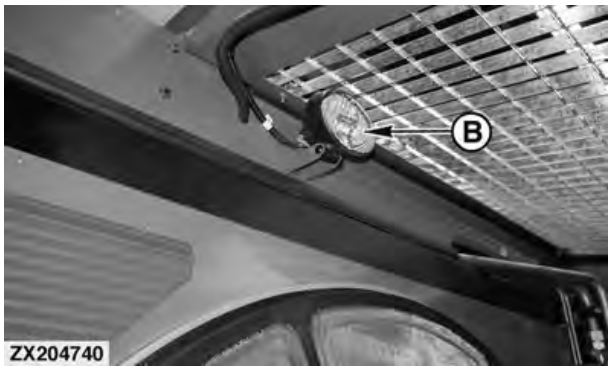
Remove and replace bulb.

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

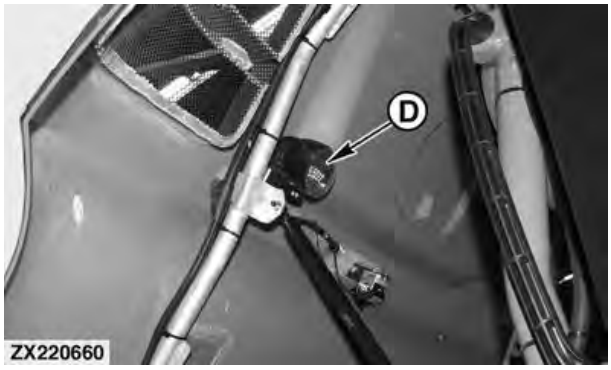
A—Service Light—Cutterhead
B—Service Light—Central Service Compartment
C—Service Light—Engine Compartment Side Door
D—Service Light—Engine Compartment Rear Door

ZX256108 —UN—09SEP15



ZX204740 —UN—07AUG13

ZX220659 —UN—06OCT14



ZX220660 —UN—06OCT14

OUCC002,00046FB -19-07SEP15-1/1

Replace Tail, Stop or Turn Lights

On Turn, Stop or Tail Lights (A): Disconnect wiring harness connector (B) from bulb assembly (C).

Turn bulb assembly counterclockwise and remove.

Remove and replace bulb.

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Push in bulb assembly and turn clockwise to install into housing and connect wiring harness.

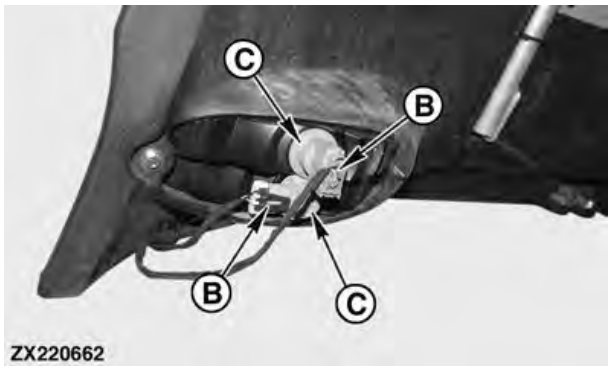
On Turn or Tail Lights (D): Remove screws (E) from lens cover (F).

Remove light bulb by pushing in and turning 1/8 turn in either direction.

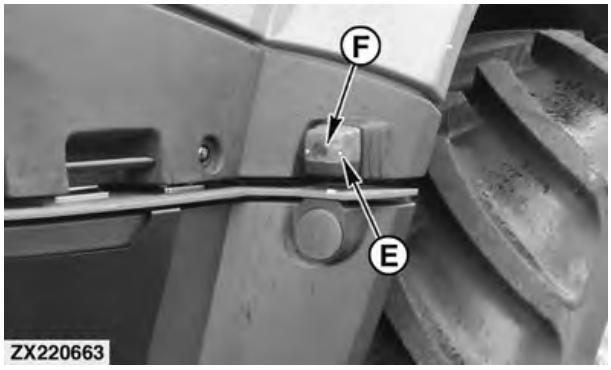
Install bulb and lens cover in reverse order.

A—Tail, Stop or Turn Lights
B—Connector
C—Bulb Assembly
D—Tail and Turn Light Extension
E—Screw
F—Lens Cover

ZX220661 —UN—06OCT14



ZX220662 —UN—06OCT14



ZX220663 —UN—06OCT14

OUCC002,00041B2 -19-25SEP14-1/1

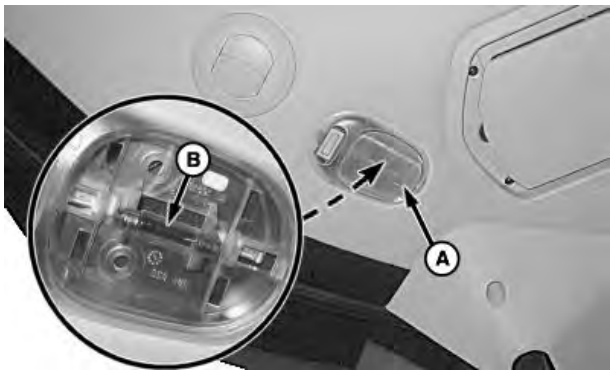
Replace Cab Interior Light

Remove lens cover (A) and replace bulb (B).

NOTE: Replacement light bulbs are sensitive to skin contact. Wear protective gloves or avoid touching light bulb surface.

Install bulb and lens cover in reverse order.

A—Lens Cover
B—Bulb



H96618 —UN—02JUN10

OUCC002,0003DAE -19-07AUG13-1/1

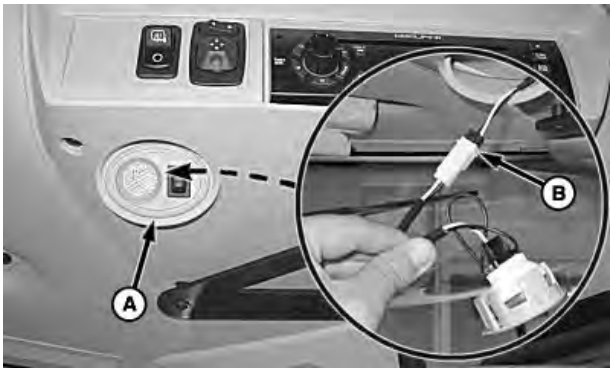
Replace Map Light

Remove map light assembly (A) and disconnect wiring harness connector (B).

Remove and replace map light assembly.

Install and orient map light assembly in reverse order.

A—Map Light Assembly **B—Connector**



H97965 —UN—13SEP10

OUCC002,0003DAF -19-07AUG13-1/1

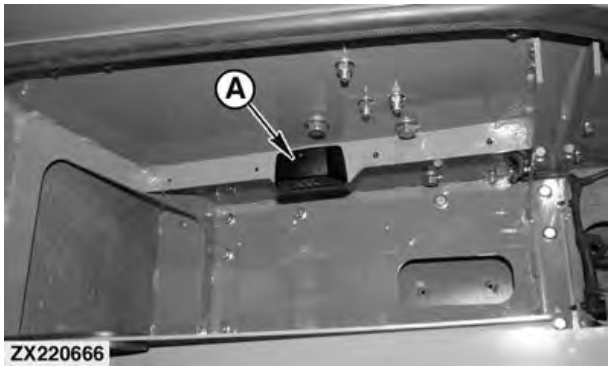
Replace Toolbox Compartment Light

Remove light assembly (A) and disconnect wiring harness connector.

Remove and replace light assembly.

Install light assembly in reverse order.

A—Toolbox Compartment Light Assembly



ZX220666 —UN—06OCT14

OUCC002,00041B4 -19-26SEP14-1/1

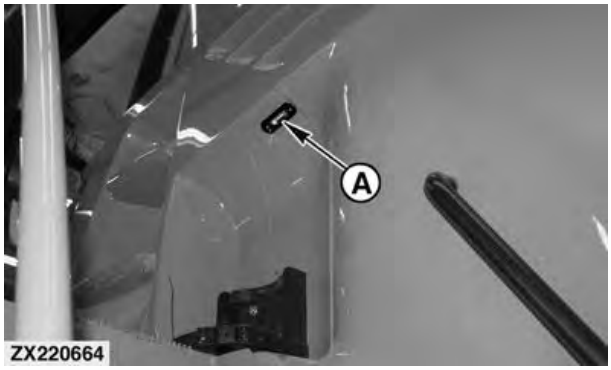
Replace Access Ladder Light

Remove light assembly (A) and disconnect wiring harness connectors (B).

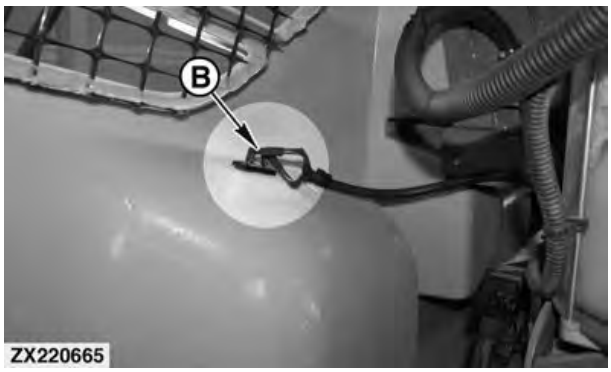
Remove and replace light assembly.

Install light assembly in reverse order.

A—Access Ladder Light Assembly **B—Connector**



ZX220664 —UN—06OCT14



ZX220665 —UN—06OCT14

OUCC002,00041B3 -19-26SEP14-1/1

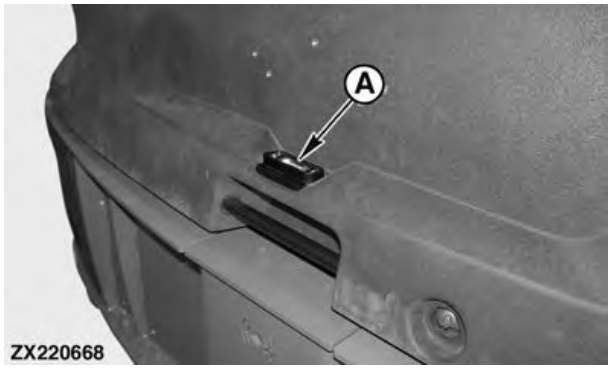
Replace License Plate Light

Remove light assembly (A) and disconnect wiring harness connector.

Remove and replace light assembly.

Install light assembly in reverse order.

A—License Plate Light Assembly



ZX220668 —UN—06OCT14

OUCC002,00041B6 -19-26SEP14-1/1

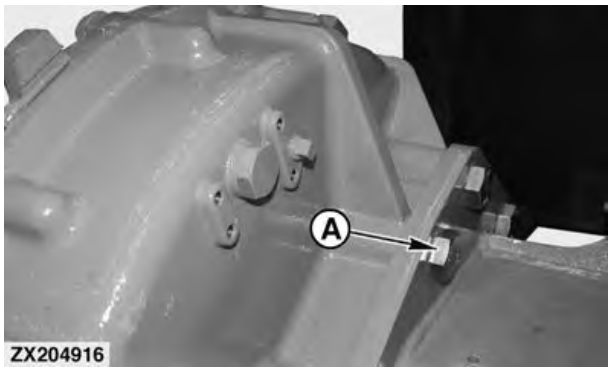
Check Final Drive Attaching Screws

IMPORTANT: During the first 50 hours of operation, tighten attaching screws at least every 10 hours of operation as follows:

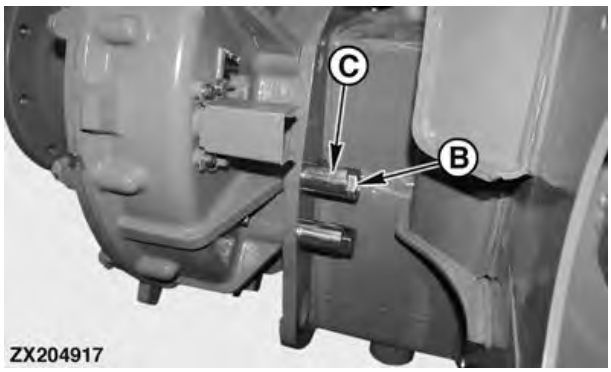
On Machines without Extensions:

- Tighten cap screws (A) without bushings to 387—473 N·m (285—349 lb·ft).
- Tighten cap screws (B) with bushings (C) to 434—806 N·m (320—594 lb·ft).

A—Cap Screw Without Bushing (10 Used)
B—Cap Screw With Bushing (4 Used)
C—Bushing



ZX204916 —UN—14AUG13



ZX204917 —UN—14AUG13

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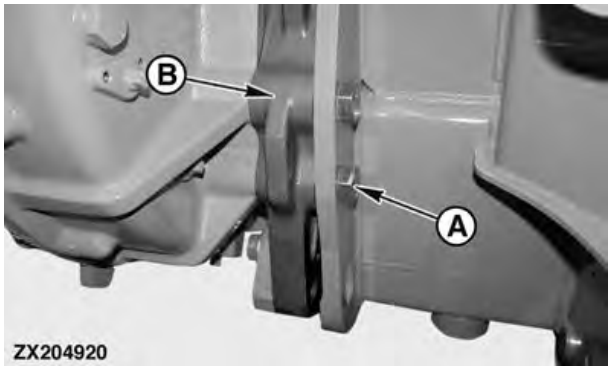
OUCC002,00046FC -19-07SEP15-1/3

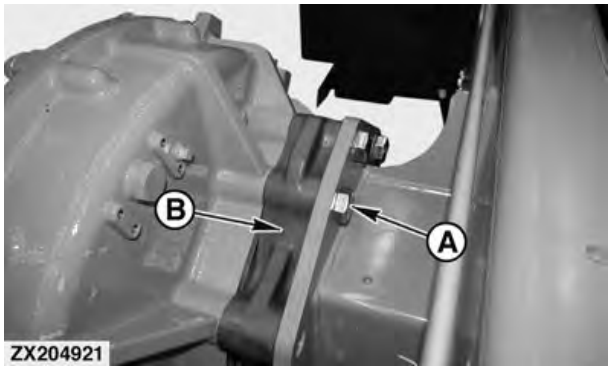
On Machines with Short Extensions:

- Tighten cap screws (A) of extension (B) to 387—473 N·m (285—349 lb·ft).
- Tighten nuts (C) to 192—288 N·m (141—212 lb·ft).

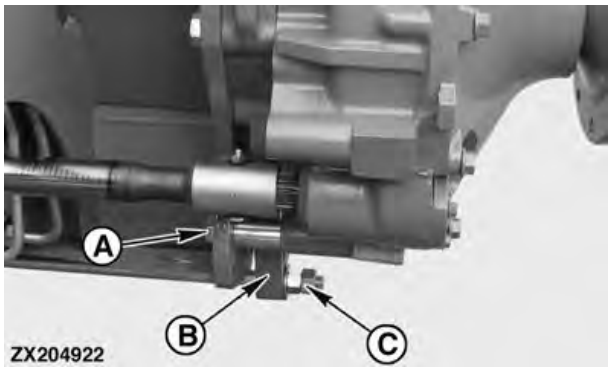
A—Cap Screw (14 Used)
B—Extension
C—Nut (4 Used)



ZX204920 —UN—14AUG13



ZX204921 —UN—14AUG13



ZX204922 —UN—29OCT14

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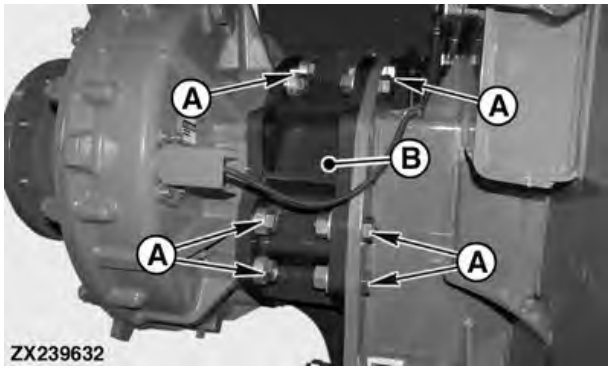
OUCC002,00046FC -19-07SEP15-2/3

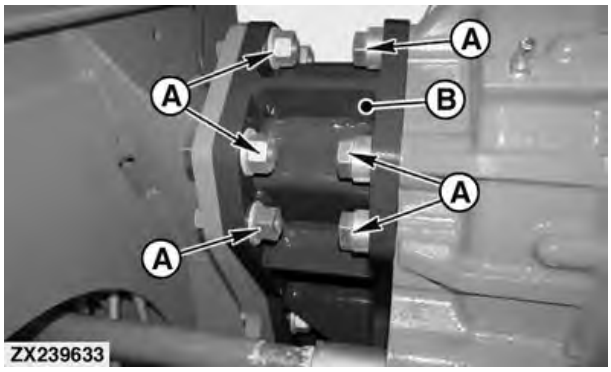
On Machines with Long Extensions (Dual Tires):

- Tighten cap screws (A) of extension (B) to 387—473 N·m (285—349 lb·ft).
- Tighten nuts (C) to 192—288 N·m (141—212 lb·ft).

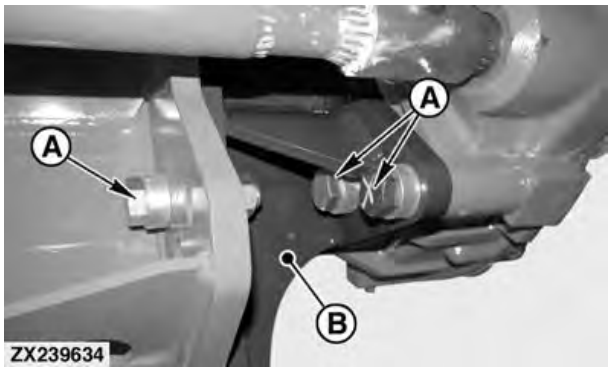
A—Cap Screw (28 Used)
B—Extension
C—Nut (4 Used)



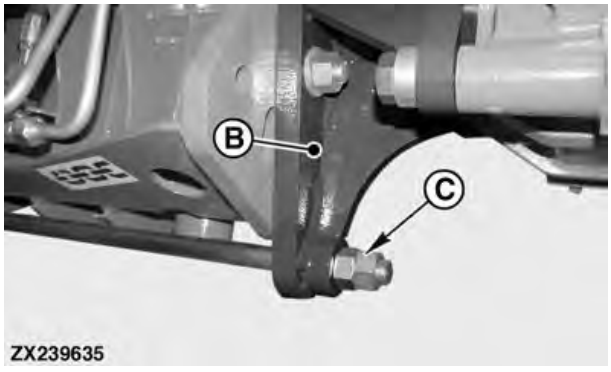
ZX239632 —UN—23MAR15



ZX239633 —UN—23MAR15



ZX239634 —UN—23MAR15



ZX239635 —UN—23MAR15

OUCC002,00046FC -19-07SEP15-3/3

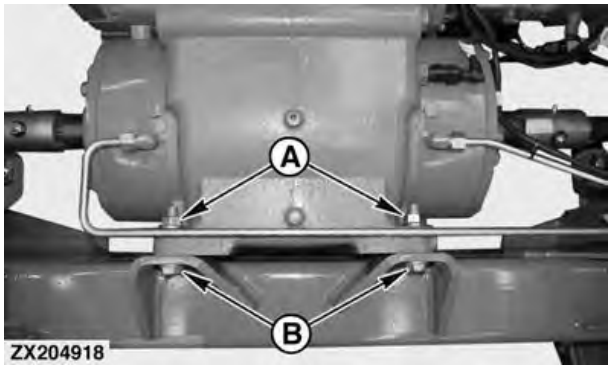
Check Transmission Attaching Screws

IMPORTANT: During the first 50 hours of operation, tighten attaching screws at least every 10 hours of operation as follows:

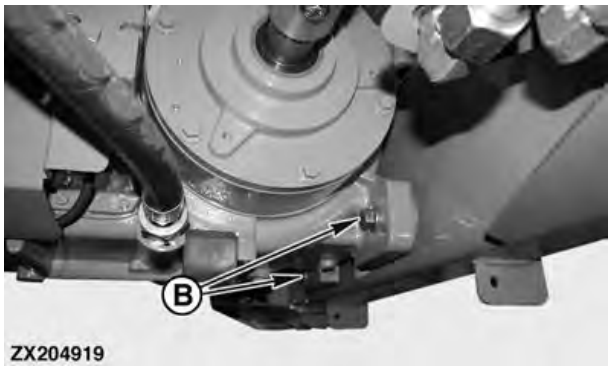
NOTE: ProDrive™ transmission attaching screws shown.

Tighten flange nuts (A) and flange screws (B) of ProDrive™ or Push Button Shift transmission to 320 N·m (235 lb·ft).

A—Flange Nut **B—Flange Screw**



ZX204918 —UN—14AUG13



ZX204919 —UN—14AUG13

OUCC002,0003DD8 -19-09SEP15-1/1

Rear Axle Toe-In

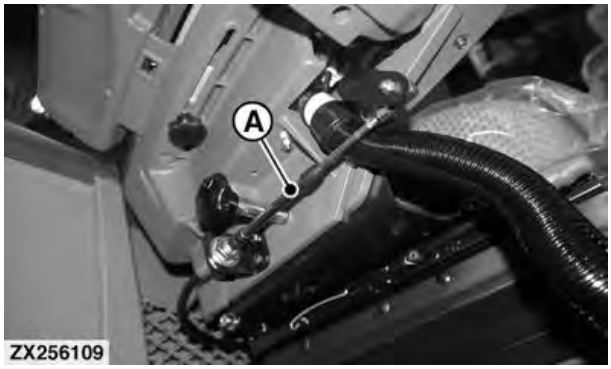
If machine is difficult to steer or if the rear wheel tires begin to wear on one side, have toe-in checked by your John Deere dealer.

OUCC002,0003DDA -19-13AUG13-1/1

Hydrostatic Drive — Adjusting Cable (Push Button Shift Transmission Only)

IMPORTANT: Adjusting cable (A) cannot be repaired. Have cable replaced and adjusted by your John Deere dealer.

A—Hydrostatic Drive Adjusting Cable



ZX256109 —UN—09SEP15

ZX256110 —UN—09SEP15

OUCC002,00046FD -19-07SEP15-1/1

Check Brake Fluid Reservoir (Push Button Shift Transmission Only)

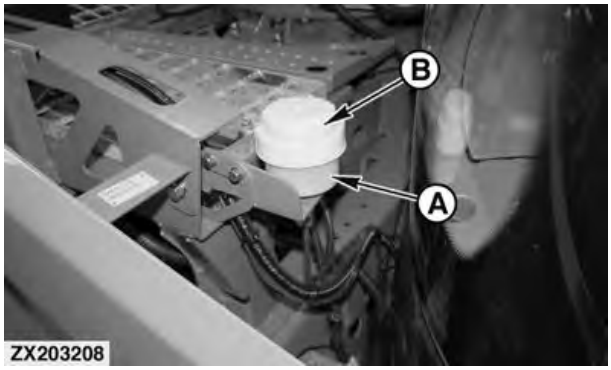
IMPORTANT: In case of any leakage see your John Deere dealer.

Use only brake fluid meeting SAE Standard J 1703 (DOT 3 or DOT 4).

Check fluid level every 250 hours of operation.

Use only specified brake fluid to top up.

A—Brake Fluid Reservoir **B—Reservoir Cap**



ZX203208 —UN—13JUL13

OUCC002,0003DDB -19-09SEP15-1/1

Check Park Brake Cylinder Cables (Push-Button Shift Transmission Only)

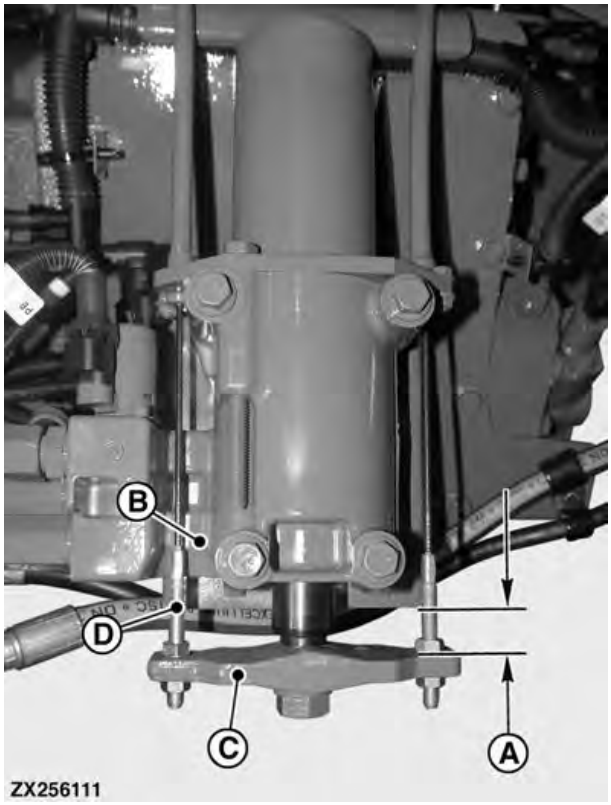
IMPORTANT: Engage park brake (piston extended - spring applied).

Measure and verify that distance (A) from actuator housing (B) to balancer (C) is approximately 33.5 to 36.5 mm (1.32 to 1.44 in) on both sides.

CAUTION: Park brake cylinder cables (D) are under extreme pressure. Cables MUST be adjusted by your John Deere dealer.

If cable (D) needs to be adjusted, see your John Deere dealer.

A—Distance
B—Actuator Housing
C—Balancer
D—Park Brake Cable



ZX256111 —UN—09SEP15

OUCC002,00046FE -19-07SEP15-1/1

Brake System

CAUTION: In case of any leakage or malfunction of the brake system see your John Deere dealer.

IMPORTANT: If you experience soft or spongy brakes, a loss of braking power or the park brake will not hold, see your John Deere dealer.

On Machines With Push Button Shift Transmission: Drum brakes are adjusted automatically when brake pedals are depressed. Further adjustment is not necessary.

On Machines With ProDrive™ Transmission: At least once a year, check the brake disk thickness, see your John Deere dealer.

OUCC002,0003DDC -19-13AUG13-1/1

Active Fill Control System (Option)

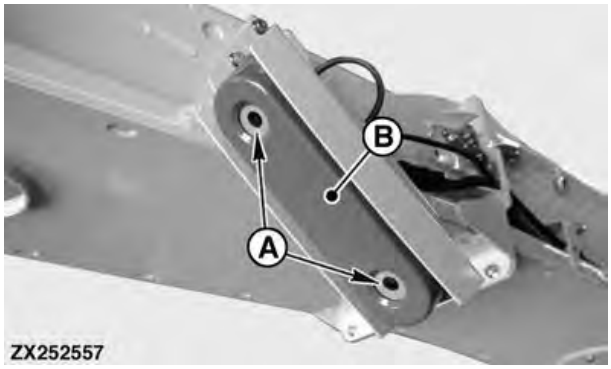
CAUTION: To avoid serious injury or death, shut OFF engine, set parking brake and remove key prior to cleaning camera.

Clean Camera:

Frequency of cleaning varies depending on a number of factors including operating conditions, weather, and crop conditions.

Clean camera lenses (A) using a soft, moistened cloth.

- **Machine With 8-Row Discharge Spout:**
  a. Tilt spout up from rest position to access camera.
  b. Turn engine off.
  c. Access engine hood by using step and handhold on left side of machine.
  d. Stand on center of engine hood to clean camera. For stability, hold on to working light grid.
- **Machine With 10 or 12-Row Discharge Spout:**
  a. Position discharge spout on right side of machine and lower it to lowest position to clean camera.



ZX252557 —UN—09SEP15

A—Window **B—Camera**

b. Turn engine off.
c. Use a raised platform as needed to access camera. For stability, hold on to working light grid.

OUCC002,00046C1 -19-03SEP15-1/1

AutoTrac™ RowSense™ System (Option)

CAUTION: To avoid serious injury or death, shut OFF engine, set parking brake and remove key prior to cleaning row sensor.

Clean Row Sensor:

Row sensor should be checked daily to see if cleaning is necessary.

Additionally check and if necessary adjust height of crop divider tip to avoid to much material accumulation on the sensor.

If material has accumulated on sensor it may prevent free movement and affect performance. To clean row sensor, remove debris from sensor and surrounding area at both sides (see arrows).

ZX1043903 —UN—30APR10

Check that sensor feelers move freely without obstruction.

OUCC002,00046C0 -19-03SEP15-1/1

Additive Dosing System (Option)

IMPORTANT: Before conducting any maintenance, look at the product label that is being used for any special handling procedures. Also check if there is any protective gear required to handle the product (face shield or goggles, chemically resistant apron, boots, respirator, or gloves).

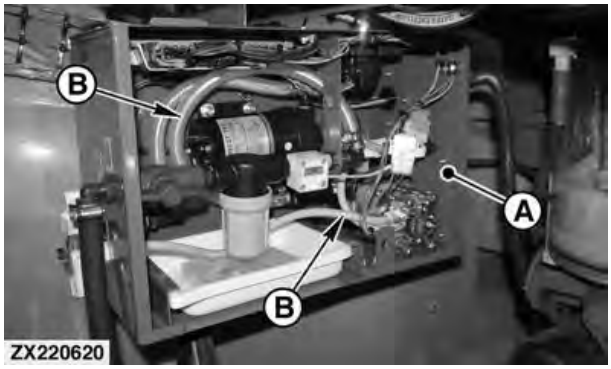
NOTE: To operate dosing system, refer to Additive Dosing System (Option) in Operating the Controls and Displays section.

Additive dosing system requires particular maintenance that must be daily or regularly carried out as follows:

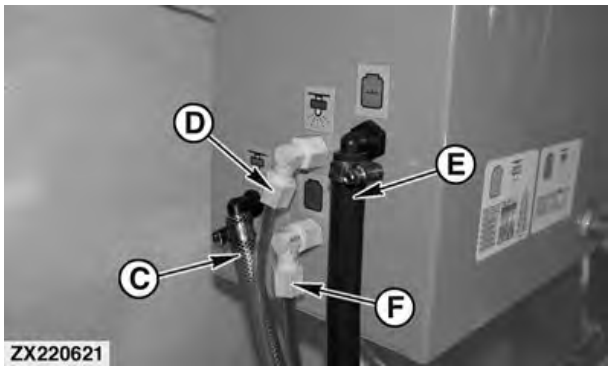
Daily—Inspect Hoses/Dosing Lines:

1. Open dosing system cabinet (A).
2. Check hoses (B), high/low volume dosing lines (C, D), and high/low volume tank lines (E, F) for damage or cracks. Replace if necessary.

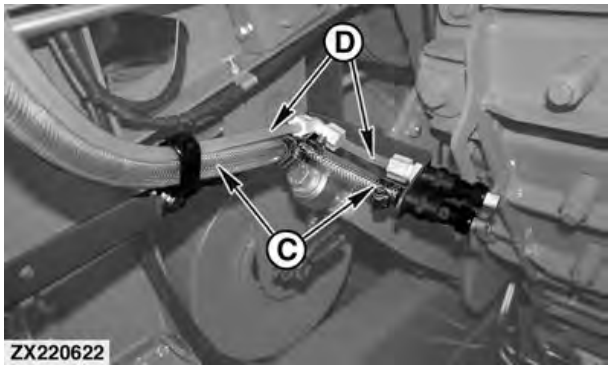
A—Cabinet
B—Hoses
C—Dosing Line—High Volume
D—Dosing Line—Low Volume
E—Tank Line—High Volume
F—Tank Line—Low Volume



ZX220620 —UN—06OCT14



ZX220621 —UN—06OCT14



ZX220622 —UN—06OCT14

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OUCC002,0004197 -19-17DEC14-1/5

Daily—Clean Dosing System:

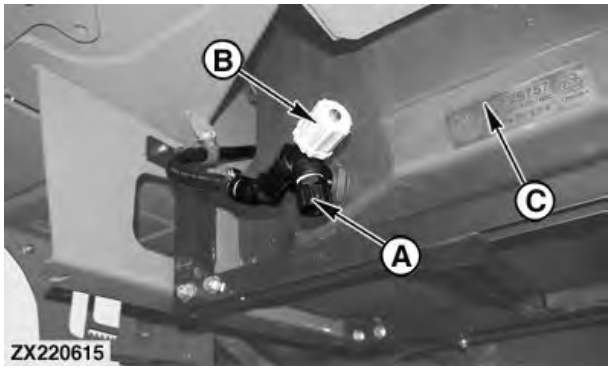
If bacterial inoculants are used, flush the system daily after every use.

1. Place suitable container underneath tank to collect tank content.
2. Remove plug (A) then open drain valve (B) of high volume tank (C). Remove all residual from the tank and consult the product label for storage or disposal.
3. Remove cover (D) of low volume tank (E).
4. Insert suitable hose to adapter fitting (F).
5. Open drain valve (G) of low volume tank (E). Remove all residual from the tank and consult the product label for storage or disposal.
6. Close drain valves (B, G).
7. Fill high volume tank (C) with approximately 20 L (5.3 gal.) clean water or low volume tank (E) with approximately 4 L (1 gal.) clean water.
8. Set high volume and/or low volume dosing system to AUTO or ON operating mode.
9. Activate Cleaning Mode.

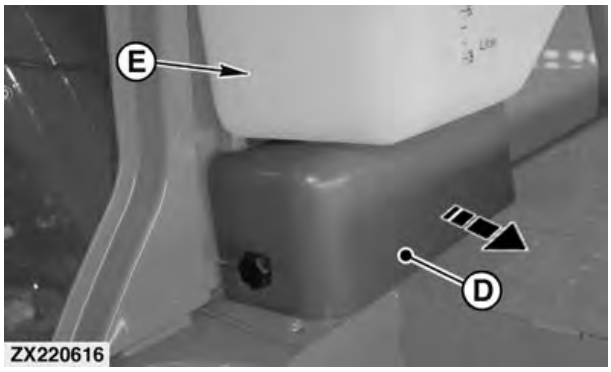
NOTE: Cleaning mode process takes 2 min. on high volume and 15 min. on low volume and TL system.

10. Press Clean Cancel button to cancel process, if necessary.

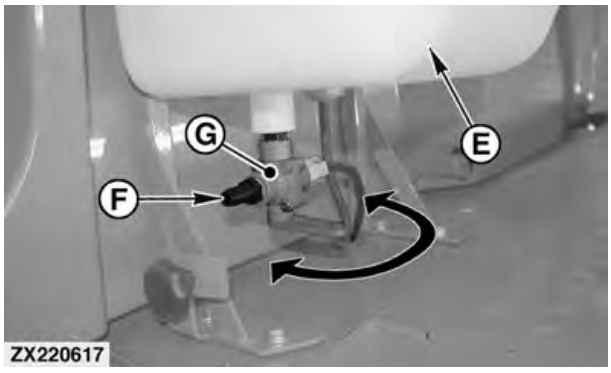
A—Plug
B—Drain Valve
C—High Volume Tank
D—Cover
E—Low Volume Tank
F—Adapter Fitting
G—Drain Valve



ZX220615 —UN—13NOV14



ZX220616 —UN—06OCT14



ZX220617 —UN—06OCT14

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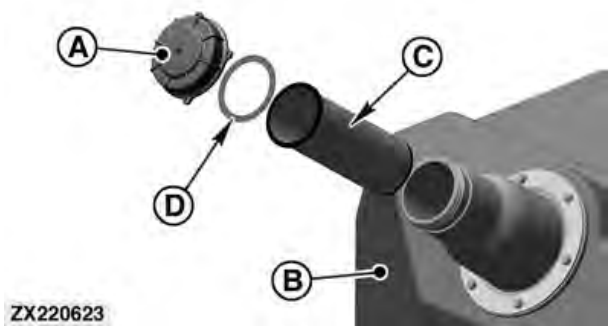
OUCC002,0004197 -19-17DEC14-2/5

Daily—Clean Filter and Tank Lid:

1. Open lid (A) from high volume tank (B) then clean filter (C).
2. Clean breather on lid (A), if necessary.
3. Check seal (D).
4. Close high volume circuit valve (E) then remove filter bowl (F).
5. Clean filter (G) and check seal (D).
6. Clean breather on lid (H) of low volume tank (I), if necessary.

A—Lid
B—High Volume Tank
C—Filter
D—Seal
E—Valve
F—Filter Bowl
G—Filter
H—Lid
I— Low Volume Tank



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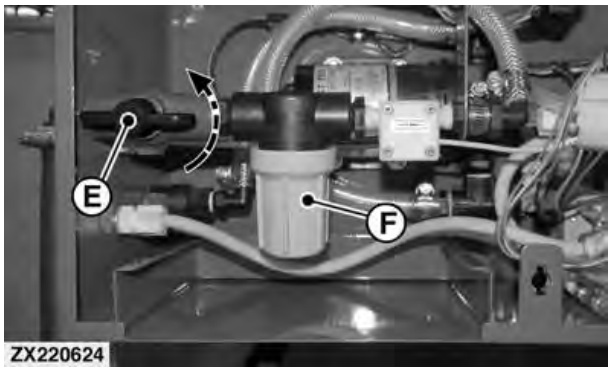
ZX220623 —UN—06OCT14



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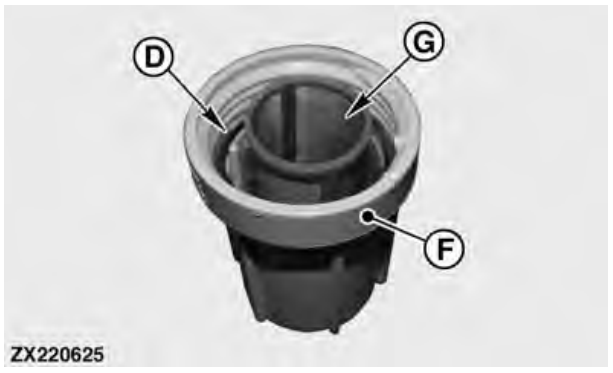
ZX220624 —UN—06OCT14



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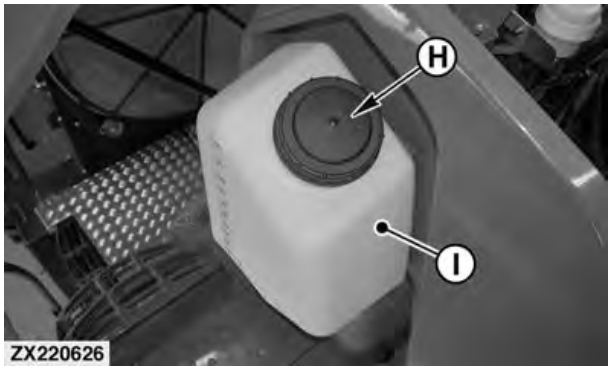
ZX220625 —UN—06OCT14



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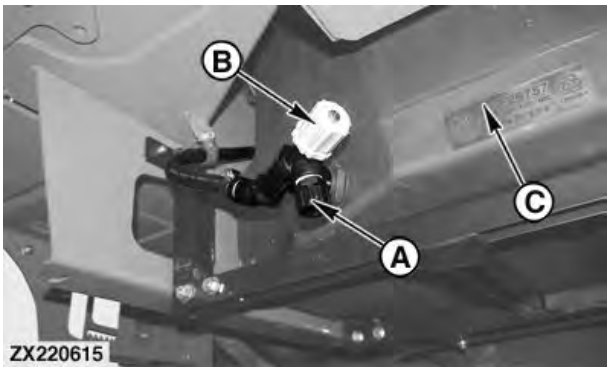
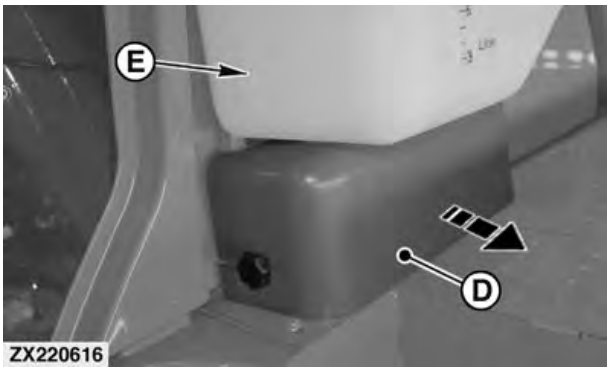


ZX220615 —UN—13NOV14



ZX220616 —UN—06OCT14

As Required—Clean Tank:

1. Place suitable container underneath tank to collect tank content.
2. Remove plug (A) then open drain valve (B) of high volume tank (C). Remove all residual from the tank and consult the product label for storage or disposal.
3. Remove cover (D) of low volume tank (E).
4. Insert suitable hose to adapter fitting (F).
5. Open drain valve (G) of low volume tank (E). Remove all residual from the tank and consult the product label for storage or disposal.
6. Open relevant tank lid (H).
7. Place suitable container underneath tank to collect the rinse water. Use a low pressure hose 4 bar (400 kPa; 60 psi) to rinse the inside of the tank.
8. Close drain valves (B, G) and install removed parts back in place.

As Required—Prime Dosing System:

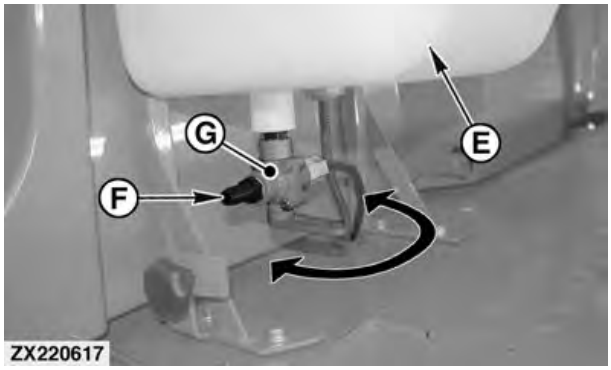
Prime dosing system every time the tank runs dry, components in dosing cabinet has been removed, or the system was not operated for day as follows:

1. Set high volume and/or low volume dosing system to AUTO or ON operating mode.
2. Activate Cleaning Mode.
3. Let the water run until no bubbles are noticed in the lines.
4. Press Clean Cancel button to cancel process, if necessary.

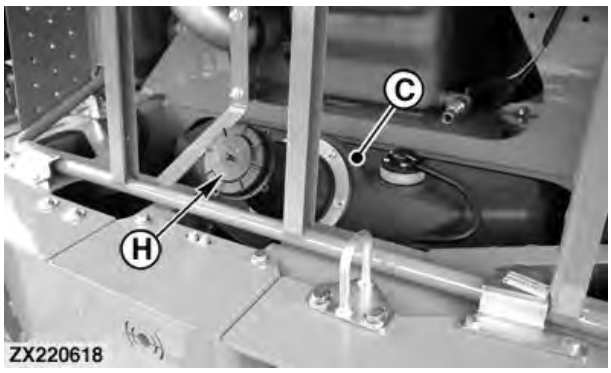
Annually—Sanitize Dosing System:

To keep the dosing system free of plugged lines and clogged tips, sanitize the low volume dosing circuit at least once a year as follows:

1. With the low volume tank clean and empty, place 30—40 ml (or 2—3 tablespoons) of 5% chlorine bleach in the tank.
2. Add 4 L (1.0 gal.) of warm water.



ZX220617 —UN—06OCT14



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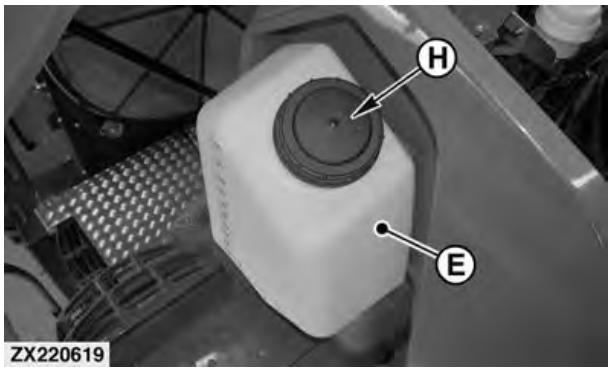


ZX220619 —UN—06OCT14

A—Plug
B—Drain Valve
C—High Volume Tank
D—Cover
E—Low Volume Tank
F—Adapter Fitting
G—Drain Valve
H—Tank Lid

Continued on next page

OUCC002,0004197 -19-17DEC14-4/5

3. Install the largest tip (**TXVK4**) into the nozzle holder (see **Change Additive Dosing System Nozzle** in this section.
4. Set high volume low/volume dosing system to AUTO or ON operating mode.
5. Place nozzle and holder into a 20 L (5 gal.) empty container and cover the container to prevent fluid from being spilled on the machine.
6. Activate Cleaning Mode. A 15 minutes cleaning mode is automatically initiated.
7. After the cleaning process is complete, rinse tank thoroughly and fill with 4 L (1.0 gal.) of clean warm water. Run the system for another clean mode interval.
8. Drain off any remaining water.

NOTE: For winter storage run the system dry for 15 minutes to get water out of the line between the tank and dosing cabinet.

OUCC002,0004197 -19-17DEC14-5/5

Change Additive Dosing System Nozzle

Several additive dosing nozzles of different sizes are stored in the dosing cabinet located in the service compartment. Unscrew knob (A) then open cabinet door (B).

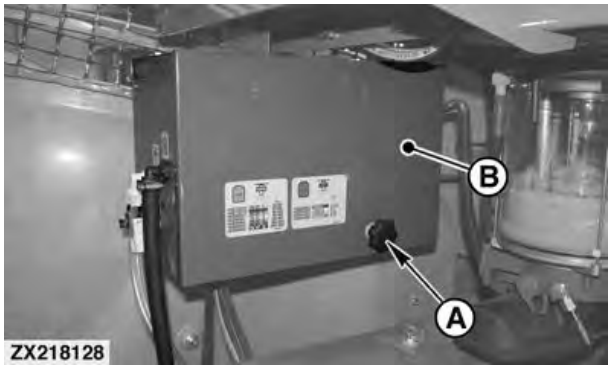
NOTE: A sticker on door (B) indicates for each dosing system (low or high volume) the type, the size, and the part number of each nozzle stored in the cabinet.

Two nozzle boxes are stored in the container (C):

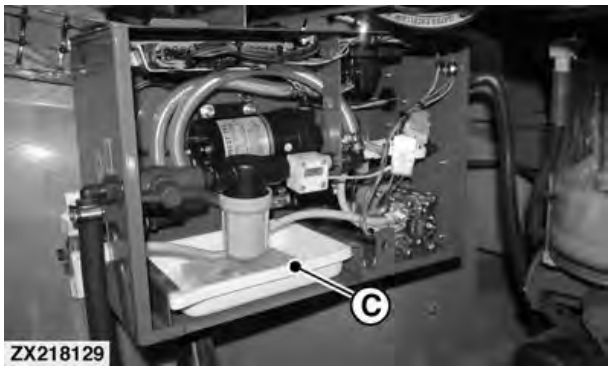
- The box (D) contains nozzles (E) for high volume dosing system purpose only.
- The box (F) contains nozzles (G) for low volume dosing system purpose only.

IMPORTANT: Do not invert nozzle type. Use nozzle type (E) with deflector for high volume dosing system and nozzle type (G) with flat face for low volume dosing system only.

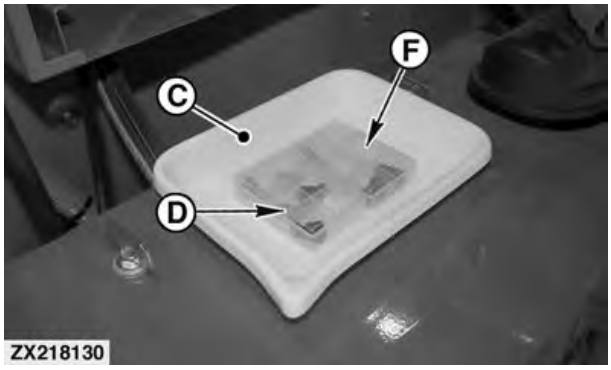
A—Knob
B—Cabinet Door
C—Container
D—Box—High Volume Nozzle
E—Nozzle—High Volume
F—Box—Low Volume Nozzle
G—Nozzle—Low Volume



ZX218128 —UN—06OCT14



ZX218129 —UN—06OCT14



ZX218130 —UN—06OCT14

ZX220608 —UN—06OCT14

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OUCC002,0004C99 -19-14JUN16-1/3

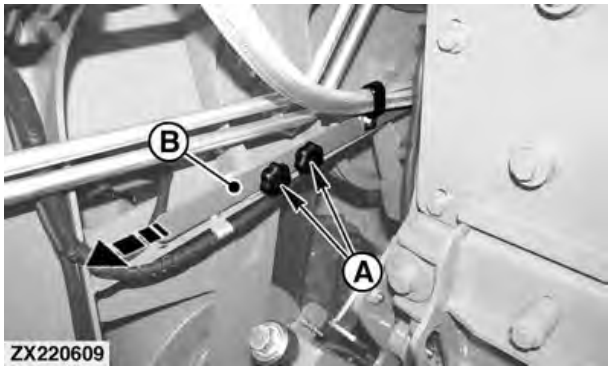
To change the nozzle proceed as follows:

1. Remove the two knobs (A) from nozzle holder (B) on left-hand side of blower.
2. Slide holder (B) away from blower side to reach the nozzle line (C) for high volume system and (D) for low volume system.

NOTE: A sticker identifying the high volume nozzle line (C) and the low volume nozzle line (D) is located on side of cabinet.

3. Remove nozzle cap (E) from fitting (F) then remove nozzle (G) or (H).

A—Knob
B—Holder
C—High Volume Nozzle Line
D—Low Volume Nozzle Line
E—Cap
F—Fitting
G—Nozzle—Low Volume
H—Nozzle—High Volume



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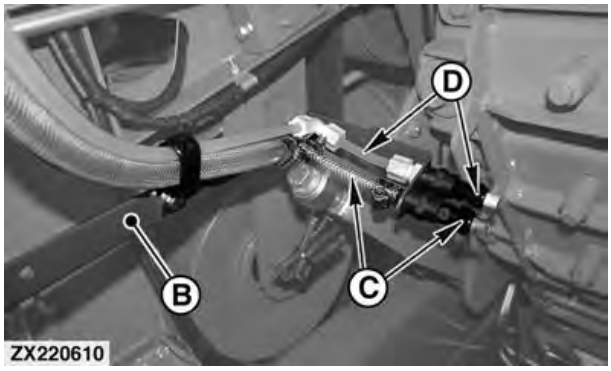

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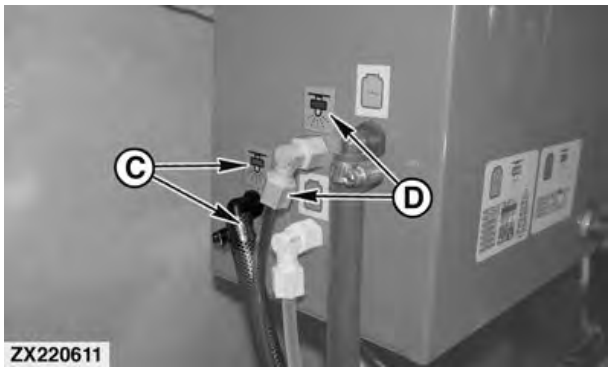

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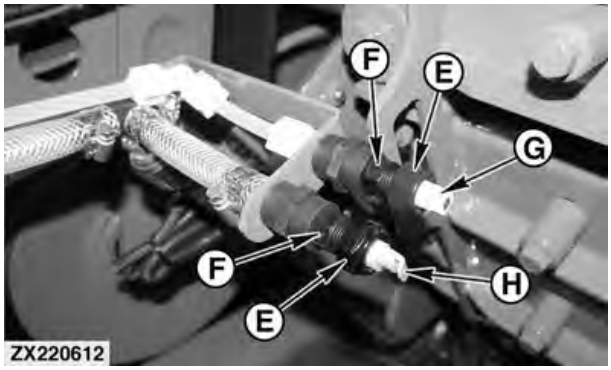

ZX220612 —UN—06OCT14

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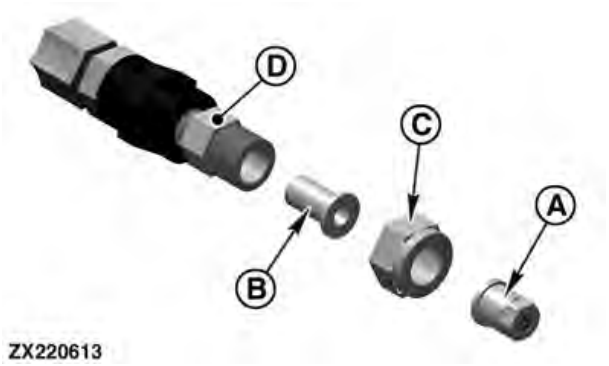
OUCC002,0004C99 -19-14JUN16-2/3

4. Install desired nozzle tip (A), screen (B), and cap (C) on fitting (D) in reverse order as removed.

IMPORTANT: Thoroughly clean screen (B) before installation. Clean off any debris and soak in warm water with a mild soap if necessary.

IMPORTANT: When changing nozzle, always apply new TEFLON sealing compound on fitting thread (D) as shown.

5. Install nozzle holder back in place and to select the new nozzle size refer to relevant Additive Dosing System Page (see **Additive Dosing System Page—High Volume (Option)** or **Additive Dosing System Page—High and Low Volume (Option)** in Operating Controls and Displays section).
6. After changing a low volume nozzle size, proceed to the low volume flow rate calibration (see **Interactive Calibration Procedures** in this section).



A—Tip
B—Screen
C—Cap
D—Fitting

OUCC002,0004C99 -19-14JUN16-3/3

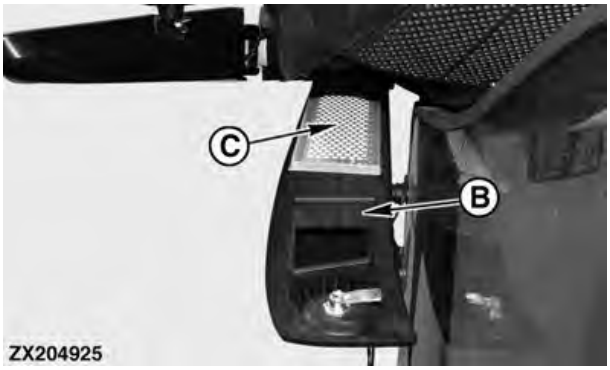
Replace Fresh Air Filter

NOTE: Fresh air filter may require cleaning sooner in very dusty conditions.

Turn knob (A) and lower access cover (B). Remove fresh air filter (C) to clean or replace.

A—Knob
B—Cover
C—Fresh Air Filter

ZX204924 —UN—14AUG13



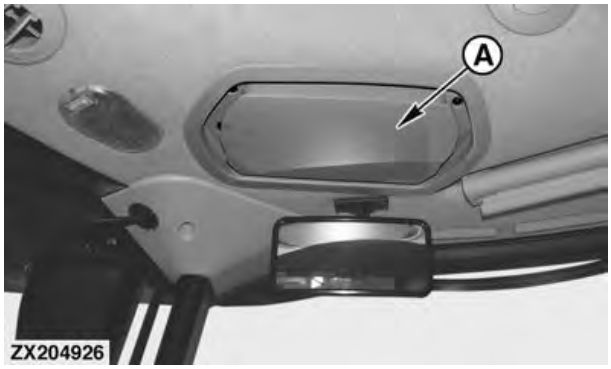
ZX204925 —UN—14AUG13

OUCC002,0003DDE -19-13AUG13-1/1

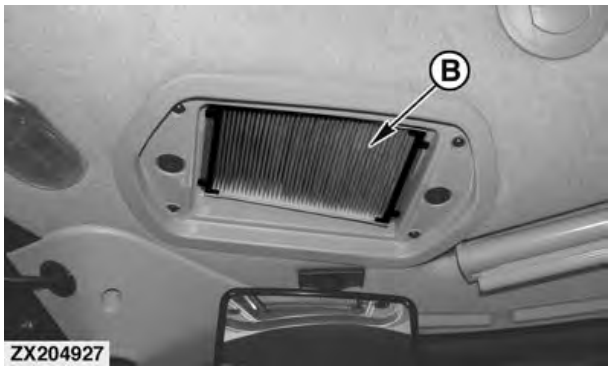
Replace Recirculation Air Filter

Remove cover (A). Remove recirculation air filter (B) to clean or replace.

A—Cover **B—Recirculation Air Filter**



ZX204926 —UN—14AUG13



ZX204927 —UN—14AUG13

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Check Refrigerant Level

IMPORTANT: The air-conditioning system operates using R134a refrigerant (tetrafluorethane). This substance does not contain any chlorine atoms, so it does not have a detrimental effect on the ozone in the Earth's atmosphere.

Even so, the refrigerant must never be discharged straight into the air. It must be trapped in a recycling unit. Therefore do not separate any line connections and have service and repair work done only by your John Deere dealer having appropriate recovery or recycling equipment available.

Regularly check refrigerant level. With air-conditioning system controls set for maximum cooling and engine running, check if diagnostic trouble code **ATC 000871.18** displayed.

If diagnostic trouble code **ATC 000871.18** is displayed, refrigerant level is low and system should be recharged by your John Deere dealer.

ZX256112 —UN—09SEP15

A—Receiver-Drier

OUCC002,00046FF -19-07SEP15-1/1

Replace Blower Wear Plate

The blower bottom consists of two welded frames (A) and (B) with wear plates (C) and (D) located at the rear of the discharge spout.

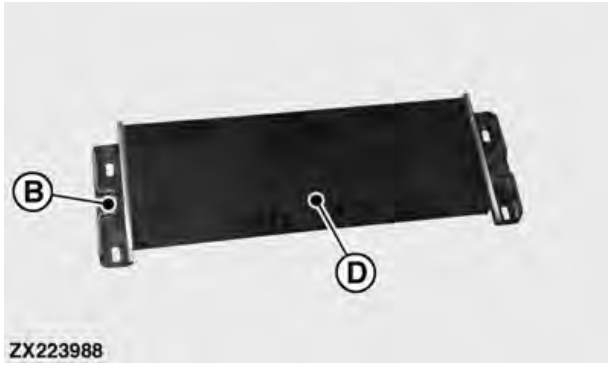
NOTE: Blower bottom is accessible from the central service compartment.

The wear plates (C) and (D) are made of wear-resistant steel. Frames (A) are also used to adjust clearance between blower paddles and wear plate (see **Replace Blower Paddles** in this section).

A—Lower Frame
B—Upper Frame
C—Wear Plate
D—Wear Plate

ZX223986 —UN—04NOV14

ZX223987 —UN—04NOV14



ZX223988 —UN—04NOV14

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OUCC002,00041F1 -19-04NOV14-1/4

CAUTION: Before servicing or adjusting the machine, disengage all drives, shut off engine and wait until all moving parts have stopped.

IMPORTANT: Blower wear plates are heavy assemblies. Be careful when removing and installing.

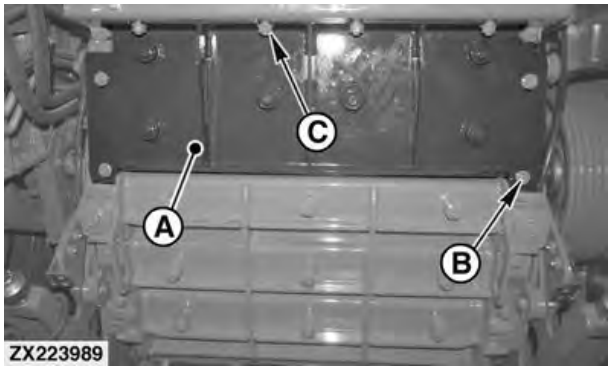
NOTE: Before installing new parts, thoroughly clean inside of blower.

To replace the upper or lower wear plates, proceed as follows:

1. **Remove Upper Wear Plate Frame:**

   Support frame (A) then remove the four attaching screws (B) and the four attaching flange nuts (C).
2. Remove the wear plate locking screws (D.
3. Remove wear plate (E) from frame (A).
4. Attach new wear plate (E) to frame (A) using locking screws (D) as shown.
5. Tighten locking screws (D) to 60 N·m (44 lb.-ft.).

A—Frame
B—Attaching Screw
C—Flange Nut
D—Locking Screw
E—Wear Plate



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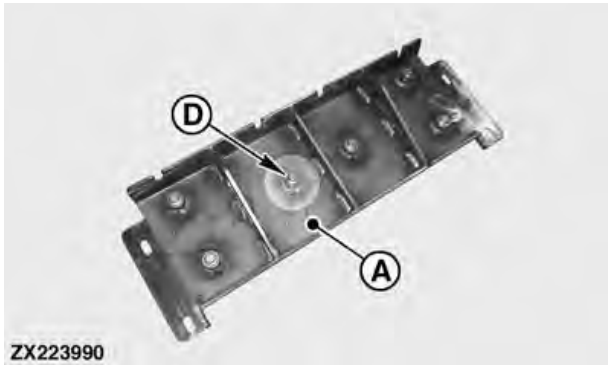

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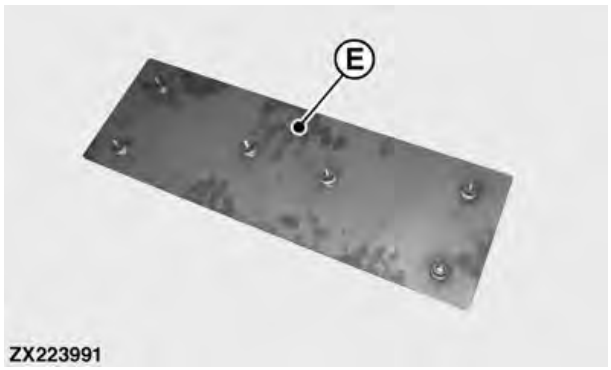

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ZX223991 —UN—04NOV14

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OUCC002,00041F1 -19-04NOV14-2/4

6. **Remove Lower Wear Plate Frame:**

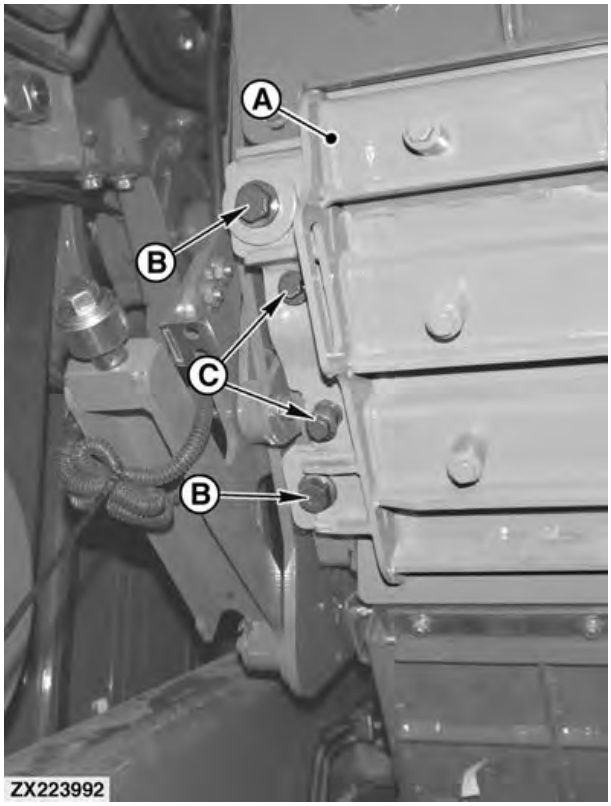
   Support frame (A) then remove the four attaching screws (B) and loosen the four attaching screws (C).

IMPORTANT: Loosen attaching screws (C) to allow frame (A) installation with a new wear plate (F).

NOTE: Screws (C) are secured with counter-nuts.

7. Remove the wear plate locking screws (D) with their bushings (E).
8. Remove wear plate (F) from frame (A).
9. Attach new wear plate (F) to frame (A) using locking screws (D) and bushings (E) as shown.
10. Tighten locking screws (D) to 110 N·m (81 lb.-ft.).

A—Frame
B—Attaching Screw
C—Attaching Screw
D—Locking Screw
E—Bushing
F—Wear Plate



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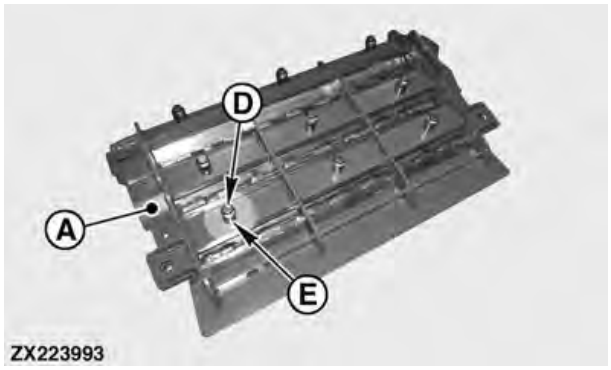

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ZX223994

ZX223994 —UN—04NOV14

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11. **Install Lower Wear Plate Frame:**

IMPORTANT: To install the lower frame (A) it is advisable to loosen all blower paddle fixing screws.

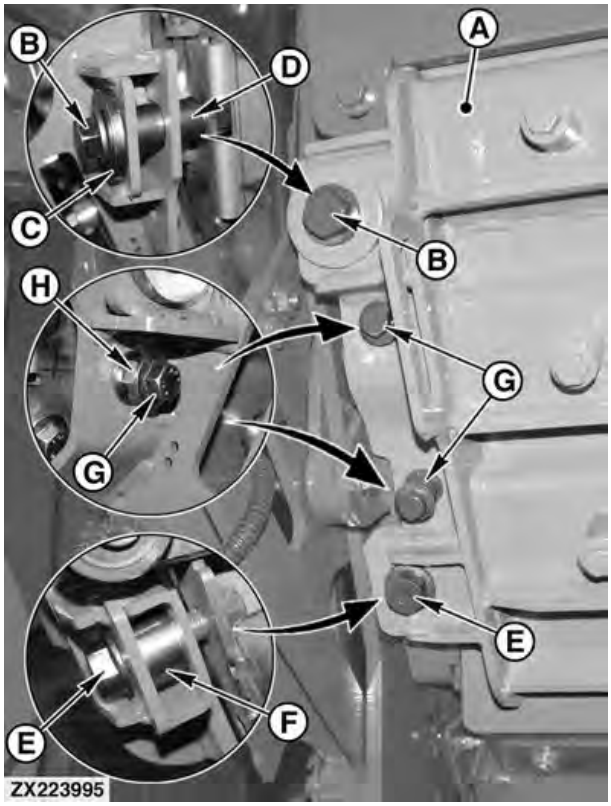
On both sides, install lower frame assembly (A) with upper attaching screws (B), washer (C), and bushing (D), as shown.

12. Install lower attaching screw (E) with bushing (F) as shown.
13. Tighten screws (B) and (E) to 250 N·m (184 lb.-ft.).
14. Tighten screws (G) until they bottom then secure with counter-nuts (H).

IMPORTANT: Do not overtighten screws (G).

15. Adjust blower paddles, see **Replace and Adjust Blower Paddles** in this section.
16. Install upper wear plate frame (I) back in place.
17. Tighten attaching screws (J) and flange nuts (K) to 100 N·m (74 lb.-ft.).

A—Lower Frame
B—Attaching Screw—Upper
C—Washer
D—Bushing
E—Attaching Screw—Lower
F—Bushing
G—Screw
H—Counter-Nut
I— Upper Wear Plate Frame
J—Attaching Screw
K—Flange Nut



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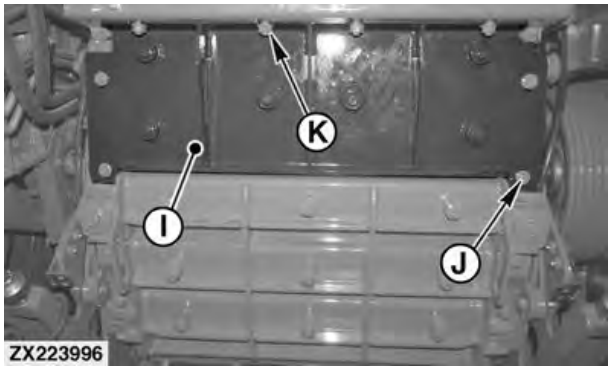

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OUCC002,00041F1 -19-04NOV14-4/4

Replace Discharge Tower Wear Plates

ZX204946 —UN—03SEP13

ZX284049 —UN—18JUN16

The discharge tower is equipped with specially coated wear plates (A).

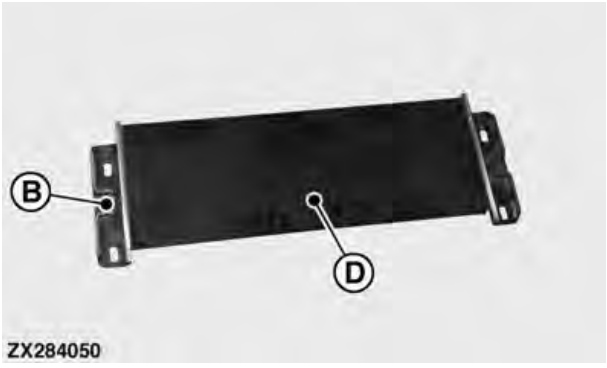
IMPORTANT: It is NOT allowed to operate the machine without discharge tower wear plates installed!

NOTE: A service hatch is provided to ease wear plate condition check.

To replace the wear plates (A), remove first the blower wear plate frames (B) and (C). Refer to **Replace Blower Wear Plate** section.

NOTE: Check frame wear plates (D) for wear conditions.

A—Discharge Tower Wear Plate
B—Upper Frame
C—Lower Frame
D—Wear Plate



ZX284050 —UN—18JUN16

ZX284051 —UN—18JUN16

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OUCC002,0004C94 -19-18JUN16-1/2

Replace discharge tower wear plates as follows:

1. Open cover (A) on discharge tower (B).

CAUTION: Wear plates are not easy to handle and weight about 20.2 kg (44.5 lb). Wear plates can damage blower paddles. To avoid damage install protection on blower paddles. To remove wear plates from discharge tower, use suitable lifting device.

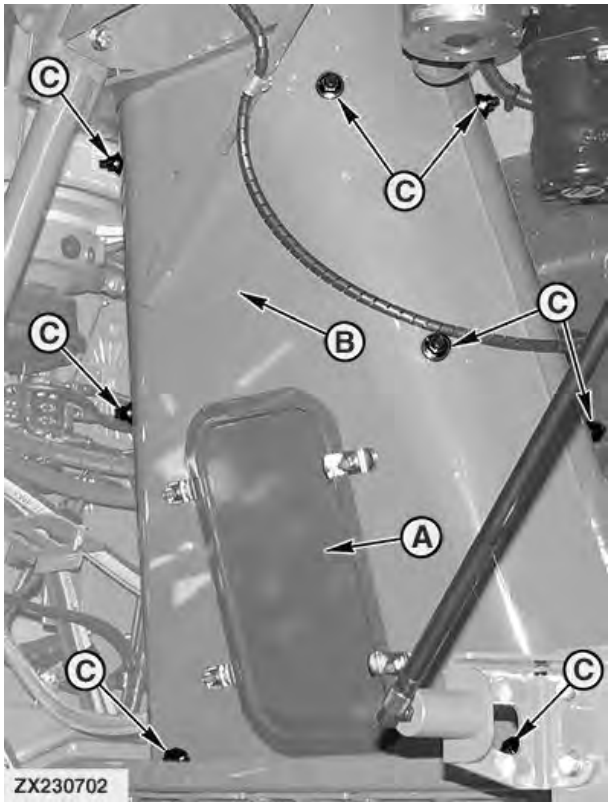
2. Remove nuts (C) outside discharge tower (B) then remove one after the other every wear plate inside discharge tower (B).
3. Take out wear plates (D) slowly from discharge tower (B) as shown.
4. Install discharge tower wear plates one after the other.

IMPORTANT: First install front wear plates then install rear wear plates, without gap between the wear plates.

5. Install attaching nuts (C) and control position of wear plates inside the discharge tower.
6. Tighten nuts (C) to **30 N·m (22.1 lb·ft)**.

Install the blower wear plate frames back in place. Refer to **Replace Blower Wear Plate** section.

A—Cover
B—Discharge Tower
C—Nut
D—Wear Plate



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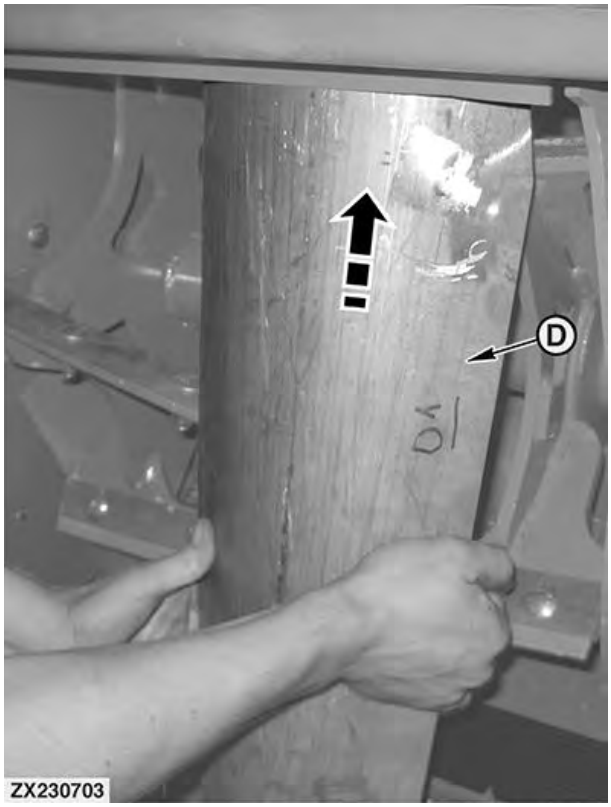

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OUCC002,0004C94 -19-18JUN16-2/2

Replace and Adjust Blower Paddles

CAUTION: Before servicing or adjusting the machine, disengage all drives, shut off engine and wait until all moving parts have stopped.

IMPORTANT: Only use original blower paddles.

The blower paddle replacement must be done in the following sequence:

1. Replace Blower Paddles
2. Adjust Blower Paddles (with special tool or with feeler gauge)
3. Adjust Outlet Scraper
4. Adjust Inlet Scraper

Proceed as follows:

Replace Blower Paddles

1. Remove wear plate frame (A).
2. Open service cover (B) to ease access for the blower paddle adjustment.
3. Remove fixing screws (C) and paddle (D).

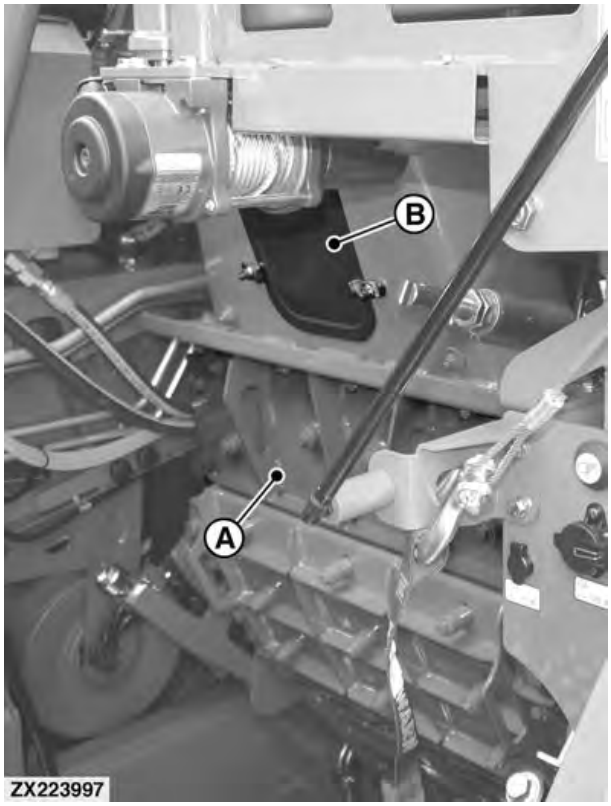
IMPORTANT: Note orientation of the screws (C).

4. Install the paddle (D) in such a way that the treated part (E) and the rounded head of fixing screws (C) are facing the blower rotating direction as shown (see arrow).

IMPORTANT: Do not tighten the screws (C) at this stage.

NOTE: Serrated paddles are available through regular spare parts channel. Contact your John Deere dealer.

A—Wear Plate Frame—Upper
B—Service Cover
C—Screw
D—Paddle
E—Treated Area



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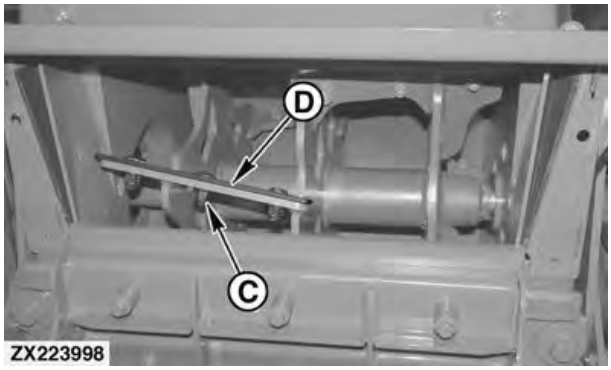

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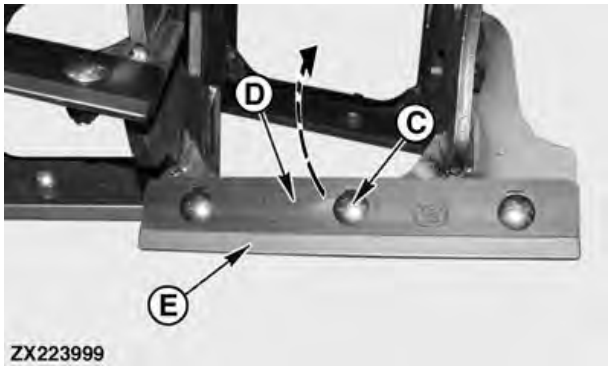

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OUCC002,00041F6 -19-13NOV14-1/6

Adjust Blower Paddles (with Special Tool)

For true running and good flow of material, all paddles (A) must be installed parallel, with a clearance (X) of 1.5 to 3 mm (0.06 to 0.12 in.) between paddles (A) and wear plate (B).

A special tool (C) with a nominal thickness of 1.5 mm (0.06 in.) and an extension (D) of 1.5 mm (0.06 in.) thickness are available.

- For GRASS, use tool (C) with extension (D)—3 mm (0.12 in.).
- For CORN, use tool (C) alone—1.5 mm (0.06 in.).

NOTE: In difficult situations (for example, high sugar content crops) the clearance can be increased.

Adjust paddle (A) with special tool (C) as follows:

1. Slide and center tool (C) underneath the blower paddle to adjust.
2. Align notches (E) of tool (C) with front edge of wear plate (B)—see arrow.

NOTE: Use hook of tool (C) to keep tool in position.

3. Align tip of blower paddle with positioning mark (F) of tool (C) to adjust paddle at the right clearance.

NOTE: If extension (D) is used, align tip of paddle with edge (G) of extension (D).

4. Slightly tighten paddle fixing screws then check the clearance (X) over all the width of the paddle.

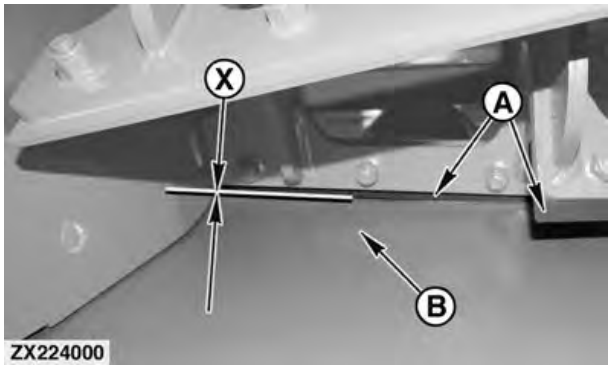
IMPORTANT: Check clearance (X) by rotating blower rotor back and forth while sliding tool (C) left to right.

5. Tighten paddle fixing screws to 95 N·m (70 lb.-ft.).

IMPORTANT: Make sure that blower rotor rotates freely.

6. Adjust outlet and inlet scrapers, if necessary.

A—Paddle
B—Wear Plate
C—Special Tool
D—Special Tool Extension
E—Notch
F—Positioning Mark
G—Extension Edge
X—1.5 to 3 mm (0.06 to 0.12 in.)



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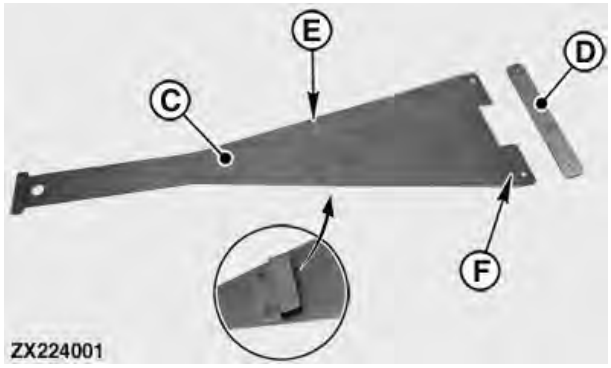

ZX224001

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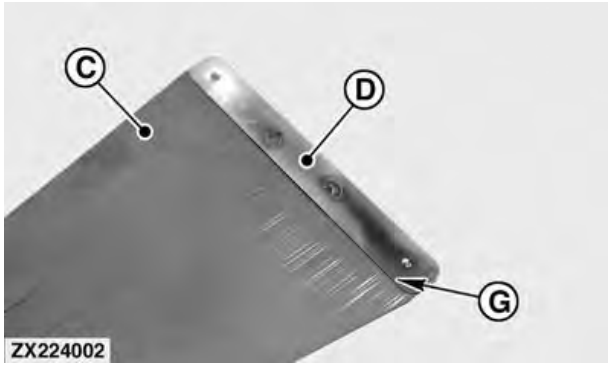
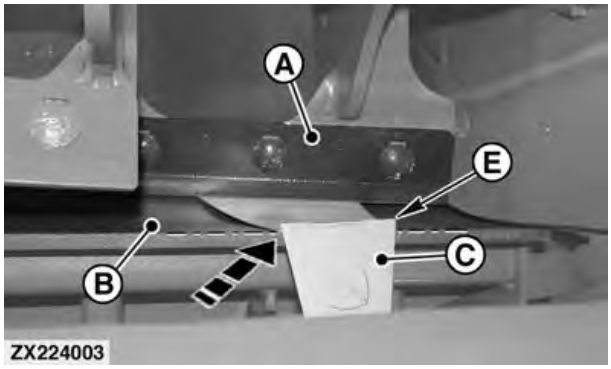


ZX224002

ZX224002 —UN—05NOV14



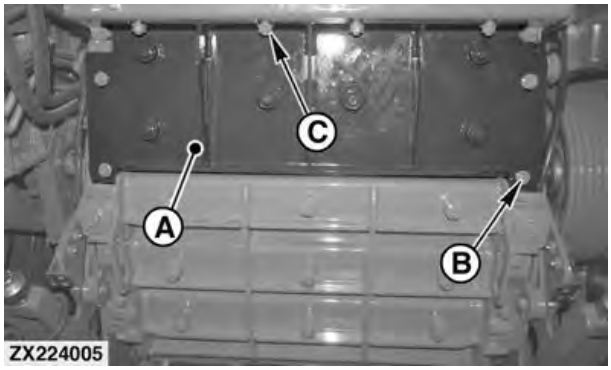
ZX224003

ZX224003 —UN—05NOV14

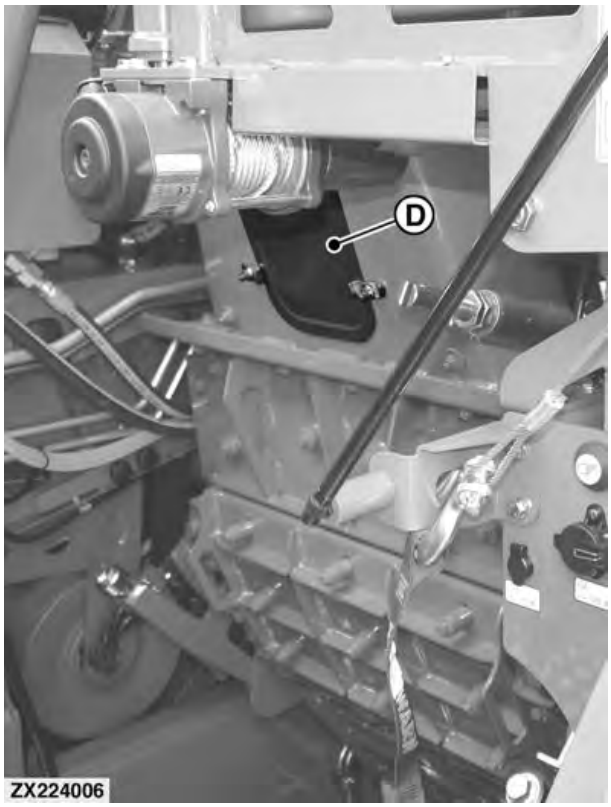
Continued on next page

7. After blower paddle replacement, reinstall upper wear plate frame (A) back in place.
8. Tighten attaching screws (B) and flange nuts (C) to 100 N·m (74 lb.-ft.).
9. Install service cover (D) back in place.

A—Wear Plate Frame—Upper
B—Screw
C—Flange Nut
D—Service Cover



ZX224005 —UN—05NOV14



ZX224006 —UN—05NOV14

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OUCC002,00041F6 -19-13NOV14-3/6

Adjust Blower Paddles (with Feeler Gauge)

For true running and good flow of material, all paddles (A) have to be installed parallel, with a clearance (X) of 1.5 to 3 mm (0.06 to 0.12 in.) between paddles (A) and wear plate (B).

Adjust paddle (A) with feeler gauge as follows:

1. Place the paddle to adjust at a distance (Y) of 147.82 mm (5.8 in.) from front edge of wear plate (B) as shown.

IMPORTANT: Follow the shape of the wear plate (B) and measure distance (Y) at the middle of the paddle (A).

2. Use a feeler gauge for adjustment.
   - For GRASS, adjust to 3 mm (0.12 in.).
   - For CORN, adjust to 1.5 mm (0.06 in.).

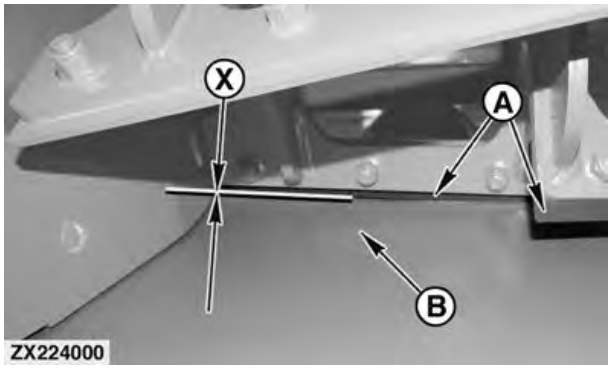
NOTE: To facilitate adjustment, it may be advisable to use two feeler gauges per paddle.

NOTE: In difficult situations (for example, high sugar content crops) the clearance can be increased.

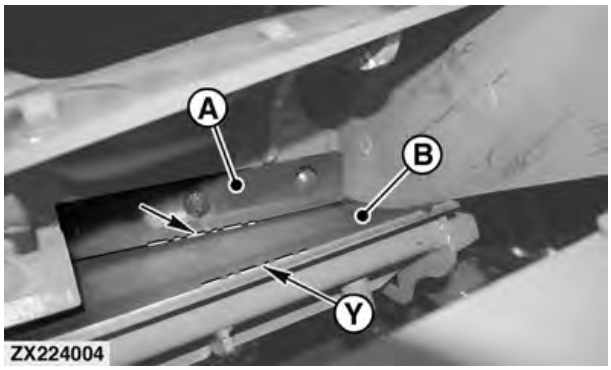
3. Tighten paddle fixing screws (B) to 95 N·m (70 lb.-ft.).

IMPORTANT: Make sure that blower rotor can rotate freely.

4. Adjust outlet and inlet scrapers, if necessary.



ZX224000 —UN—05NOV14



ZX224004 —UN—05NOV14

A—Paddle
B—Wear Plate
X—1.5 to 3 mm (0.06 to 0.12 in.)
Y—147.82 mm (5.8 in.)

Continued on next page

OUCC002,00041F6 -19-13NOV14-4/6

Adjust Outlet Scraper

Adjust outlet scraper as follows:

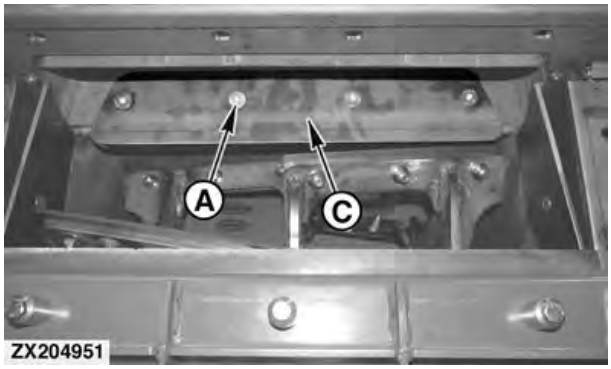
1. Loosen socket head screws (A).

IMPORTANT: Do not remove socket head screws (A). Make sure retaining straps (B) do not fall down.

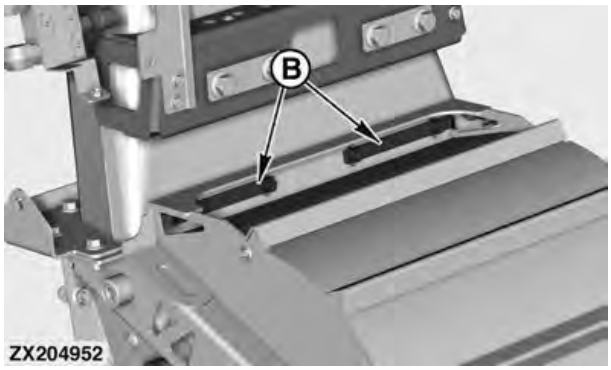
2. Adjust position of scraper (C) until clearance of 3 ± 0.5 mm (0.12 ± 0.02 in.) between paddle (D) and edge of scraper (C) is obtained.
3. Tighten socket head screws (A).
4. Check clearance at all blower paddles.

IMPORTANT: Make sure that blower rotor can rotate freely.

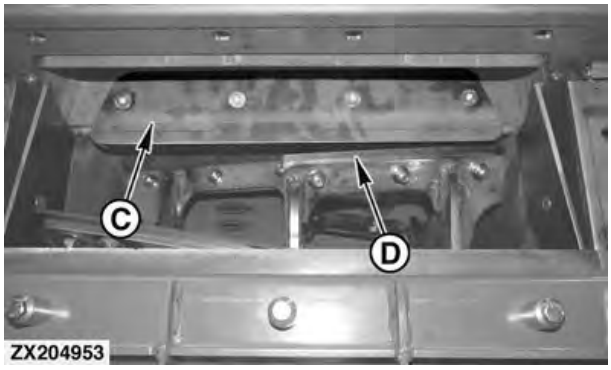
A—Socket Head Screw
B—Retaining Strap
C—Scraper—Outlet
D—Paddle



ZX204951 —UN—05NOV14



ZX204952 —UN—03SEP13



ZX204953 —UN—05NOV14

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OUCC002,00041F6 -19-13NOV14-5/6

Adjust Inlet Scraper

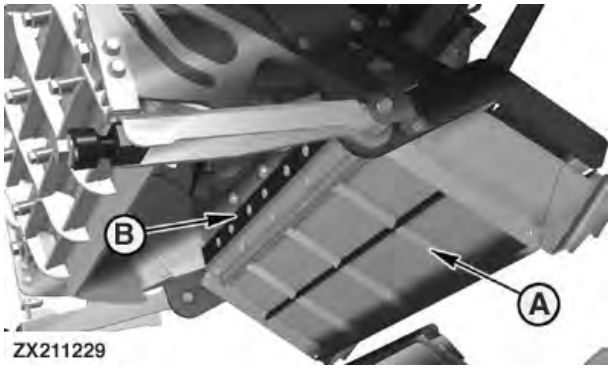
Adjust inlet scraper as follows:

1. **Machine with Kernel Processor:** Remove kernel processor and swing grass chute (A) away to access scraper (B). See **Operate the Kernel Processor (Option)** in Field Operation section.

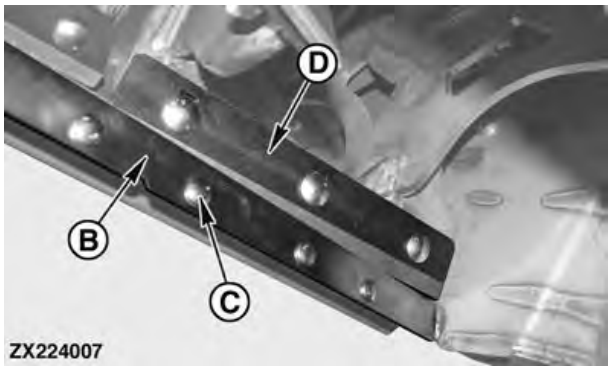
   Machine without Kernel Processor: Swing grass chute away to access scraper (B). See **Operate the Grass Chute** in Field Operation section.
2. Release attaching screws (C) of scraper (B).
3. Adjust position of scraper (B) until clearance of 2 mm (0.07 in.) between paddle (D) and edge of scraper (B) is obtained.
4. Tighten screws (C).
5. Check clearance at all blower paddles.

IMPORTANT: Make sure that blower rotor can rotate freely.

6. Swing grass chute (A) back in working position.
7. Install kernel processor (if equipped). See **Operate the Kernel Processor (Option)** in Field Operation section.



ZX211229 —UN—02JUN14

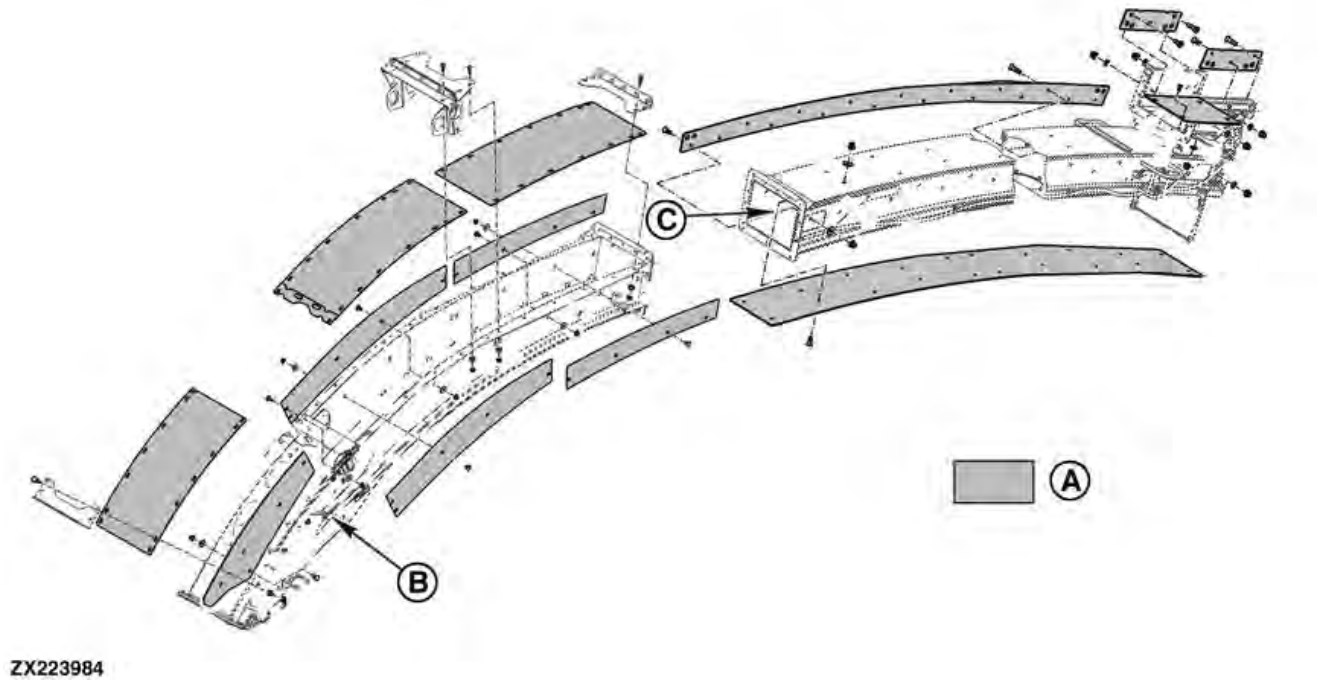


ZX224007 —UN—05NOV14

A—Grass Chute
B—Scraper—Inlet
C—Screw
D—Paddle

OUCC002,00041F6 -19-13NOV14-6/6

Spout Service Opening and Wear Plates



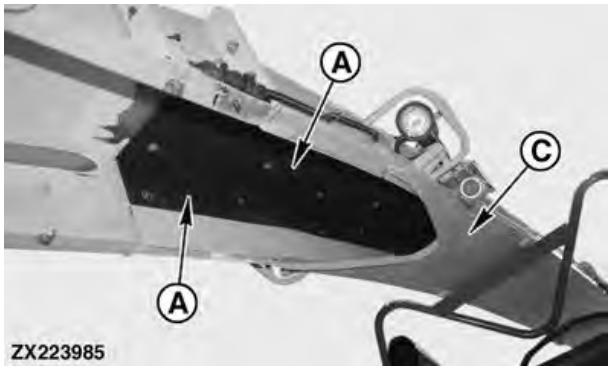
ZX223984 —UN—04NOV14

Spout Wear Plates—High Arc

Wear plates (A) are located at the spout base portion (B) and spout extension (C).

NOTE: Wear plates (A) are made of wear-resistant steel.

A—Wear Plate
B—Spout Base Portion
C—Extension



ZX223985 —UN—04NOV14

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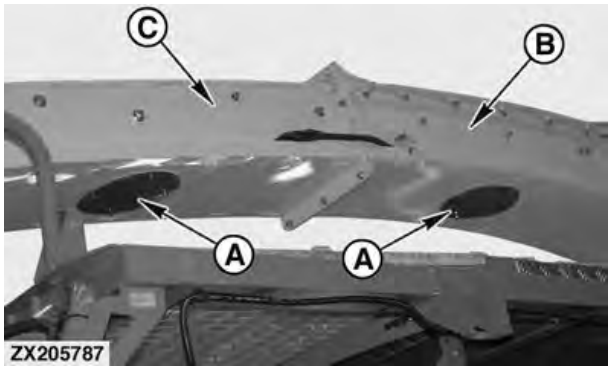
OUCC002,00041F7 -19-11NOV14-1/2

Several service openings (A) are located underneath spout base portion (B) and spout extension (C).

A—Service Opening
B—Spout Base Portion
C—Extension



ZX205787 —UN—16OCT13

OUCC002,00041F7 -19-11NOV14-2/2

Adjust Spout Motor Gear and Ring Gear

Rotate spout to the left-hand side of the machine.

Remove top shield (A) to access spout motor gear (B).

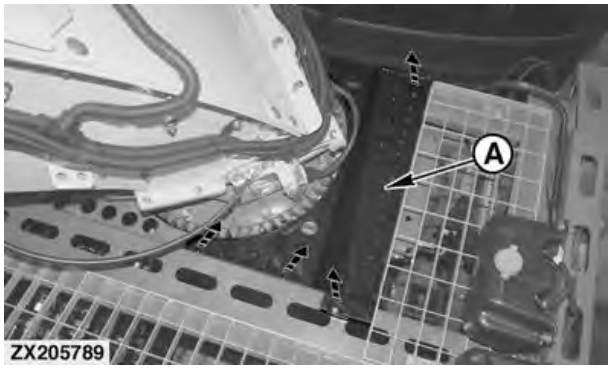
Adjustment:

1. Slacken off all screws (C).
2. Loosen lock nut (D).
3. Push gear (B) against ring gear (E) by turning set screw (F) clockwise, so that gear (B) meshes easily with ring gear (E) and that a play of 0.1 mm (0.004 in.) is obtained.

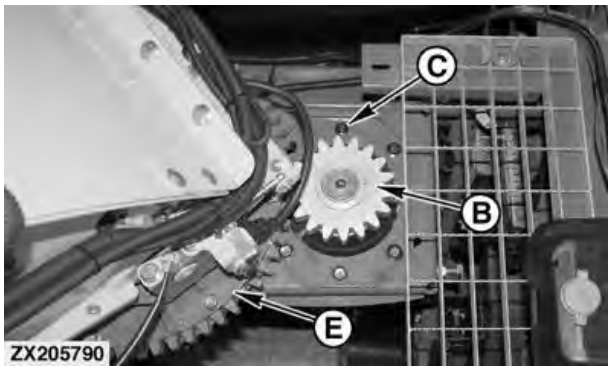
IMPORTANT: Do not apply lubricant between gear (B) and ring gear (E).

4. Tighten screws (C).
5. Tighten lock nut (D).

A—Shield
B—Gear
C—Screw (6 used)
D—Lock Nut
E—Ring Gear
F—Set Screw

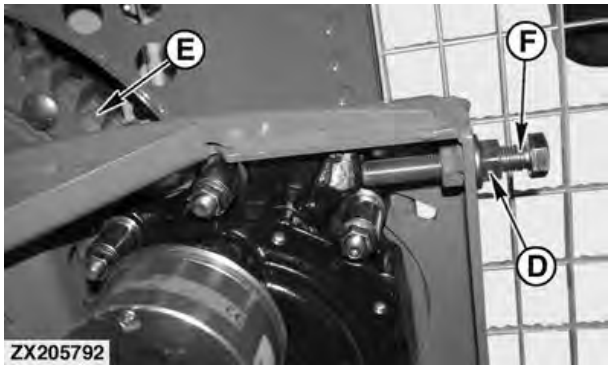


ZX205789 —UN—16OCT13



ZX205790 —UN—16OCT13

ZX205791 —UN—16OCT13



ZX205792 —UN—16OCT13

OUCC002,00041EE -19-03NOV14-1/1

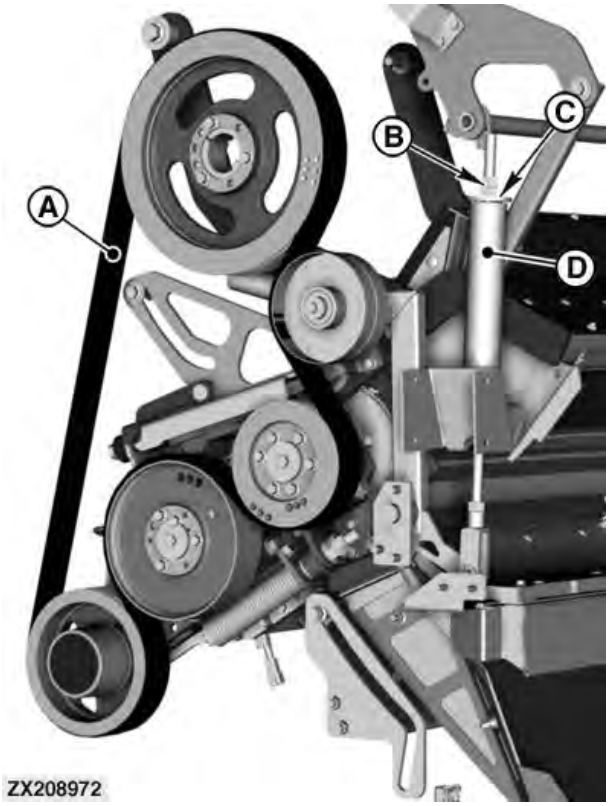
Adjust Kernel Processor Drive Belt Tension

IMPORTANT: Swing kernel processor in to working position before checking or adjusting drive belt tension (see Operate the Kernel Processor (Option) in Field Operation section).

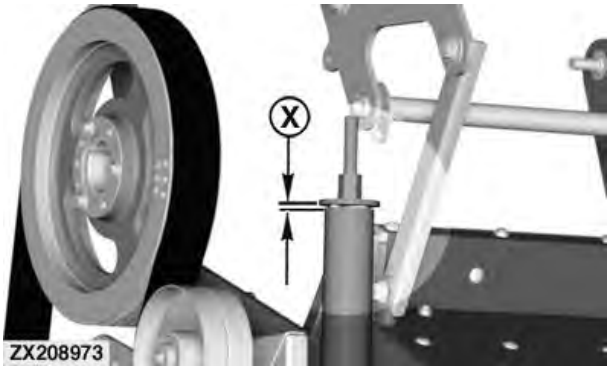
Check for correct belt routing (see illustration) when replacing drive belt (A).

Adjust belt tension by using adjusting nut (B) so that distance (X) between plate (C) and rod (D) is about 10 mm (0.4 in.).

A—Drive Belt
B—Adjusting Nut
C—Plate
D—Rod
X—10 mm (0.4 in.)



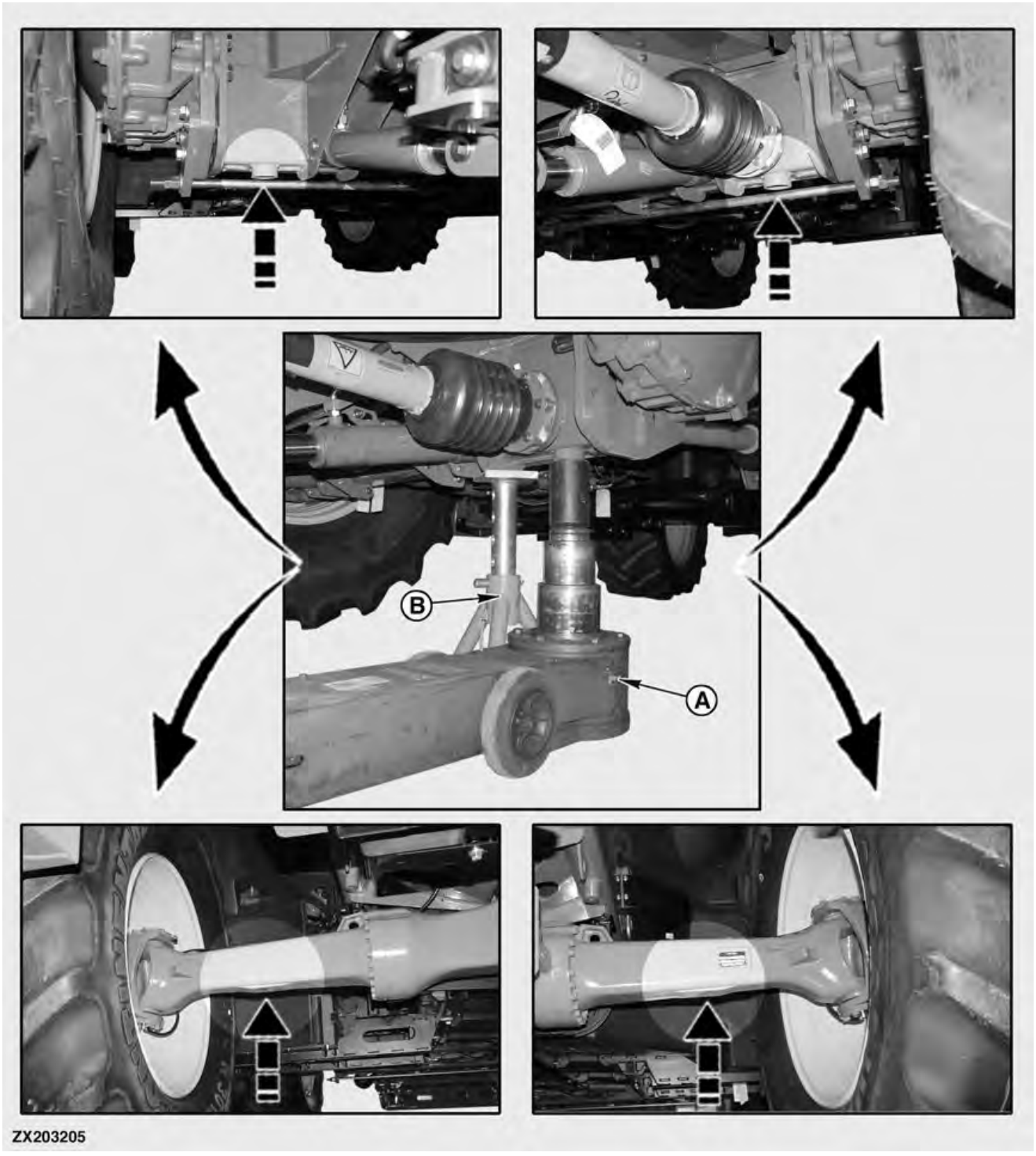
ZX208972 —UN—03JAN14



ZX208973 —UN—03JAN14

OUCC002,0003F2A -19-13NOV14-1/1

Jacking Points



A—Lifting Device **B—Jackstand**

Refer to above illustration for jacking points (see arrows) when removing tires.

CAUTION: Always use suitable lifting device (A) and secure front or rear axle with suitable jackstand (B).

OUCC002,0003F45 -19-20JAN14-1/1

Service Tires Safely

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

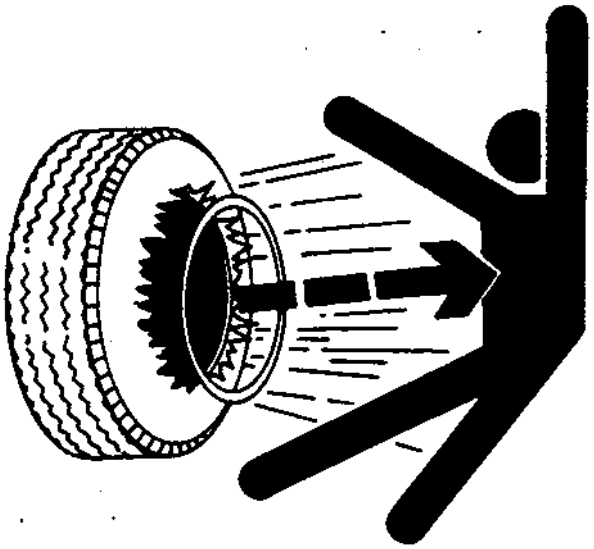
Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

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



TS211 —UN—15APR13

OUCC002,0003E1D -19-05OCT13-1/1

Care and Service of Tires

Check tires daily for damage and noticeably low pressure. Long life and satisfactory performance depend on proper tire inflation.

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.

IMPORTANT: A permanent, inside-out repair should be made as soon as possible to prevent any further tire damage.

Have cuts or tears repaired as soon as possible, or change tire.

Protect tires from unnecessary exposure to sunlight, petroleum products and chemicals.

Drive carefully. Try to avoid rocks and sharp objects.

OUCC002,0003C9D -19-04JUL13-1/1

Wheel Bolts and Nuts

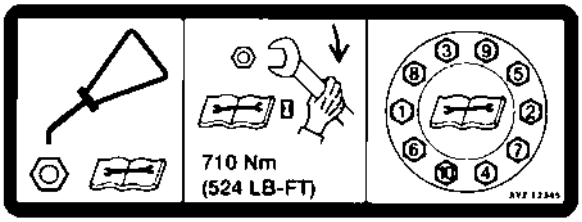
After the first hour of operation and then every ten hours during the first 50 hours of operation, check the hardware and tighten to the specified torque:

- Front axle wheel bolts (Lubricated) to 710 N·m (524 lb·ft)

  NOTE: Before installing the front axle wheel bolts, coat the front thread area with JDM J20C oil or its equivalent. Make sure that the screw head and contact surface are not coated with oil. The screw head and contact surface must remain dry.

- Rear axle wheel nuts (Dry) to 550 N·m (405 lb·ft)

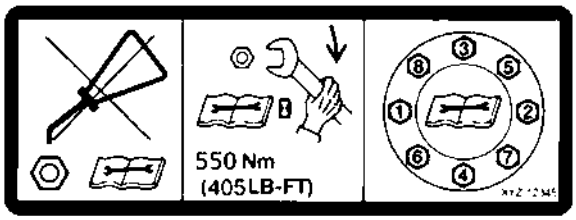
H96809 —UN—09JUN10



ZX224019 —UN—08NOV14

ZX224019

Torque of Front Wheel Bolts



ZX224020 —UN—08NOV14

ZX224020

Torque of Rear Wheel Nuts

OUCC002,0004C8B -19-13JUN16-1/1

Mounting Tires

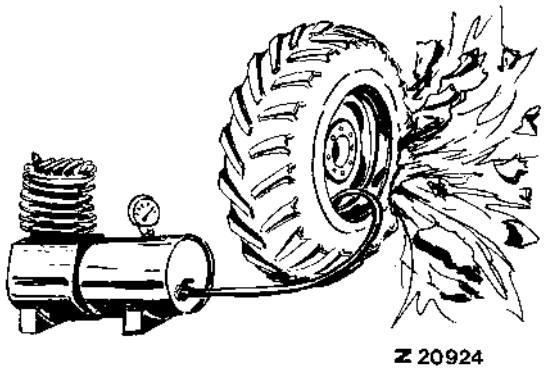
CAUTION: Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service.

When seating tire beads on rims, never exceed maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force.

If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead and reinflate.

Detailed agricultural tire mounting instructions, including the necessary safety precautions, are available from your local tire manufacturer agents.

IMPORTANT: Operate machine only with correct tire pressure. Keep valve caps screwed down on valve stems to prevent foreign material from accumulating in the valve cores.



Z20924 —UN—15AUG94

Check tire pressure frequently, referring to tire pressure charts. Required pressure may vary as load changes with installation of different headers.

OUCC002,0003C9F -19-04JUL13-1/1

Changing Tires

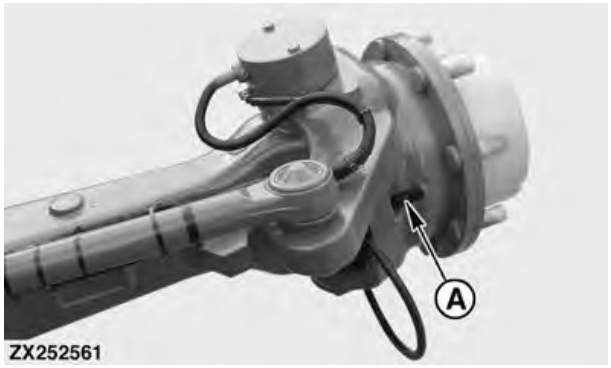
If tires are changed from what was originally shipped from the factory, it is necessary to recalibrate the system. In some configurations, it is necessary to readjust the steering angle and the pivoting angle so that rear tires do not come in contact with any part of the machine. For more information, contact your John Deere Dealer.

- To adjust steering angle, use the setting screw (A).
- To adjust rear axle pivot stops (B), modify the stop thickness.

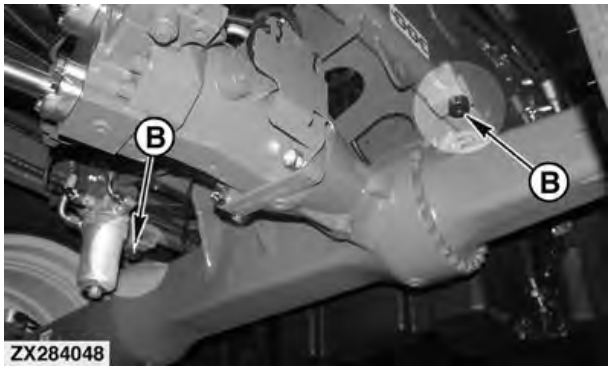
IMPORTANT: When changing drive wheels, tire radius may also change. CAB control unit MUST be set to new tire radius. See your John Deere dealer for further information.

IMPORTANT: The tires on any one axle must come from the same manufacturer and have the same tread, same designation, and same load-bearing index.

A—Setting Screw **B—Pivot Stop**



ZX252561 —UN—09SEP15



ZX284048 —UN—18JUN16

OUCC002,0004C8A -19-13JUN16-1/1

Tire Sizes

8100-8800	
FRONT WHEELS	680/85R32, 178, A8 tubeless
	650/85R38, 179, D tubeless
	650/85R38, 173, D tubeless
	800/70R38, 178, D tubeless
	800/70R38, 179, D tubeless
	710/70R42, 173, D tubeless
	710/75R42, 175, D tubeless
	710/75R42, 176, D tubeless
	710/75R42, 179, D tubeless
	710/75R42, 181 D tubeless
	900/60R42, 178, A8 tubeless
	900/60R42, 180, D tubeless
	900/60R42, 186, D tubeless
REAR WHEELS	620/75R26, 168, A8 tubeless
	710/65R26, 166, D tubeless
	710/65R26, 168, A8 tubeless
	500/80R28, 176, A8 tubeless
	540/65R30, 168, A8 tubeless
	620/70R30, 164, D tubeless
	620/70R30, 178, A8 tubeless
	710/60R30, 162, D tubeless
	750/60R30, 167, D tubeless
	650/60R34, 159, D tubeless
	650/60R34, 165, D tubeless

OUCC002,0004CA6 -19-17JUN16-1/1

Tire Pressures

IMPORTANT: Also refer to the tire manufacturer recommendations to choose the relevant tire pressure. Contact tire manufacturer or visit manufacturer web site.

Payload at 40 km/h (24.8 mph)			
Front Tires	**160 kPa (1.6 bar) (23.2 psi)**	**200 kPa (2.0 bar) (29.0 psi)**	**240 kPa (2.4 bar) (34.8 psi)**
680/85R32, 178, A8	5090 kg (11222 lb) at 140 kPa (1.4 bar) (20.3 psi)	6060 kg (13360 lb)	6500 kg (14330 lb)
650/85R38, 179, D	6700 kg (14771 lb)	7300 kg (16094 lb)	7750 kg (17086 lb)
650/85R38, 173, D	6000 kg (13228 lb)	6650 kg (14661 lb)	7100 kg (15653 lb)
800/70R38, 178, D	7010 kg (15454 lb)	7705 kg (16987 lb)	8215 kg (18111 lb)
800/70R38, 179, D	7750 kg (17086 lb)	Not applicable	Not applicable
710/70R42, 173, D	6150 kg (13558 lb)	6680 (14727 lb)	7100 kg (15653 lb)
710/75R42, 175, D	6500 kg (14330 lb)	7095 kg (15642 lb)	7500 kg (16535 lb)
900/60R42, 180, D (Michelin)	8000 kg (17637 lb)	Not applicable	Not applicable
900/60R42, 186, D (Michelin)	Not applicable	Not applicable	9500 kg (20944 lb)
900/60R42, 180, D (Trelleborg)	7275 kg (16039 lb)	8150 kg (17968 lb)	8760 kg (19312 lb)
Rear Tires	**160 kPa (1.6 bar) (23.2 psi)**	**200 kPa (2.0 bar) (29.0 psi)**	**240 kPa (2.4 bar) (34.8 psi)**
500/80R28, 176, A8	3465 kg (7639 lb)	4010 kg (8840 lb)	4560 kg (10053 lb)
540/65R28, 168, A8	3345 kg (7374 lb)	3875 kg (8543 lb)	4480 kg (9877 lb)
620/70R30, 178, A8	4430 kg (9766 lb)	5135 kg (11321 lb)	6000 kg (13228 lb)
710/60R30, 159, D	4250 kg (9370 lb)	4800 kg (10582 lb)	5150 kg (11354 lb)
750/55R30, 162, D	4375 kg (9645 lb)	4820 kg (10626 lb)	5150 kg (11354 lb)
650/60R34, 159, D	3980 kg (8774 lb)	4460 kg (9832 lb)	4795 kg (10571 lb)

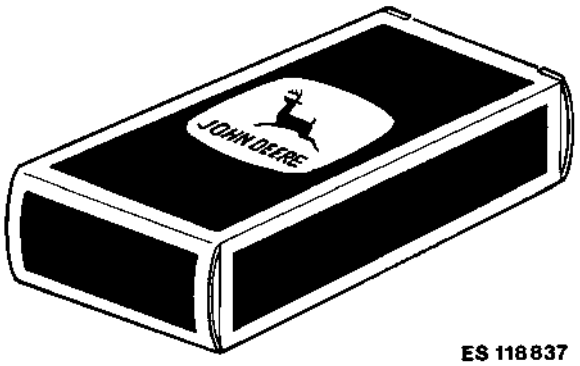
OUCC002,0004CA5 -19-17JUN16-1/1

Use Genuine John Deere Parts

Genuine John Deere parts have been specifically designed for John Deere machines.

Other parts are neither examined nor released by John Deere. Installation and use of such products could have negative effects upon the design characteristics of the machine and thereby affect its safety.

Avoid this risk by using only genuine John Deere parts.



ES118837 —UN—07JUN95

FX,ORI -19-04DEC90-1/1

Engine Storage Guidelines for Long Term Storage

1. John Deere engines can be stored outside for up to three (3) months with no long term preparation IF COVERED BY WATERPROOF COVERING. Outside storage is not recommended without a waterproof covering.
2. John Deere engines can be stored inside for up to six (6) months with no long term preparation.
3. John Deere engines expected to be stored more than six (6) months MUST have long term storage preparation.
4. Long term storage includes the use of a stabilized rust preventive oil to protect internal metal components of the engine. This oil should be an SAE 10 oil with 1—4 % morpholine or equivalent vapor corrosion inhibitor. These rust preventive oils are available from area distributors.

Preparing engine for long term storage

IMPORTANT: Any time your engine will not be used for over six (6) months, the following recommendations for storing it and removing it from storage will help to minimize corrosion and deterioration.

IMPORTANT: DO NOT USE BIODIESEL DURING MACHINE STORAGE. When using biodiesel blends, switch to petroleum diesel for long term storage. Before storage, operate engine on at least one complete tank of petroleum diesel fuel to purge the fuel system. Follow normal storage procedures once the fuel system has been purged.

The following storage preparations are used for long term engine storage up to one year. After that, the engine should be started, warmed up, and retreated for an extended storage period.

- Change engine oil and replace filter. Used oil will not give adequate protection. Add one (1) ounce of rust preventive oil to the engine crankcase for every quart of oil. This rust preventive oil should be an SAE 10 oil with 1—4 % morpholine or equivalent vapor corrosion inhibitor.
- Ensure the machine fuel tank is filled with high quality petroleum diesel fuel. Filling the tank completely will ensure that water does not build up due to condensation. For storage of more than one year, use John Deere PREMIUM DIESEL FUEL CONDITIONER (or equivalent) at the specified concentration.
- Draining and flushing of cooling system is not necessary if engine is to be stored only for several months. However, for extended storage periods of a year or longer, it is recommended that the cooling system be drained, flushed, and refilled. Refill with appropriate coolant.

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Prepare Machine for Storage

IMPORTANT: When fuel is stored in fuel tank of machines or storage tank of farms for extended periods, or if there is a slow turn over of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your John Deere dealer for recommendations.

For prolonged machine storage the best practice is to drain bio-diesel and fill machine with regular petroleum diesel fuel. Otherwise use bio-diesel stabilizer (anti-oxidant) additives or fully formulated bio-diesel conditioners. Contact your John Deere dealer for recommendations.

If possible, store the machine in a dry, sheltered place and prepare the machine for storage as follows:

General:

- Thoroughly clean the machine inside (through service openings) and outside. Debris and dirt will attract moisture, which leads to corrosion.

  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.

- Thoroughly clean outside of engine with salt-free water.

  CAUTION: Do not use petrol!

- Thoroughly clean all drive belts, but do not use aggressive cleaning agents such as petrol, benzine, turpentine oil or similar cleaning solvents.
  It is recommended to use the following:
  - A cloth dipped in liquid ammonia
  - Soap water
  - A 1:10 mixture of glycerine and spirits
- Support header with blocks to level it or lower header onto a horizontal dry base. Lower cutterhead.
- Block up machine, taking load off tires. Leave tires inflated.
- If machine is stored outside, jack it up on supports and remove wheels. Store wheels in a cool, dark and dry room.
- Fill fuel tank to prevent condensation.
- Lubricate machine and grease adjusting bolt threads.
- Grease bare metal surfaces of hydraulic cylinder piston rods well and retract rods as far as possible.
- Coat all lever linkages and bearing points without grease fittings with oil.
- Swing rotary screen away and carefully clean radiator fins, using compressed air or a weak water jet.
- Clean condenser and oil cooler after cleaning radiator. Clean charge air cooler.
- Clean inside of air cleaner and install new elements.
- Repaint areas where needed.
- List all service work to be done before the next season and have it carried out in good time. Your John Deere dealer is in a better position to carry out necessary service and repairs during the off season.
- Charge batteries completely. Specific gravity will equal 1.260 volts. Remove negative lead to batteries to minimize unintended discharging of the batteries.
- If machine is to be stored for a long period of time remove and clean batteries. Store them in a cool dry place and keep them charged.
- Slacken all drive belts. Place strips of strong paper between belt and pulleys to prevent sticking.

Engine:

If machine is to be stored for some time (during the winter months), engine metal parts must be protected from corrosion and the fuel system must be protected from gummy deposits.

To protect engine and fuel system, use the rust inhibitor available from your John Deere dealer. The rust inhibitor set includes one can of rust inhibitor, masking tape and protective caps to cover engine openings.

IMPORTANT: Rust inhibitor agents evaporate very easily. For this reason, seal all openings after the inhibitor has been added. Also keep the inhibitor container closed at all times.

- Drain engine oil and replace filter element. Drain oil when still warm. Refill crankcase with oil of specified quality and viscosity. Operate engine for a few minutes before adding rust inhibitor.
  To protect engine and fuel system, use the rust inhibitor available from your John Deere dealer. The rust inhibitor set includes one can of rust inhibitor, masking tape and protective caps to cover engine openings.
  Add rust inhibitor as follows:
  Add 650 cm^3 (40 $in.^3$) of rust inhibitor to engine oil and run engine for a few minutes.

  NOTE: This engine oil can be used again at the beginning of the next season for approx. 20—25 operating hours. Then drain the oil and refill crankcase with fresh engine oil of specified quality and viscosity.

- Drain hydraulic oil and power distribution gear oil reservoir and fill with fresh oil of specified quality. Add approx. 50 cm^3 (3.05 $in.^3$) of rust inhibitor.
- Drain fuel tank and pour 150 cm^3 (9.2 $in.^3$) of rust inhibitor into empty tank. Add 10 L (2.6 gal.) of fuel. Start engine and run at high idle for 15—20 minutes to distribute the mixture in the complete fuel system.
- Drain, flush and refill cooling system with fresh coolant every two years.

  IMPORTANT: Use only John Deere Cool-Gard™ in the cooling system, independent of the season.

Continued on next page

- Drain water separator.
- With the engine running, operate all hydraulic functions several times.
  - Stop the engine and allow it to cool for approx. 15—20 minutes.
  - **On 8100—8600:** Remove fuse F48.
  - **On 8700 and 8800:** Remove fuse F92.
  - Remove plug of intake manifold or connecting pipe of starting aid adapter and inject approx. 35 cm^3 (2 $in.^3$) of rust inhibitor per cylinder into this opening. At the same time, crank engine with starting motor.
  - Do not start engine after rust inhibitor has been added.
- Disconnect turbocharger air intake line and inject 90 cm^3 (3.04 fl.oz.) of rust inhibitor into turbocharger intake side. Connect and tighten air intake line.
- Disconnect turbocharger exhaust line and inject 90 cm^3 (3.04 fl.oz.) of rust inhibitor into turbocharger outlet side. Connect and tighten exhaust line.
- Seal all openings with plugs or grease proof paper. Cover muffler opening.
- Thoroughly clean engine and spray with anti-rust fluid; then cover engine with a tight-fitting, waterproof tarpaulin.

Air-conditioning system:

- Every 60 to 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.

Additive Dosing System (if Equipped):

- Between crops and also at the end of the season, sanitize the system. Sanitizing process keeps the system free of plugged lines and clogged tips.

Cool-Gard is a trademark of Deere & Company.

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Remove Machine From Storage

General:

- Reconnect and/or charge batteries.
- Close service covers.
- Check oil and coolant levels. Inspect for leaks and add oil and coolant if needed.
- Adjust and check tension of drive belts.
- Check tire inflation and review machine operator's manual.
- Inspect fire extinguisher by following maintenance instructions on fire extinguisher label. Recharge or replace as necessary.
- Go over complete machine and make sure that all bolts are tight and cotter pins are in place.
- Afterwards run machine at half-speed for about an hour. Check all bearings for overheating.

Engine:

- Remove engine tarpaulin, plugs from engine openings, and paper strips between fan belt and pulleys. Tension drive belt.
- Check all seals and coolant level. Antifreeze and rust inhibitor should be left in the cooling system during the summer months as a protection against corrosion.
- If rust inhibitor was added to the engine oil before storing the machine, this oil can be used for approx. 25 hours at the beginning of the new season. Otherwise, drain the oil and fill crankcase with fresh oil of specified quality and viscosity.
- Before starting the engine after longer storage periods (Long Term Storage): Remove fuse F48 (8100—8600) or F92 (8700 and 8800). Crank engine for 30 seconds — or until engine oil pressure indicator light goes out. This will ensure proper lubrication of all engine parts during the starting procedure. Reinstall fuse F48 (8100—8600) or F92 (8700 and 8800). Then start engine and run for approx. 5 minutes at half-rated speed.

  IMPORTANT: DO NOT operate starter more than 30 seconds at a time. Wait at least 2 minutes for starter to cool before trying again.

  NOTE: If using BIODIESEL blends after long term storage, frequency of fuel filter plugging may increase initially.

- Check all lines and seals for leaks. See your John Deere dealer, if necessary.

Air-Conditioning System:

CAUTION: The air-conditioning system should only be serviced by your John Deere dealer.

- Clean evaporator.
- Clean or replace dry-type paper filter.
- Clean or replace recirculation air filter.
- Tension compressor drive belt.

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Specifications

8100 Forage Harvester

John Deere PowerTech™ PSS **9.0 L engine (Final Tier 4/Stage IV)**

Model	John Deere 6090HZ014@259 up to SN 515999 John Deere 6090HZ018@259 from SN 516000
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	9.0 L (548 cu.in.)
Bore	118.4 mm (4.66 in.)
Stroke	136 mm (5.40 in.)
Power (according to ECE-R120) at rated speed	259 kW (352 hp)
At 2000 rpm	279 kW (379 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	common rail
Air cleaner	self-cleaning air prefilter

John Deere PowerTech Plus™ **9.0 L engine (Tier 3/Stage III A)**

Model	John Deere 6090HZ020@259
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	9.0 L (548 cu.in.)
Bore	118.4 mm (4.66 in.)
Stroke	136 mm (5.40 in.)
Power (according to ECE-R120) at rated speed	259 kW (352 hp)
At 2000 rpm	279 kW (379 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	common rail
Air cleaner	self-cleaning air prefilter

John Deere PowerTech™ **9.0 L engine (Tier 2/Stage II)**

Model	John Deere 6090HZ013@259
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	9.0 L (548 cu.in.)
Bore	118.4 mm (4.66 in.)
Stroke	136 mm (5.40 in.)
Power (according to ECE-R120) at rated speed	259 kW (352 hp)
At 2000 rpm	279 kW (379 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	common rail
Air cleaner	self-cleaning air prefilter

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8200 Forage Harvester

John Deere PowerTech™ PSS **9.0 L engine (Final Tier 4/Stage IV)**

Model	John Deere 6090HZ014@259 up to SN 515999 John Deere 6090HZ018@259 from SN 516000
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	9.0 L (548 cu.in.)
Bore	118.4 mm (4.66 in.)
Stroke	136 mm (5.40 in.)
Power (according to ECE-R120) at rated speed	295 kW (401 hp)
At 2000 rpm	317 kW (431 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	common rail
Air cleaner	self-cleaning air prefilter

John Deere PowerTech Plus™ **9.0 L engine (Tier 3/Stage III A)**

Model	John Deere 6090HZ020@295
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	9.0 L (548 cu.in.)
Bore	118.4 mm (4.66 in.)
Stroke	136 mm (5.40 in.)
Power (according to ECE-R120) at rated speed	295 kW (401 hp)
At 2000 rpm	317 kW (431 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	common rail
Air cleaner	self-cleaning air prefilter

John Deere PowerTech™ **9.0 L engine (Tier 2/Stage II)**

Model	John Deere 6090HZ013@295
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	9.0 L (548 cu.in.)
Bore	118.4 mm (4.66 in.)
Stroke	136 mm (5.40 in.)
Power (according to ECE-R120) at rated speed	295 kW (401 hp)
At 2000 rpm	317 kW (431 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	common rail
Air cleaner	self-cleaning air prefilter

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8300 Forage Harvester

John Deere PowerTech™ PSS **13.5 L engine (Final Tier 4/Stage IV)**

Model	John Deere 6135HZ014@360 up to SN 515999 John Deere 6135HZ015@360 from SN 516000
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	336 kW (457 hp)
At 1800 rpm	360 kW (490 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech Plus™ **13.5 L engine (Tier 3/Stage III A)**

Model	John Deere 6135HZ017@360
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	336 kW (457 hp)
At 1800 rpm	360 kW (490 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech™ **13.5 L engine (Tier 2/Stage II)**

Model	John Deere 6135HZ012@360
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	336 kW (457 hp)
At 1800 rpm	360 kW (490 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

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8400 Forage Harvester

John Deere PowerTech™ PSS **13.5 L engine (Final Tier 4/Stage IV)**

Model	John Deere 6135HZ014@369 up to SN 515999 John Deere 6135HZ015@369 from SN 516000
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	369 kW (502 hp)
At 1800 rpm	397 kW (540 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech Plus™ **13.5 L engine (Tier 3/Stage III A)**

Model	John Deere 6135HZ017@369
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	369 kW (502 hp)
At 1800 rpm	397 kW (540 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech™ **13.5 L engine (Tier 2/Stage II)**

Model	John Deere 6135HZ012@369
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	369 kW (502 hp)
At 1800 rpm	397 kW (540 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

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8500 Forage Harvester

John Deere PowerTech™ PSS **13.5 L engine (Final Tier 4/Stage IV)**

Model	John Deere 6135HZ014@400 up to SN 515999 John Deere 6135HZ015@400 from SN 516000
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	400 kW (544 hp)
At 1800 rpm	430 kW (585 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech Plus™ **13.5 L engine (Tier 3/Stage III A)**

Model	John Deere 6135HZ017@400
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	400 kW (544 hp)
At 1800 rpm	430 kW (585 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech™ **13.5 L engine (Tier 2/Stage II)**

Model	John Deere 6135HZ012@400
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	400 kW (544 hp)
At 1800 rpm	430 kW (585 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

OUCC002,0004CB2 -19-21JUN16-1/1

8600 Forage Harvester

John Deere PowerTech™ PSS **13.5 L engine (Final Tier 4/Stage IV)**

Model	John Deere 6135HZ014@428 up to SN 515999 John Deere 6135HZ015@428 from SN 516000
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	428 kW (582 hp)
At 1800 rpm	460 kW (626 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech Plus™ **13.5 L engine (Tier 3/Stage III A)**

Model	John Deere 6135HZ017@428
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	428 kW (582 hp)
At 1800 rpm	460 kW (626 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

John Deere PowerTech™ **13.5 L engine (Tier 2/Stage II)**

Model	John Deere 6135HZ012@428
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	13.5 L (825 cu.in.)
Bore	132 mm (5.20 in.)
Stroke	165 mm (6.50 in.)
Power (according to ECE-R120) at rated speed	428 kW (582 hp)
At 1800 rpm	460 kW (626 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 ± 50 rpm
High idle	2100 ± 50 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

OUCC002,0004CB3 -19-21JUN16-1/1

8700 Forage Harvester

Cummins® 19 L engine

Model	QSK19 - DZ101450 (Tier 2/Stage II)
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	19 L (1159 cu.in.)
Bore	159 mm (6.25 in.)
Stroke	159 mm (6.25 in.)
Power (according to ECE-R120) at rated speed	521 kW (708 hp)
At 1900 rpm	563 kW (765 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

OUCC002,0004D19 -19-05JUL16-1/1

8800 Forage Harvester

Cummins® 19 L engine

Model	QSK19 - DZ101450 (Tier 2/Stage II)
Type	Inline 6-cylinder, wet liners, valve-in-head, turbocharged, air-to-air intercooled
Displacement	19 L (1159 cu.in.)
Bore	159 mm (6.25 in.)
Stroke	159 mm (6.25 in.)
Power (according to ECE-R120) at rated speed	555 kW (755 hp)
At 1900 rpm	620 kW (831 hp) (max. engine power)
Rated engine speed	2100 rpm
Low idle	900 rpm
High idle	2100 rpm
Fuel supply	unit injectors
Air cleaner	self-cleaning air prefilter

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8100—8800 Forage Harvesters

Feeding System

Number of feed rolls	4
Width of feed roll channel 8100 - 8500	660 mm (2 ft 2 in)
Width of feed roll channel 8600 - 8800	830 mm (2 ft 9 in)
Metal detector	Standard
Stone detector	Option
Harvesting unit drive	Hydrostatic

Length of cut

Length of cut, 40-knife cutterhead 40 knives	7 mm - 26 mm (0.28 in - 1.02 in) 1 mm (0.04 in) steps
20 knives	14 mm - 52 mm (0.55 in - 2.04 in)
Length of cut, 48-knife cutterhead 48 knives	6 mm - 22 mm (0.24 in - 0.87 in) 1 mm (0.04 in) steps
24 knives	12 mm - 44 mm (0.48 in - 1.73 in)
Length of cut, 56-knife cutterhead 56 knives	4 mm - 19 mm (0.16 in - 0.74 in) 1 mm (0.04 in) steps
28 knives	8 mm - 38 mm (0.32 in - 1.49 in)
Length of cut, 64-knife cutterhead 64 knives	3 mm - 15 mm (0.12 in - 0.59 in) 1 mm (0.04 in) steps
32 knives	6 mm - 30 mm (0.24 in - 1.18 in)

Stationary Knife

Stationary knife adjustment from the cab	Standard
Stationary knife adjustment range	0.2 mm - 0.4 mm (0.008 in - 0.016 in)
Hard-faced	For grass
Tungsten-carbide faced, at cutting edges	For corn
Tungsten-carbide faced, at cutting edges and at the top (Duraline™ Plus)	Universal

Cutterhead

Chamber width 8100 - 8500	710 mm (2 ft 4.0 in)
Chamber width 8600 - 8800	880 mm (2 ft 9.9 in)
Diameter	670 mm (2 ft 2.4 in)
Speed	1100 rpm with 40, 48, or 56 knives 1200 rpm with 64 knives (8300—8800 only)
Number of knives (40-knife cutterhead)	4 x 10; 4 x 5
Number of knives (48-knife cutterhead)	4 x 12; 4 x 6
Number of knives (56-knife cutterhead)	4 x 14; 4 x 7
Number of knives (64-knife cutterhead)	4 x 16; 4 x 8
Knives	
Straight	For grass
Curved	For corn
Knife sharpening in reverse rotation	Standard
Automatically controlled	Standard

Continued on next page

Drive	Hydraulic motor
Speed	350 rpm

Kernel Processor—Standard (Optional)

Roll diameter	240 mm (9.49 in)
Roll speed— 24% ratio (at 2100 rpm engine speed)	
Upper roll	3248 rpm
Lower roll	2612 rpm
Roll speed— 35% ratio (at 2100 rpm engine speed)	
Upper roll	3655 rpm
Lower roll	2702 rpm
Roll spacing	0.5 to 4.5 mm (0.02 to 0.177 in)
Roll spacing adjustable from the cab	Option
Roll drive	Via belts from blower
Weight 8100 - 8500 Weight 8600 - 8800	320 kg (705 lb) 360 kg (794 lb)

Kernel Processor—KernelStar™ (Optional)

Roll diameter	240 mm (9.49 in)
Roll speed (at 2100 rpm engine speed)	
Upper roll	3282 rpm
Lower roll	3115 rpm
Roll spacing	0.5 to 3.0 mm (0.02 to 0.18 in)
Roll spacing adjustable from the cab	Option
Roll drive	Via belts from blower
Weight 8100 - 8500 Weight 8600 - 8800	380 kg (838 lb) 420 kg (926 lb)

Blower

Type	Blower system
Rotor diameter	560 mm (1 ft 10.0 in)
Blower channel width 8100 - 8500 Blower channel width 8600 - 8800	540 mm (1 ft 9.3 in) 620 mm (2 ft 0.4 in)
Speed (at 2100 rpm engine speed)	1800 rpm
Number of paddles	10
Wear plate	8 mm (0.32 in) Hardox 8 mm (0.32 in) Duraline™ HD (Option)

Discharge Spout

Rotation	210°
Hydraulic swing	Standard
Double flap (electrically controlled)	Standard
Spout extension	for 10-row and 12-row harvesting units (Option)
Automatic spout positioning	Optional

Main Clutch

Type	Hydraulically operated dry-type disk clutch
Number of disks 8100 - 8500 Number of disks 8600 - 8800	1 2

Hydraulic System—PBST Transmission

Type	Closed-center
Pump	105 cm^3—fixed displacement, gear type

Continued on next page

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Hydraulic System—ProDrive™ Transmission

Type	Closed-center
Pump	125 cm^3—fixed displacement, gear type

Electrical System

8100, 8200	
Alternator	12 V, 200 A
Battery	1x 174 Ah
8300 - 8600	
Alternator	12 V, 200 A
Battery	2x 154 Ah (in parallel)
8700, 8800	
Alternators	12 V, 200 A 24 V, 70 A
Battery	1x 174 Ah 2x 154 Ah (in series)

Brakes—PBST Transmission

Type	Hydraulically operated shoe-type, two brake circuits

Brakes—ProDrive™ Transmission

Type	Electro-hydraulically operated wet disk-type, two redundant brake circuits

Ground Speed Drive

Type	Hydrostatic

Transmission

Type	Three-speed transmission (PBST) Two-speed transmission (ProDrive™)

Max. Ground Travel Speeds—PBST Transmission

20 km/h (12 mph) version	9.1 km/h (5.6 mph) in 1st gear (2100 rpm) 17.4 km/h (10.8 mph) in 2nd gear (2100 rpm) 20 km/h (12.5 mph) in 3rd gear (1650 rpm)
25 km/h (15 mph) version	8.1 km/h (5.4 mph) in 1st gear (2100 rpm) 15.5 km/h (9.6 mph) in 2nd gear (2100 rpm) 25 km/h (15.5 mph) in 3rd gear (1650 rpm)
30 km/h (18 mph) version	9.7 km/h (6.0 mph) in 1st gear (2100 rpm) 18.6 km/h (11.5 mph) in 2nd gear (2100 rpm) 30 km/h (18.6 mph) in 3rd gear (1650 rpm)

Max. Ground Travel Speeds—ProDrive™ Transmission

20 km/h (12 mph) version	20 km/h (12.5 mph) in field mode 20 km/h (12.5 mph) in road mode
25 km/h (15 mph) version	20 km/h (12.5 mph) in field mode 25 km/h (15.5 mph) in road mode
30 km/h (18 mph) version	20 km/h (12.5 mph) in field mode 30 km/h (18.6 mph) in road mode
40 km/h (25 mph) version	20 km/h (12.5 mph) in field mode 40 km/h (24.8 mph) in road mode

Rear Axle

Medium Duty (8.5 t) two-wheel drive	8100 - 8600
Medium Duty (8.5 t) four-wheel drive	8100 - 8600
Heavy-Duty (11.5 t) two-wheel drive	8700, 8800

Continued on next page

Heavy-Duty (11.5 t) four-wheel drive	8700, 8800

Capacities

Fuel tank:	
8100 - 8600	1100 L (290 gal)
8700, 8800	1500 L (386 gal)
DEF tank:	
8100 - 8600 (Final Tier 4/Stage IV engine only)	43 L (11.4 gal)
Inoculant tank (High Volume):	
8100 - 8800	360 L (95 gal)
Inoculant tank (Low Volume):	
8100 - 8800	30 L (8 gal)
Water tank:	
8100 - 8600	20 L (5.29 gal)
8700, 8800	16 L (4.2 gal)
Air compressor tank:	
8100 - 8800	40 L (10.6 gal)
Cooling system (complete) — Final Tier 4/Stage IV:	
8100 and 8200	82 L (21.7 gal)
8300 - 8600	113 L (29.9 gal)
Cooling system (complete) — Tier 3/Stage III A:	
8300 - 8500	99 L (26.2 gal)
Cooling system (complete) — Tier 2/Stage II:	
8100 and 8200	78 L (21.7 gal)
8300 - 8600	100 L (26.4 gal)
8700, 8800	115 L (30.4 gal)
Engine (with filter) — Final Tier 4/Stage IV:	
8100 and 8200	37 L (9.8 gal)
8300 - 8600	58 L (14.8 gal)
Engine (with filter) — Tier 3/Stage III A:	
8300 - 8500	58 L (15.3 gal)
Engine (with filter) — Tier 2/Stage II:	
8100 and 8200	37 L (9.8 gal)
8300 - 8600	58 L (15.3 gal)
8700, 8800	64 L (16.9 gal)
PBST Transmission	9.6 L (2.53 gal)
ProDrive™ transmission	13 L (3.43 gal)
Final drives (each)	7.0 L (1.85 gal)
Four-wheel drive rear axle	
Differential (Medium Duty rear axle)	15.5 L (4.09 gal)
Differential (Heavy-Duty rear axle)	17.0 L (4.49 gal)
Reduction gear	0.7 L (0.19 gal)
In motor housing	1 L (0.26 gal)
Two-wheel drive rear axle	
Wheel hub	0.5 L (0.13 gal)
Hydraulic system:	
Hydraulic oil reservoir—Without high flow wagon dump or Auxiliary Drive option	50 L (13.2 gal)
Hydraulic oil reservoir—With high flow wagon dump or Auxiliary Drive option	70 L (18.5 gal)
Right Feedroll Gearbox	6.7 L (1.77 gal)
Left Feedroll Gearbox	1.2 L (0.32 gal)

Continued on next page

OUCC002,0004C60 -19-09JUL16-4/5

Header Gearbox (Medium Duty)	0.87 L (0.23 gal)
Header Gearbox (Heavy-Duty)	1.33 L (0.35 gal)
Power Distribution Gear Lubrication System	33 L (8.72 gal)
Brake system—PBST Transmission:	
Brake fluid	1 L (0.26 gal)
AC system:	
Refrigerant	2200 g (7.6 oz)

Operator's Cab

Air conditioning system	Standard
Heater	Standard
Passenger seat	Standard

Sound Level

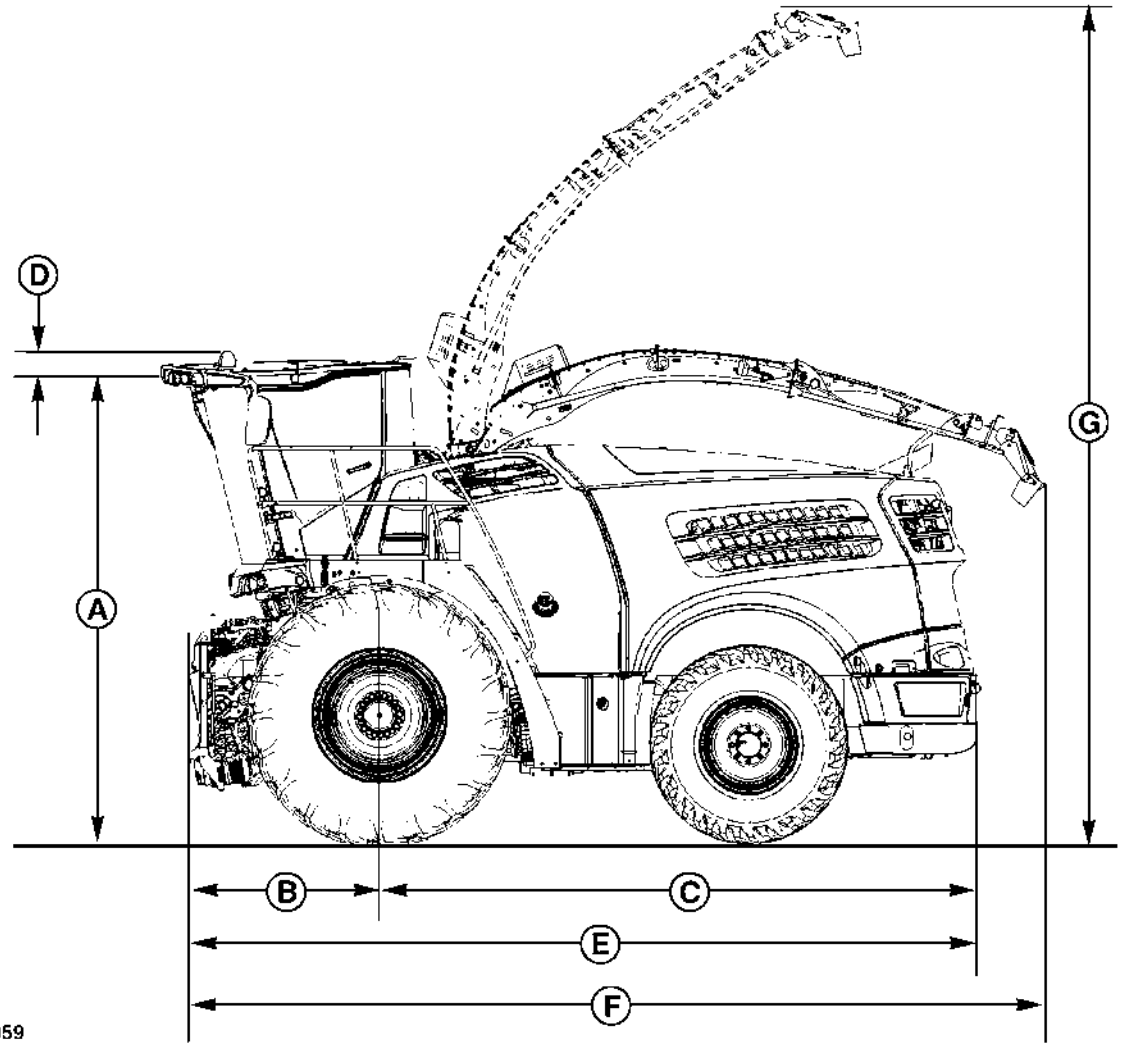
Max. sound level at operator's ear in accordance with Directive 86/188/EEC. Measurement method in accordance with ISO5131 with cab closed (average value):	
8100 - 8600	73 dB(A)
8700, 8800	74 dB(A)

Whole Body Vibration

The weighted root mean square acceleration to which the whole body is subjected to ranges from 0.5 to 1.4 m/s² as measured on a representative machine during typical operations and analyzed in accordance with ISO 2631. During the same operations, the weighted root mean square to which the upper limbs (hands and arms) are subjected was less than 2.5 m/s² when analyzed in accordance with ISO 5349. These acceleration values depend on the roughness of the ground, the speeds at which the Self-Propelled Forage Harvester is operated, the operator’s experience, weight, and driving habits.

OUCC002,0004C60 -19-09JUL16-5/5

Dimensions



ZX1050959

ZX1050959 —UN—06OCT14

A—3.74 m (12 ft 3.2 in)[1]
B—1.58 m (5 ft 2.2 in)
C—4.94 m (16 ft 0.3 in)
D—0.19 m (7.5 in)
E—6.52 m (21 ft 4.7 in)
F—7.06 m (23 ft 1.95 in)[2]
— 8.05 m (26 ft 4.93 in)[3]
— 7.99 m (26 ft 2.56 in)[4]
G—6.24 m (20 ft 5.7 in)[1]

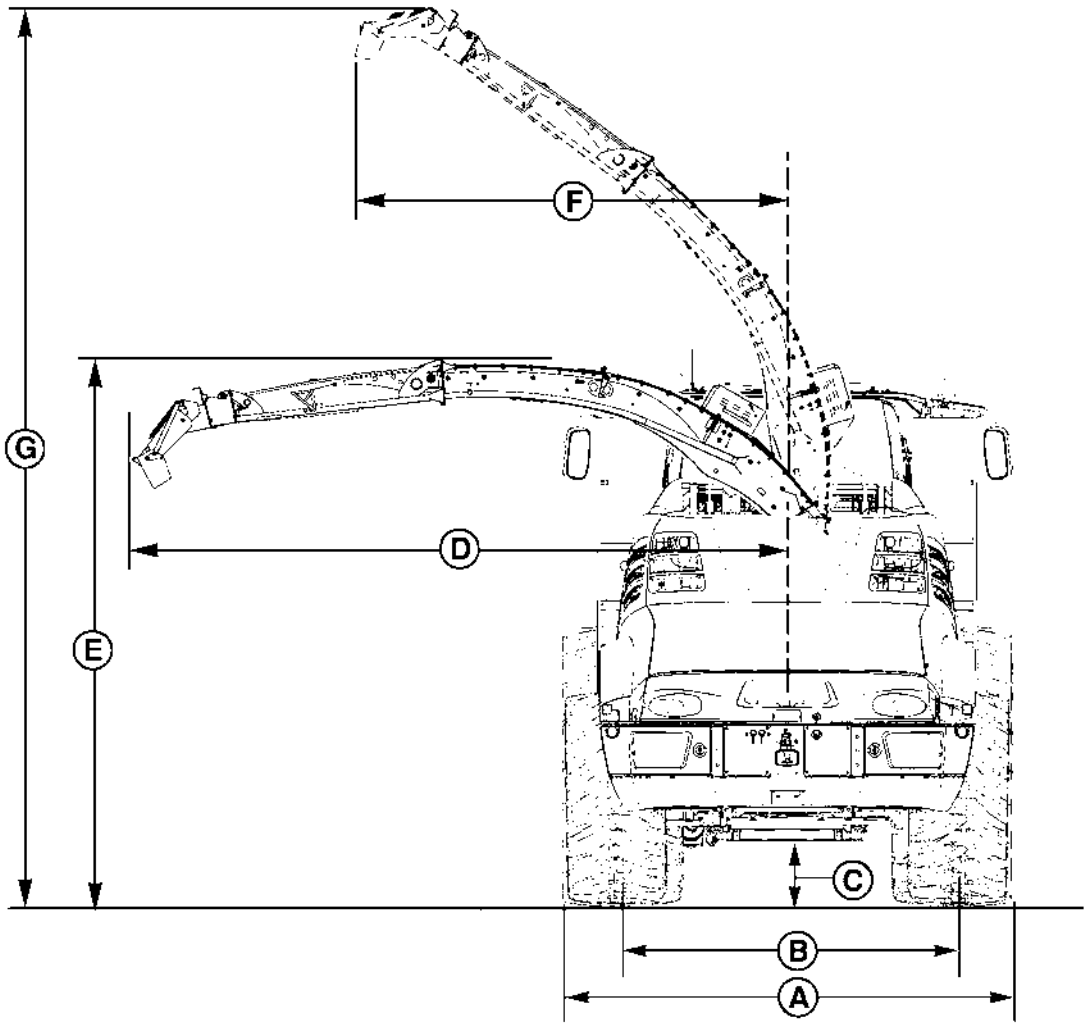
NOTE: Dimensions given for a machine with:

- *800/70 R38 front tires*
- *650/60 R34 rear tires*

[1] This dimension depends on tire size.
[2]Machine with 8-row discharge spout.
[3]Machine with 10-row discharge spout.
[4]Machine with 12-row discharge spout.

Continued on next page

OUCC002,0003C46 -19-03SEP15-1/2



ZX1050961

ZX1050961—UN—06OCT14

A—3.27 m (10 ft 8.7 in)[1]
B—2.802 m (9 ft 2.3 in)[2]
C—0.35 m (1 ft 1.8 in) min.[1]

D—4.83 m (15 ft 10.2 in)[3]
— 5.85 m (09 ft 0.4 in)[4]
— 6.54 m (21 ft 5.48 in)[5]
E — 4.03 m (13 ft 2.8 in)

F— 3.59 m (11 ft 9.3 in)[3]
— 4.65 m (15 ft 3.1 in)[4]
— 5.38 m (17 ft 7.81 in)[5]
G—6.43 m (21 ft 1.1 in)[3]

— 6.81 m (22 ft 4.1 in)[4]
— 7.10 m (23 ft 3.53 in)[5]

NOTE: Dimensions given for a machine with:

- *800/70 R38 front tires*
- *650/60 R34 rear tires*
- *Non powered rear axle*

[1] This dimension depends on tire size.
[2] This dimension depends on rear axle type.
[3] Machine with 8-row discharge spout.
[4] Machine with 10-row discharge spout.
[5] Machine with 12-row discharge spout.

OUCC002,0003C46 -19-03SEP15-2/2

Type Plates

Serial numbers identifying machine components or assemblies are stamped on components or factory serial number plates.

These numbers and letters are required when ordering replacement parts.

To ensure that you always have these numbers at hand, enter the appropriate serial numbers in the spaces provided in each illustration.

OUCC002,0003D5A -19-29JUL13-1/1

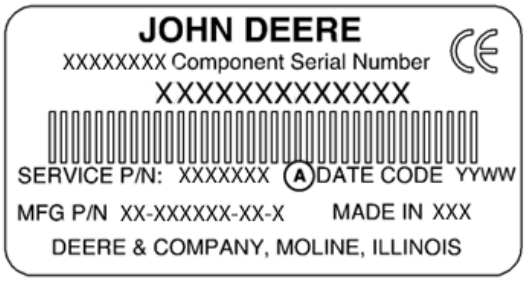
Identify Date Code

Use the date code (A) on the product label to identify the date of manufacture. “YY" (B) identifies the last two numbers of the year of manufacture; “WW” (C) identifies the week number of calendar year of manufacture.

NOTE: The week number of manufacture ranges between 01-53.

Date Code		
YY	Last Two Numbers of Year of Manufacture	Example: **11** = 20**11** **12** = 20**12** **13** = 20**13**
WW	Week Number of Calendar Year of Manufacture	Example: 01, 02, 03...53

A—Date Code (Date of Manufacture)
B—Last Two Numbers of Year of Manufacture
C—Week Number of Calendar Year of Manufacture



PC17568 —UN—16AUG13

Product Label Example

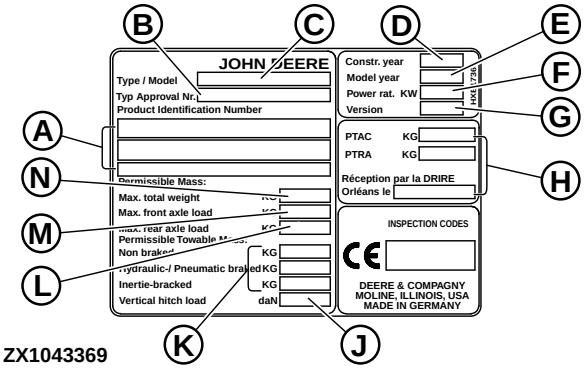
PC17574 —UN—16AUG13

Date Code Example

OUCC002,0004276 -19-24JAN15-1/1

Forage Harvester (Product Identification) Type Plate

A—Product Identification Number
B—Type Approval Number (in Certain Countries Only)
C—Model
D—Year of Production
E—Model Year
F—Engine Power
G—Version (in Certain Countries Only)
H—French Homologation Purpose Only
J—Permissible Drawbar Load
K—Permissible Trailer Load
L—Permissible Rear Axle Load
M—Permissible Front Axle Load
N—Permissible Total Weight



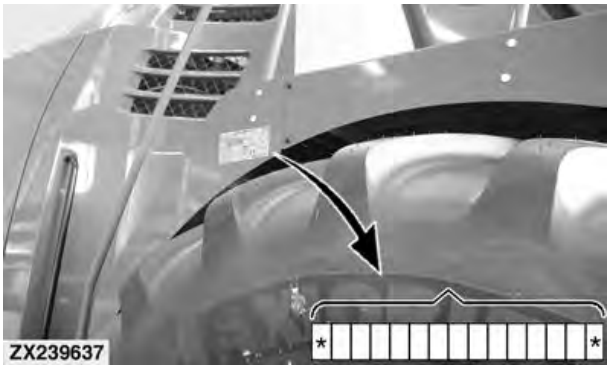
ZX1043369

ZX1043369 —UN—07SEP09

OUCC002,0003D58 -19-29JUL13-1/1

Product Identification Number

The product identification number is located on the right side of the operator's platform.



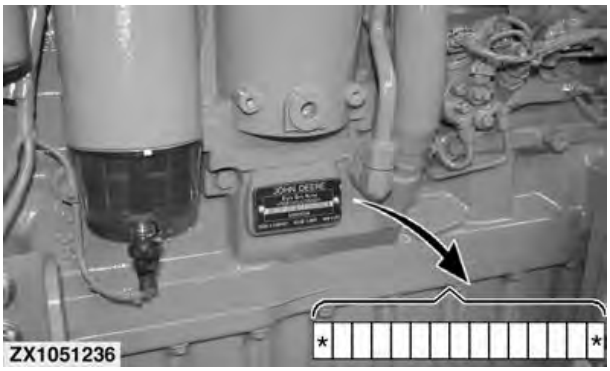
ZX239637 —UN—23MAR15

OUCC002,00046BC -19-03SEP15-1/1

Machine Component Serial Numbers

Engine Serial Number—PowerTech™ PSS 6090 (Final Tier 4/Stage IV)

The serial number is located near the oil filter.

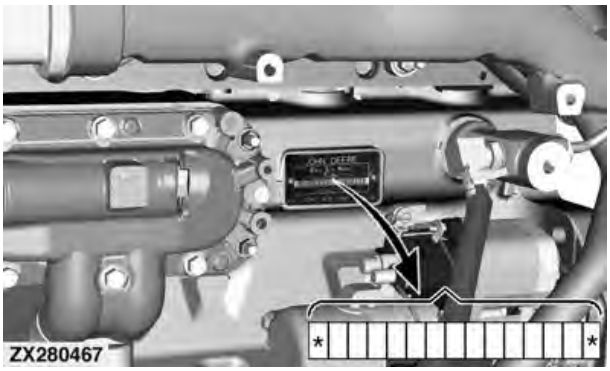


ZX1051236 —UN—06OCT14

OUCC002,0004C61 -19-07JUN16-1/30

Engine Serial Number—PowerTech Plus™ 6090 (Tier 3/Stage III A)

The serial number is located near the starter motor.



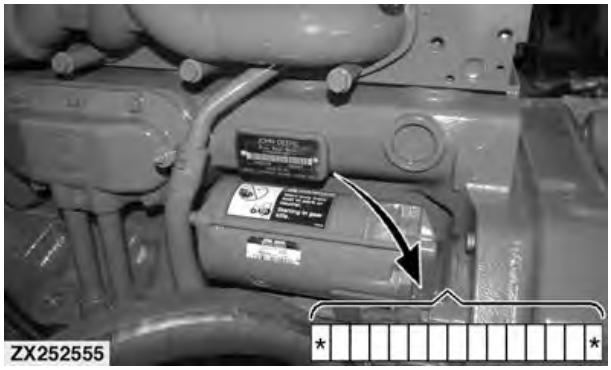
ZX280467 —UN—18JUN16

Continued on next page

OUCC002,0004C61 -19-07JUN16-2/30

Engine Serial Number—PowerTech™ 6090 (Tier 2/Stage II)

The serial number is located near the starter motor.

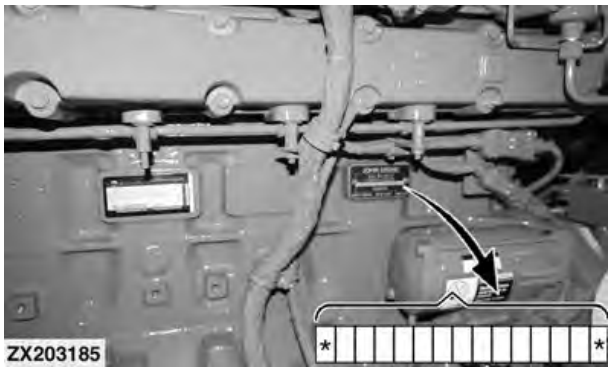


ZX252555 —UN—09SEP15

OUCC002,0004C61 -19-07JUN16-3/30

Engine Serial Number—PowerTech™ PSS 6135 (Final Tier 4/Stage IV)

The serial number is located near the starter motor.

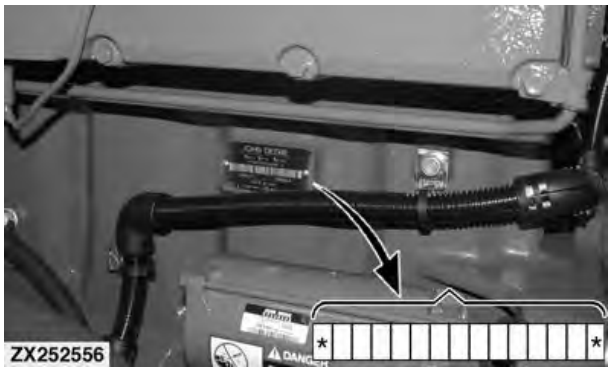


ZX203185 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-4/30

Engine Serial Number—PowerTech™ Plus 6135 (Tier 3/Stage III A)

The serial number is located near the starter motor.



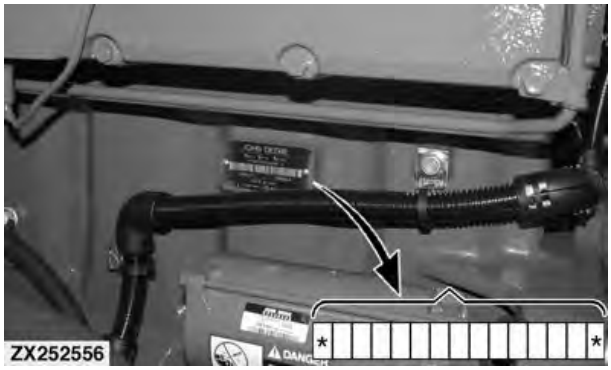
ZX252556 —UN—09SEP15

Continued on next page

OUCC002,0004C61 -19-07JUN16-5/30

Engine Serial Number—PowerTech™ 6135 (Tier 2/Stage II)

The serial number is located near the starter motor.

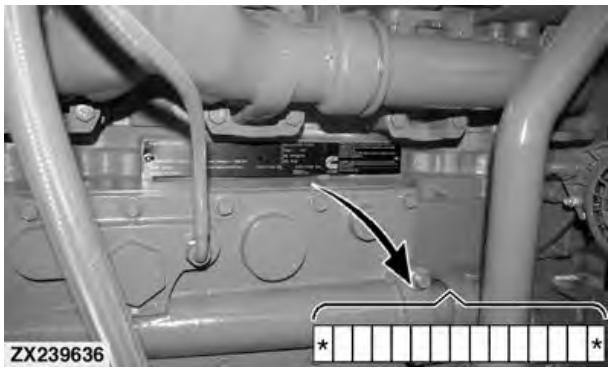


ZX252556 —UN—09SEP15

OUCC002,0004C61 -19-07JUN16-6/30

Engine Serial Number— QSK19 (Tier 2/Stage II)

The serial number is located near the 24 V alternator.

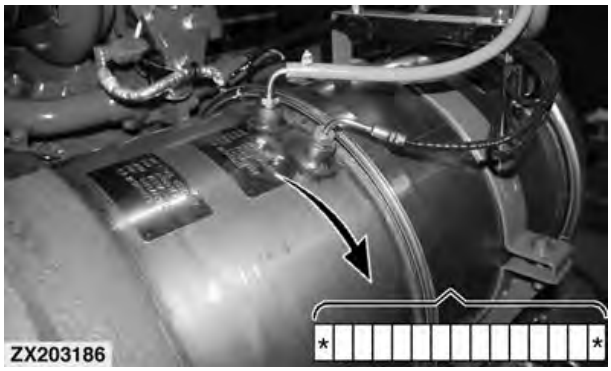


ZX239636 —UN—23MAR15

OUCC002,0004C61 -19-07JUN16-7/30

Exhaust Filter System Serial Number (Final Tier 4/Stage IV Engine Only)

The serial number is located on top.



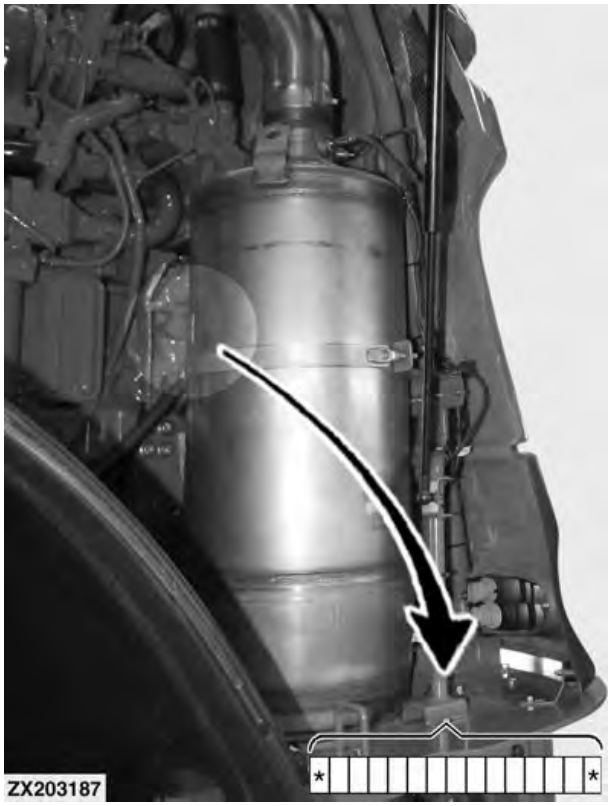
ZX203186 —UN—24JUN13

Continued on next page

OUCC002,0004C61 -19-07JUN16-8/30

SCR (Selective Catalytic Reduction) Module Serial Number (Final Tier 4/Stage IV Engine Only)

The serial number is located on front side.



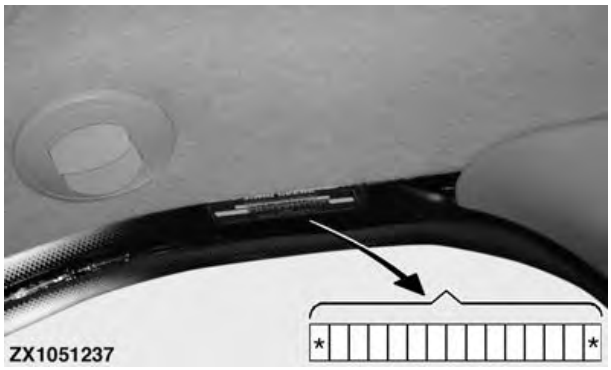
ZX203187 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-9/30

Cab Serial Number

The serial number is located on the inside of the right-hand side panel.

NOTE: The cab serial number is the same as for the air-conditioning system.



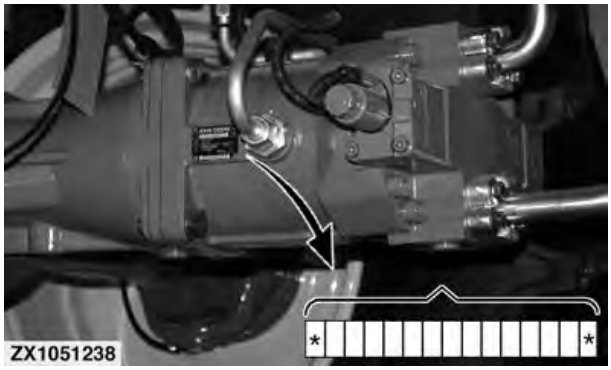
ZX1051237 —UN—20JUN13

Continued on next page

OUCC002,0004C61 -19-07JUN16-10/30

Rear Wheel Drive Motor Serial Number

The serial number is located on the right-hand side of the motor.

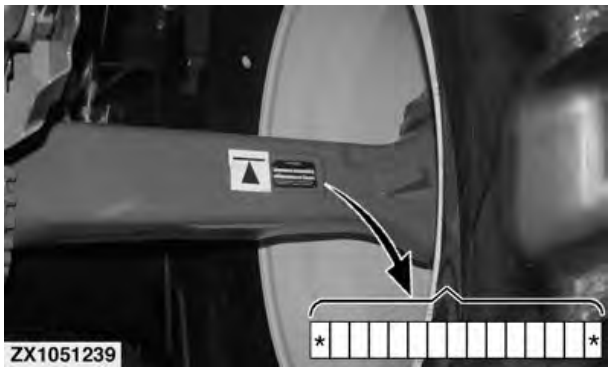


ZX1051238 —UN—17JUN16

OUCC002,0004C61 -19-07JUN16-11/30

Rear Axle Serial Number

The serial number is located on the rear side (right-hand) of the rear axle.

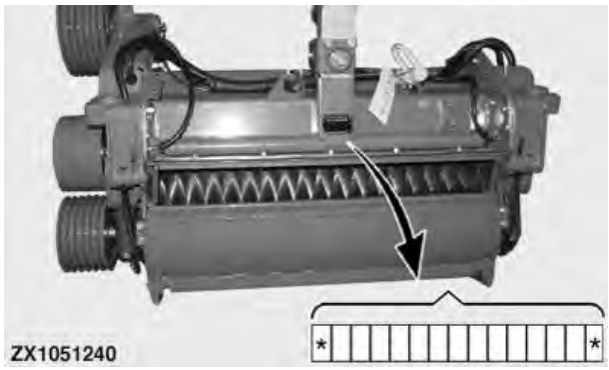


ZX1051239 —UN—17JUN16

OUCC002,0004C61 -19-07JUN16-12/30

Kernel Processor Serial Number

The serial number is located on front covering shield.



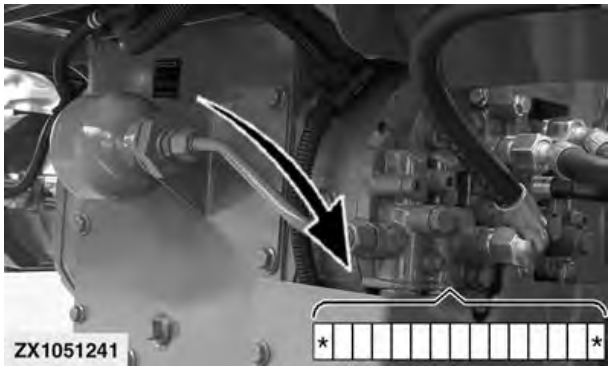
ZX1051240 —UN—03JAN14

Continued on next page

OUCC002,0004C61 -19-07JUN16-13/30

ProDrive™ Transmission Serial Number

The serial number is located on the transmission housing.

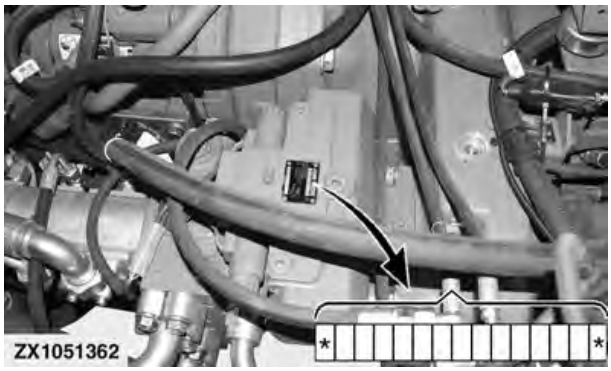


ZX1051241 —UN—06OCT14

OUCC002,0004C61 -19-07JUN16-14/30

Hydrostatic Pump Serial Number (ProDrive™ Transmission)

The serial number is located on the pump housing.

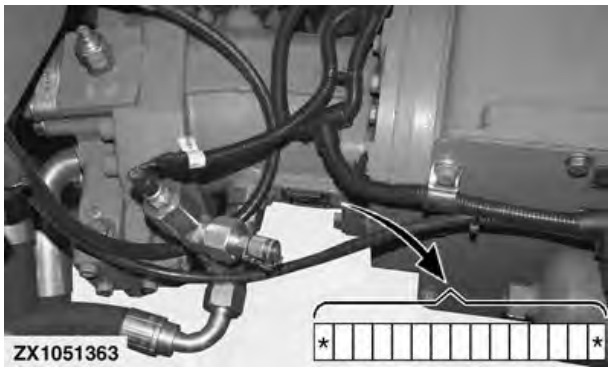


ZX1051362 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-15/30

Main Drive Motor Serial Number (ProDrive™ Transmission)

The serial number is located on the motor housing.



ZX1051363 —UN—24JUN13

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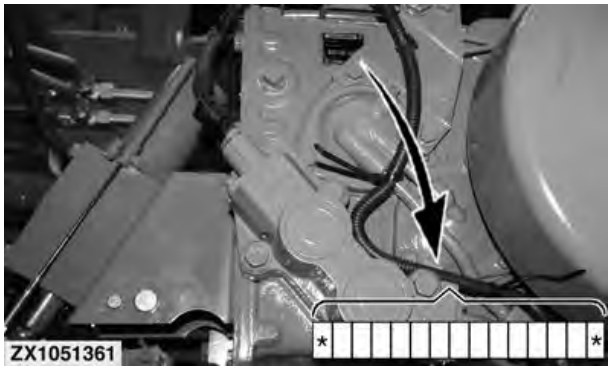
OUCC002,0004C61 -19-07JUN16-16/30

Push-Button Shift Transmission Serial Number

The serial number is located on the transmission housing.

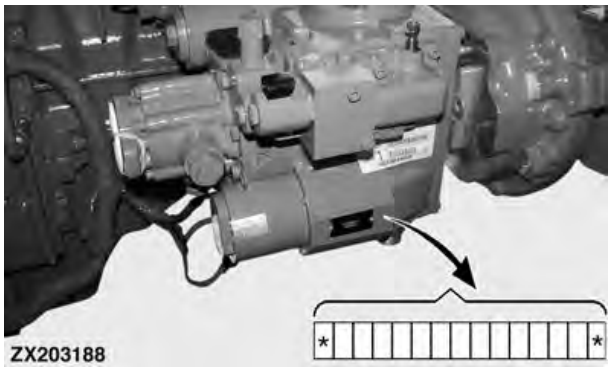


ZX1051361 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-17/30

Hydrostatic Pump Serial Number (Push-Button Shift Transmission)

The serial number is located on the pump housing.

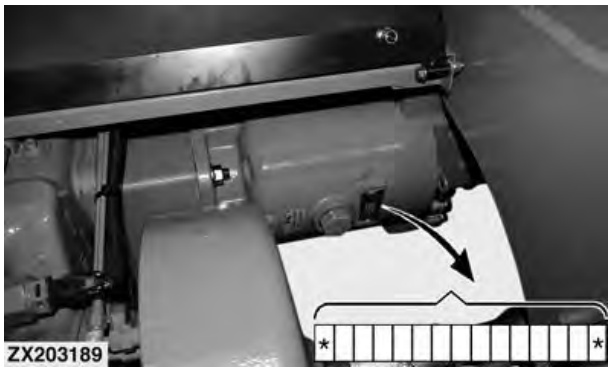


ZX203188 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-18/30

Main Drive Motor Serial Number (Push-Button Shift Transmission)

The serial number is located on the motor housing.



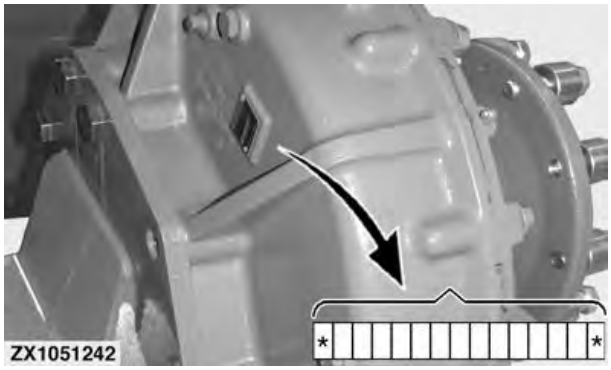
ZX203189 —UN—24JUN13

Continued on next page

OUCC002,0004C61 -19-07JUN16-19/30

Final Drive Serial Number

The serial number is located on the transmission housing opposite the input shaft.

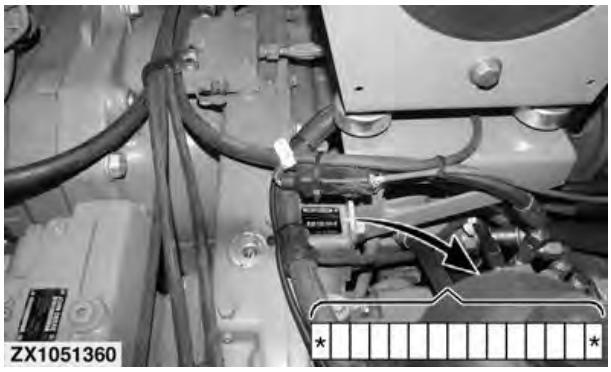


ZX1051242 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-20/30

Power Distribution Gear Serial Number

The serial number is located on top of housing (right-hand side).

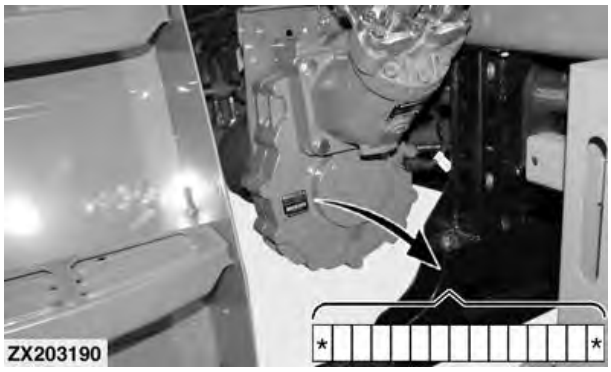


ZX1051360 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-21/30

Header Drive Gearbox Serial Number

The serial number is located on the header drive gearbox housing.



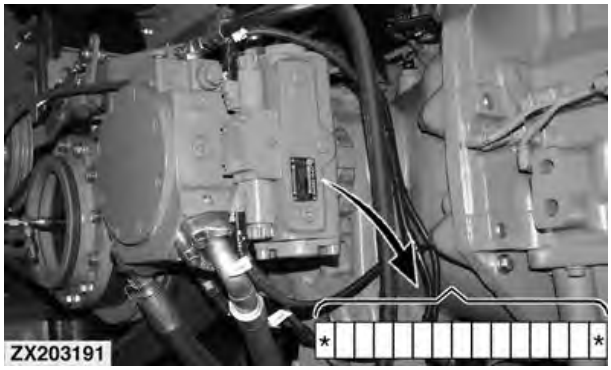
ZX203190 —UN—24JUN13

Continued on next page

OUCC002,0004C61 -19-07JUN16-22/30

Header Drive Gearbox Hydrostatic Pump Serial Number

The serial number is located on the pump housing.

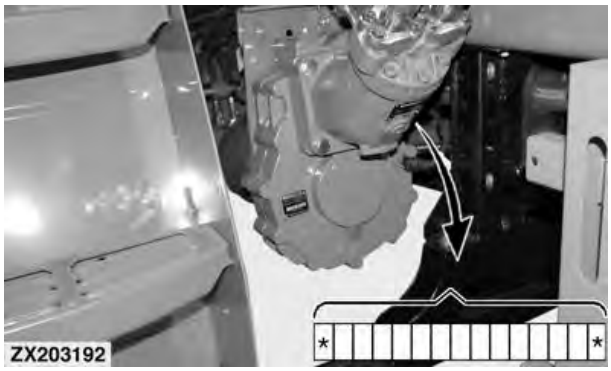


ZX203191 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-23/30

Header Drive Gearbox Motor Serial Number

The serial number is located on the motor housing.

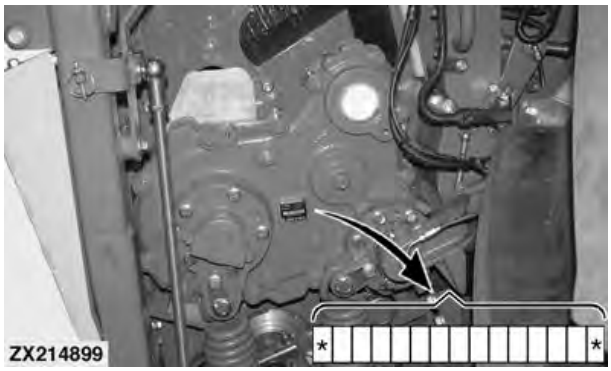


ZX203192 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-24/30

Left Feedroll Gearbox Serial Number

The serial number is located on the left feedroll gearbox.



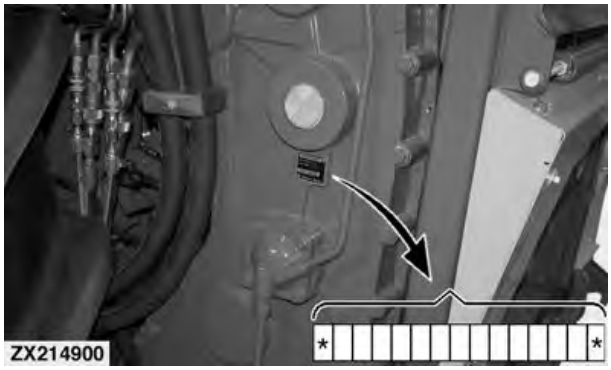
ZX214899 —UN—06OCT14

Continued on next page

OUCC002,0004C61 -19-07JUN16-25/30

Right Feedroll Gearbox Serial Number

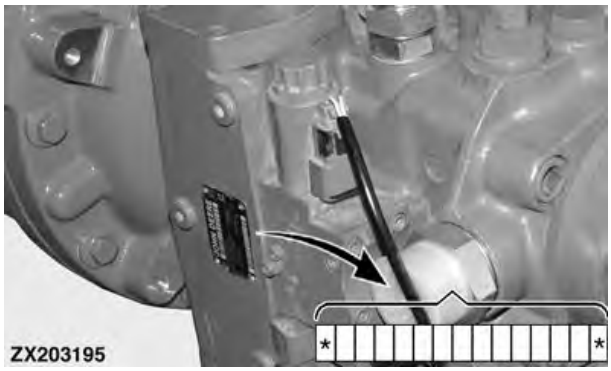
The serial number is located on the right feedroll gearbox.



OUCC002,0004C61 -19-07JUN16-26/30

Right Feedroll Gearbox Hydrostatic Pump Serial Number

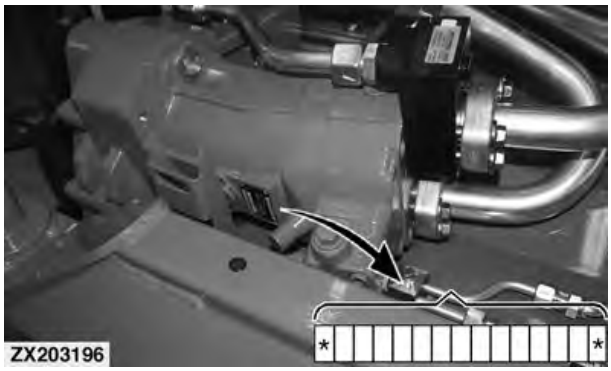
The serial number is located on the pump housing.



OUCC002,0004C61 -19-07JUN16-27/30

Right Feedroll Gearbox Hydrostatic Motor Serial Number

The serial number is located on the motor housing.

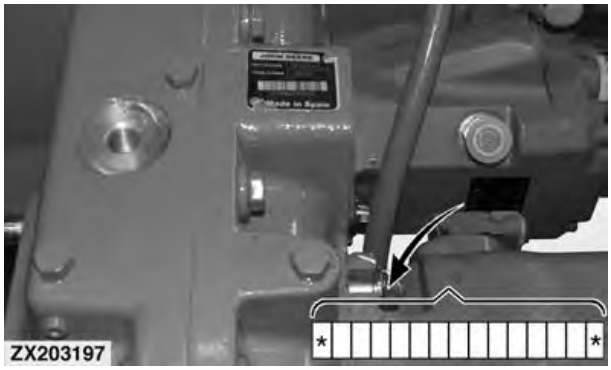


Continued on next page

OUCC002,0004C61 -19-07JUN16-28/30

Load Sensing Pump Serial Number

The serial number is located on the pump housing.

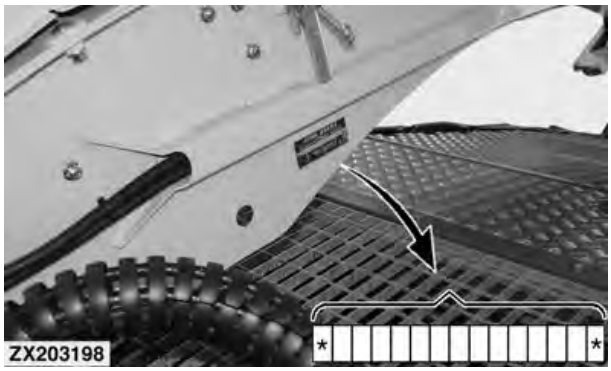


ZX203197 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-29/30

Spout Serial Number

The serial number is located on the left-hand side of the spout.

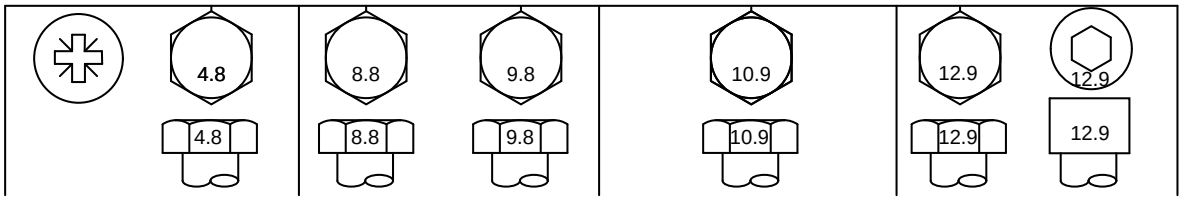


ZX203198 —UN—24JUN13

OUCC002,0004C61 -19-07JUN16-30/30

Metric Bolt and Screw Torque Values

TS1670 —UN—01MAY03



Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]		Lubricated[a]		Dry[b]	
	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	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N·m	lb.-ft.														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. 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 fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

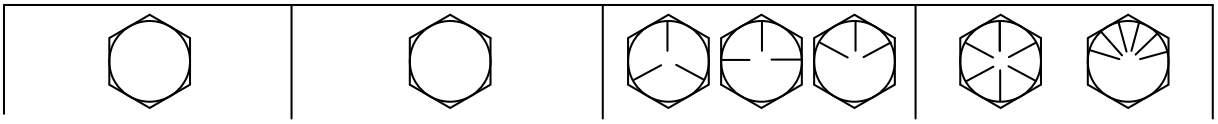
[a] *"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.*

[b] *"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B, F13E or F13H zinc flake coating.*

DX,TORQ2 -19-12JAN11-1/1

Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



Bolt or Screw Size	SAE Grade 1				SAE Grade 2[a]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]	
	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	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N·m	lb.-ft.	N·m	lb.-ft.
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N·m	lb.-ft.	N·m	lb.-ft.				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N·m	lb.-ft.														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

[a] Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. 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.

[b] "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

[c] "Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B, F13E or F13H zinc flake coating.

DX,TORQ1 -19-12JAN11-1/1

EC Declaration of Conformity

John Deere Werk Zweibrücken
Homburger Straße 117
D-66482 Zweibrücken, Germany

The person named below declares that

The Forage Harvester
Models: 8100, 8200, 8300, 8400, 8500, 8600, 8700 and 8800

fulfills all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Agricultural and Forestry Machinery-Electromagnetic Compatibility	ISO 14982	Self-certification
Machinery Directive	2006/42/EC	Self-certification, per Article 5 of the Directive
Agricultural Machinery Safety—Part 1	ISO 4254-1	Self-certification
Agricultural Machinery Safety—Part 7	ISO 4254-7	Self-certification
Machinery Safety	ISO 12100	Self-certification
EMC Directive	2004/108/EC	Self-certification

Name and address of the person in the European Community authorized to compile the technical construction file:

Peter Thoene
John Deere GmbH & Co. KG
Mannheim Regional Center (Zentralfunktionen)
John Deere Strasse 70
Mannheim, Germany D-68163
EUConformity@johndeere.com

Place of declaration: D-66482 Zweibrücken, Germany

Date of declaration: 22nd October 2015

Manufacturing unit: John Deere Werk Zweibrücken

Name: Richard Wuebbels

Title: Engineering Manager Forage Harvester

DXCE01 —UN—28APR09

CE

OUCC002,0004D1B -19-05JUL16-1/1

EU Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A

The person named below declares that

Product: Horizontal Narrow Stereo Camera, Horizontal Wide Stereo Camera, Vertical Narrow Stereo Camera, Vertical Wide Stereo Camera

fulfills all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Electromagnetic Compatibility Directives	2014/30/EU	Annex II of the Directive

The product is in conformity with the following standards ans/or other nominative documents:

EN ISO 14982:2009
EN 55022:2010/AC:2011
EN 55024:2010

Name and address of the person in the European Community authorized to compile the technical construction file:

Brigitte Birk
John Deere GmbH & Co. KG
Mannheim Regional Center (Zentralfunktionen)
John Deere Strasse 70
Mannheim, Germany D-68163

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of declaration: Urbandale, Iowa U.S.A
Date of declaration: 20 April 2016

Name: Daniel Pflieger
Title: Global Engineering Manager Infrastructure

DXCE01 —UN—28APR09

CE

OUCC002,0004C2E -19-26MAY16-1/1

EU Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A

The person named below declares that

Product: IPM Controller

Model(s): IP01

fulfills all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Electromagnetic Compatibility Directives	2014/30/EU	Annex II of the Directive

The product is in conformity with the following standards ans/or other nominative documents:

EN ISO 14982: 2009
EN 55022: 2010/AC:2011
EN 55024:2010

Name and address of the person in the European Community authorized to compile the technical construction file:

Brigitte Birk
John Deere GmbH & Co. KG
Mannheim Regional Center (Zentralfunktionen)
John Deere Strasse 70
Mannheim, Germany D-68163

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Place of declaration: Urbandale, Iowa U.S.A

Date of declaration: 20 April 2016

Name: Daniel Pflieger

Title: Global Engineering Manager Infrastructure

DXCE01 —UN—28APR09

CE

OUCC002,0004C2F -19-26MAY16-1/1

Eurasian Economic Union–EAC

This information applies only to products which bear the EAC conformity mark of the Eurasian Economic Union member states.

Manufacturer: Deere & Company
Moline, Illinois U.S.A.

Models: 8100, 8200, 8300, 8400, 8500, 8600, 8700 and 8800 Forage Harvesters

Made in Zweibrücken, Germany

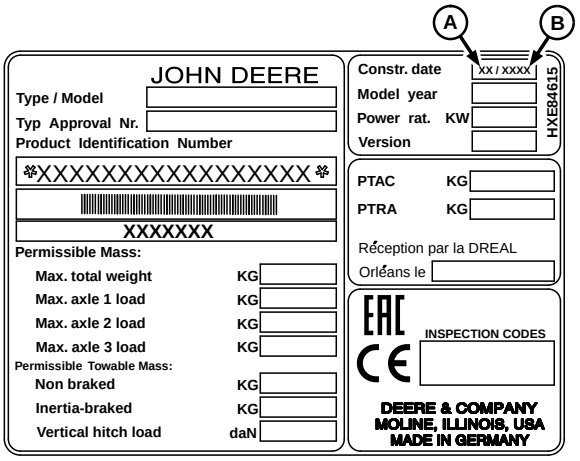
Name and address of the authorized representative in the Eurasian Economic Union:
Limited Liability Company
"John Deere Rus"

Address:
142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi microdistrict, vladenye "Warehouse 104," Building 2.

For technical support, contact your dealer.

Date of manufacture is denoted by the product label.

A—Month of Manufacture **B—Year of Manufacture**



Product Label Example

OUCC002,0004C29 -19-08MAY16-1/1

Eurasian Economic Union–EAC (English, Russian, and Kazakh)

Information for products that bear conformity mark of the Eurasian Economic Union member states

Manufacturer: Deere & Company
Moline, Illinois U.S.A.

Model: Horizontal Narrow Stereo Camera, Horizontal Wide Stereo Camera, Vertical Narrow Stereo Camera, Vertical Wide Stereo Camera

Made in Germany

Name and address of the authorized representative in the Customs Union of Russia, Belarus, and Kazakhstan:
Limited Liability Company
"John Deere Rus"

Address:
142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi micro district, vladenye "Warehouse 104," Building 2.

For technical support, contact your dealer.

EAC

ZX284078 —UN—19JUN16

Information for products that bear conformity mark of the Eurasian Economic Union member states

Manufacturer: Deere & Company
Moline, Illinois U.S.A.

Model: Controller (IPM)

Made in USA

Name and address of the authorized representative in the Customs Union of Russia, Belarus, and Kazakhstan:
Limited Liability Company
"John Deere Rus"

Address:
142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi micro district, vladenye "Warehouse 104," Building 2.

For technical support, contact your dealer.

EAC

ZX284079 —UN—19JUN16

Continued on next page

Евразийский экономический союз (ЕАЭС)

Информация об изделиях, которые имеют знак соответствия требованиям технических регламентов Евразийского экономического союза (ЕАЭС)

Производитель: Компания Deere & Company
г. Молин, Штат Иллинойс, США

модель: Горизонтальная узкоформатная стереокамера, горизонтальная широкоформатная стереокамера, вертикальная узкоформатная стереокамера , вертикальная широкоформатная стереокамера
Сделано в Германии.

Наименование и адрес уполномоченного представителя на территории Евразийского экономического союза (ЕАЭС): Общество с ограниченной ответственностью "Джон Дир Русь"

Адрес: 142050, Россия, Московская область, Домодедовский район, г. Домодедово, микрорайон "Белые столбы", владение "Склады 104." стр. 2.
Для получения технической поддержки обращайтесь к дилеру, обслуживающему вашу организацию.

EAC

ZX284076 —UN—19JUN16

Евразийский экономический союз (ЕАЭС)

Информация об изделиях, которые имеют знак соответствия требованиям технических регламентов Евразийского экономического союза (ЕАЭС)

Производитель: Компания Deere & Company
г. Молин, Штат Иллинойс, США

модель: Контроллер обработки изображений (IPM)
Сделано в США.

Наименование и адрес уполномоченного представителя на территории Евразийского экономического союза (ЕАЭС): Общество с ограниченной ответственностью "Джон Дир Русь"

Адрес:
142050, Россия, Московская область, Домодедовский район, г. Домодедово, микрорайон "Белые столбы", владение "Склады 104," стр. 2.
Для получения технической поддержки обращайтесь к дилеру, обслуживающему вашу организацию

EAC

ZX284077 —UN—19JUN16

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Еуразиялық экономикалық одақ - ЕЭО

Еуразиялық экоомикалық одаққа мүше елдердің сәйкестігі жөніндегі белгісі бар өнімдер туралы ақпарат

Өндіруші: Deere & Company
Молин, Иллинойс, АҚШ

Үлгі: Көлденең жіңішке стерео камера, көлденең кең стерео камера, тік жіңішке стерео камера, тік кең стерео камера
Германияда жасалған.

Еуразиялық экономикалық одақтағы өкілдердің аты мен мекенжайы:
"John Deere Rus" жауапкершілігі шектеулі серіктестігі

Мекенжайы: 142050, Ресей, Мәскеу облысы, Домодедово қаласы, Белые столбы ықшам ауданы, "Склады 104," қожалығы, 2 үй.

Техникалық қолдау алу үшін дилеріңізбен хабарласыңыз.

EAC

PC22765 —UN—15JUN16

Еуразиялық экономикалық одақ - ЕЭО

Еуразиялық экоомикалық одаққа мүше елдердің сәйкестігі жөніндегі белгісі бар өнімдер туралы ақпарат

Өндіруші: Deere & Company
Молин, Иллинойс, АҚШ

Үлгі: Кескін өңдеу модулі (КӨМ)
АҚШ-та жасалған

Еуразиялық экономикалық одақтағы өкілдердің аты мен мекенжайы:
"John Deere Rus" жауапкершілігі шектеулі серіктестігі

Мекенжайы: 142050, Ресей, Мәскеу облысы, Домодедово қаласы, Белые столбы ықшам ауданы, "Склады 104," қожалығы, 2 үй.

Техникалық қолдау алу үшін дилеріңізбен хабарласыңыз.

EAC

PC22766 —UN—15JUN16

OUCC002,0004CAB -19-19JUN16-3/3

Toxic or Hazardous Substances or Elements Disclosure—Image Processing Module (IPM)

The Environment Friendly Use Period (EFUP) marked on this product refers to the safety period of time in which the product is used under the conditions specified in the product instructions without leakage of noxious and harmful substances.
The EFUP relates only to the environmental impact of the product in normal use, it does not imply product life.

In accordance with the requirements specified in SJ/T11364-2014, all Active Fill Control sold in the People's Republic of China are marked with the following pollution control logo.

PC15290 —UN—31OCT12

Part Name	Toxic or hazardous substances and elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated dephenyl ethers (PBDE)
PCBA (Base)	X	O	O	O	O	O
PCBA (Small)	X	O	O	O	O	O
Housing	O	O	O	O	O	O
Cover	O	O	O	O	O	O
Cap	O	O	O	O	O	O
Hardware	O	O	O	O	O	O
Harnesses	X	O	O	O	O	O

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T26572-2011.
X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part is above the limit requirement in GB/T26572-2011.

OUCC002,0004C3D -19-26MAY16-1/1

Toxic or Hazardous Substances or Elements Disclosure—Motec Stereo Camera

The Environment Friendly Use Period (EFUP) marked on this product refers to the safety period of time in which the product is used under the conditions specified in the product instructions without leakage of noxious and harmful substances.
The EFUP relates only to the environmental impact of the product in normal use, it does not imply product life.

In accordance with the requirements specified in SJ/T11364-2014, all Active Fill Control sold in the People's Republic of China are marked with the following pollution control logo.

ZX271533 —UN—04FEB16

Part Name	Toxic or hazardous substances and elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated dephenyl ethers (PBDE)
PCB Sensor 1	X	O	O	O	O	O
PCB Sensor 2	X	O	O	O	O	O
PCB Mainboard	X	O	O	O	O	O
PCB Connector	X	O	O	O	O	O
Housing Top	O	O	O	O	O	O
Housing Bottm	O	O	O	O	O	O
Glass Panes	O	O	O	O	O	O
Hardware	O	O	O	O	O	O

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T26572-2011.
X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part is above the limit requirement in GB/T26572-2011.

OUCC002,0004C3E -19-26MAY16-1/1

FCC Notifications to User

John Deere Active Fill Control

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

These devices must be operated as supplied by John Deere Ag Management Solutions. Any changes or modifications made to these devices without the express written approval of John Deere Ag Management Solutions may void the user's authority to operate these devices.

Image Processing Module

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

Stereo Camera

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced technician for help.

OUCC002,0004703 -19-16DEC15-1/1

Safety Note Regarding the Subsequent Installation of Electrical and Electronic Appliances and/or Components

The machine is equipped with electronic components whose function may be influenced by electromagnetic radiation from other appliances. Such influences may be hazardous, so take the following safety instructions into account.

If electrical and electronic appliances are subsequently installed on the machine and connected to the onboard system, the user must verify whether the installation affects the electronics or other components. This applies particularly to:

- Personal Computer
- GPS (Global Positioning System) receiver

In particular, subsequently installed electrical/electronic components must comply with the relevant edition of EMC Directive 2004/108/EC, and be CE marked.

If mobile communication systems (e.g. radio communication, telephone) are to be installed subsequently, the following extra requirements must be met:

- Only devices with an approval complying with the valid national regulation (i.e. BZT approval in Germany) shall be installed;
- The device shall be installed securely;
- Portable or mobile devices may be operated in the vehicle only if connected to a fixed outside antenna;
- Transmitters shall be installed separately from the vehicle's electronics;
- The antenna must be installed in a professional manner, with a good ground connection between the antenna and the vehicle ground.

Wiring, installation and maximum permissible current supply must be as stated in the installation instructions of the machine manufacturer.

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John Deere Service Keeps You on the Job

John Deere Parts

We help minimize downtime by putting genuine John Deere parts in your hands in a hurry.

That's why we maintain a large and varied inventory—to stay a jump ahead of your needs.

TS100 —UN—23AUG88

DX,IBC,A -19-04JUN90-1/1

The Right Tools

Precision tools and testing equipment enable our Service Department to locate and correct troubles quickly . . . to save you time and money.

TS101 —UN—23AUG88

DX,IBC,B -19-04JUN90-1/1

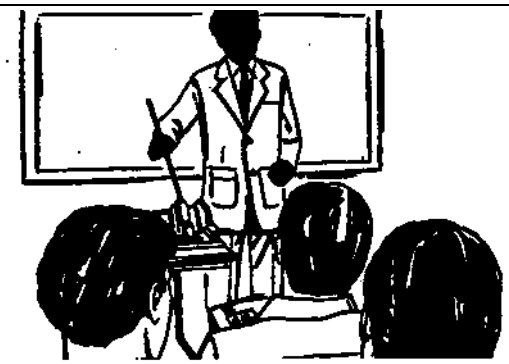
Well-Trained Technicians

School is never out for John Deere service technicians.

Training schools are held regularly to be sure our personnel know your equipment and how to maintain it.

Result?

Experience you can count on!



TS102 —UN—23AUG88

DX,IBC,C -19-04JUN90-1/1

Prompt Service

Our goal is to provide prompt, efficient care when you want it and where you want it.

We can make repairs at your place or at ours, depending on the circumstances: see us, depend on us.

JOHN DEERE SERVICE SUPERIORITY: We'll be around when you need us.

TS103 —UN—23AUG88

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