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8245R, 8270R, 8295R, 8320R and 8345R Tractors (S. N. 016001—)

OPERATOR'S MANUAL

**8245R, 8270R, 8295R, 8320R and 8345R
Tractors (S. N. 016001—)
(European Edition)**

OMRE314063 ISSUE D1 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

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

If this product contains a gasoline engine:

⚠ WARNING

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

The State of California requires the above two warnings.

Additional Proposition 65 Warnings can be found in this manual.

John Deere Waterloo Works

(European Edition)

LITHO IN U.S.A.

Introduction

Foreword

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

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

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

RIGHT-HAND AND LEFT-HAND sides are determined by facing 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.

THIS TRACTOR 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 TRACTOR 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 tractor will relieve the manufacturer of all liability for any resulting damage or injury.

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

OURX935,00001B4 -19-07JAN11-1/1

Look For Supplemental Information

Occasionally new or revised information will become available after manuals are printed. To get this up-to-date information into your hands, publication supplements are prepared and supplied to the field in the machine literature package.

Supplements can be supplied in the following forms and are usually identified with one of these titles:

- Direction(s) Sheet
- Installation Instructions
- Publications Supplement

Before your initial review of the Operator's Manual, look through the machine literature package to see if any

supplemental information has been provided. If supplied, review this information to determine which operating procedures are impacted or modified by the revised instructions. Pay close attention to "CAUTION" and "IMPORTANT" statements as they address your safety, the safety of others, and safe operation of the machine.

When Operator's Manuals are revised, the supplemental information is incorporated directly into the manual, thereby eliminating the supplement.

OURX935,000046A -19-04APR06-1/1

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Triple Link Suspension™	Trademark of Deere and Company
Vari-Cool™	Trademark of Deere and Company

RX33672,0000DEE -19-25MAY10-1/1

Contents

	Page		Page
Safety	05-1	Message Center	16-13
Safety Signs		Configuring Home Page	16-14
Replace Damaged or Missing Safety Signs	10-1	Setting Cab Lighting	16-15
Operator's Manual	10-1	Setting Service Interval	16-16
Passenger Seat	10-2	Setting Implement Width, Area Counter and Distance Counter	16-17
External Front Hitch Control Switch (If Equipped)	10-2	Setting Alarm Volume	16-18
External Rear Hitch Control Switch	10-3	Read Operator Manuals for ISOBUS Implements	16-18
Pick—Up Hitch (If Equipped)	10-3	Connecting ISO Implements and Multiple ISO Displays	16-19
Accumulators—Independent Link Suspension tractors (If equipped)	10-4	AUXILIARY CONTROLS	16-21
Implement Detected	10-5	CommandCenter Software Version	16-23
Auxiliary Control	10-5	Calibrating Dual Beam Radar	16-24
		Manual Vehicle Speed Calibration	16-25
Controls and Instruments		Lights	
Front Console	15-1	Road and Field Light Identification and CommandCenter™ Indicators	20-1
Corner Post Display	15-1	Programmable Lighting State	20-3
STOP, Service Alert and Information Indicators	15-2	Programmable Lights	20-3
Digital Indicators—Tachometer, Ground Speed and Transmission	15-4	Operating Turn Signals and High/Low Beam	20-5
Gauges—Coolant Temperature, Engine Oil Pressure and Fuel Level	15-4	Operating Hazard Lights	20-6
CommandArm Controls	15-5	Operating Rotary Beacon Light (If Equipped)	20-7
CommandArm™ Controls	15-6	Using Seven-Terminal Outlet	20-8
Foot Operated Throttle Control (If Equipped)	15-7	Operator Station	
Secondary Brake Lever	15-7	Adjusting Air Suspension Seat	25-1
External Hitch Raise/Lower Switches	15-8	Adjusting Active Seat™ (If Equipped)	25-2
		Using Instructional Seat	25-3
CommandCenter		Heated Leather Seat (If Equipped)	25-4
Activating The System	16-1	Adjusting CommandARM™ Position	25-4
CommandCenter Menu	16-1	Operating Cab Heat, Defrost and Air Conditioning—Standard Equipment	25-5
CommandCenter Primary Navigational Tools	16-2	Operating Automatic Temperature Control (ClimaTrak™ ATC)	25-6
Shortcut Buttons	16-3	Adjusting Steering Wheel and Column	25-7
CommandCenter Page Layout	16-3	Operating Horn	25-7
CommandCenter Righ region Common Soft Keys	16-5	Operating Front Windshield Wiper and Washer	25-8
CommandCenter™ Input Fields	16-6	Operating Rear Window Wiper and Washer (If Equipped)	25-8
Navigating To Specific Page	16-7	Operating Deluxe Radio	25-9
Selecting Highlight Color	16-8	Setting Clock and Alarm—Deluxe Radio	25-10
Setting Country, Language, And Units	16-9	Changing World Tuner Set- tings—Deluxe Radio	25-11
Setting Country, Language, And Units	16-10		
Setting System Time	16-11		
Viewing Basic Diagnostic Readings	16-12		

Continued on next page

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	Page		Page
Changing World Tuner Set- tings—Deluxe Radio	25-11	Using Trailer Air Brakes (If Equipped)	40-10
Operating Premium Radio with Compact Disc (CD) Player	25-12	Using Trailer Air Brakes (If Equipped)	40-11
Setting Clock—Premium Radio	25-14	AutoTrac™ Assisted Steering System (If Equipped)	40-12
Setting the Alarm—Premium Radio	25-15		
Compact Disc (CD) Mode—Premium Radio	25-16	Operating PowerShift Transmission	
Using iPod® — Premium Radio	25-17	Operating the Transmission	41-1
Changing World Tuner Setting—Pre- mium Radio	25-18	Shifting the Transmission	41-2
Setting up Hands Free (Bluetooth®) Mode – Premium Radio	25-19	Setting Startup Gear And RPM Droop	41-4
USB Mode – Premium Radio	25-20	Operating Automatic PowerShift (APS)	41-5
Operating Premium Radio Through CommandARM™ Controls	25-21		
Installing Business Band Radio and Antenna	25-22	Operating IVT/AutoPowr Transmission	
Using Auxiliary Power Strip And Electrical Outlets (If Equipped)	25-23	Controls Identification	42-1
Connecting Compatible Electronic Equipment	25-24	Left-Hand and Right-Hand Reverser Shift Patterns	42-2
Configuring Tractor For GPS/Radar	25-25	Operating The Transmission	42-3
Mounting StarFire™ Receiver	25-26	Adjusting Set Speeds	42-4
Installing GreenStar System Components	25-27	Set Speeds—Guidelines And Examples	42-5
Connecting AutoTrac™ Assisted Steering System (If Equipped)	25-28	Adjusting Set Speeds To Match Varying Load Conditions	42-6
Monitor Bracket Mounts	25-29	Adjusting Reverse-Forward Set Speed Ratio	42-7
Using Electric Mirror (If Equipped)	25-29	Putting Tractor In Motion	42-8
Using Telescoping Heated Electric Mirror (If Equipped)	25-30	Tractor Speed Displays On Corner Post Display And CommandCenter™	42-9
Storage Compartment	25-31	Using Creeper Mode	42-9
Steps and Handrails	25-32	Using Individual Brake Pedals	42-10
		Stopping And Parking The Tractor	42-11
		IVT Selector Examples	42-12
Break-In Period		Downhill Operation In Slippery Conditions	42-13
Break-In Checks	30-1	Setting IVT™/AutoPowr™ Options	42-14
		Load Control Function—Engine RPM Droop— IVT™/AutoPowr™ Options (Modes 1, 2, and 3) Auto With or Without PTO	42-16
Operating the Engine		Using Enabling Mode (Come Home)	42-17
Starting the Engine	35-1		
Stopping the Engine	35-2	Intelligent Total Equipment Control (ITEC)	
Engine Fuel System and Power Rating	35-2	Description And Display	45-1
Cold Weather Starting—Without Optional Starting Aid	35-2	Entering Equipment On iTEC™ Editing Page	45-5
Using Engine Coolant Heater—If Equipped	35-3	Operating Intelligent Total Equipment Control (iTEC™) While Stationary	45-7
Using a Battery Booster or Charger	35-4	Operating Intelligent Total Equipment Control (iTEC™) While Moving	45-9
		Aborting and/or Clearing iTEC Sequence	45-11
Operating the Tractor		iTEC Functions	45-12
Avoid Contact with Pesticides	40-1	iTEC Functions—IVT (Infinitely Variable Transmission)™ Transmission	45-13
Clean Vehicle of Hazardous Pesticides	40-1		
Keep Riders Off Machine	40-2	Hitch	
Using Seat Belts	40-2	Hitch Set-up and Use (Quick Reference)	50-1
Using Emergency Exit	40-3	Using Hitch Command Lever	50-2
Transmission-Hydraulic System Warm-Up	40-4	Adjusting Load/Depth Control (Draft Response)	50-3
Operating Tractor with Independent Link Suspension	40-5	Using Position Control	50-3
Using FieldCruise™	40-6	Using Draft Control	50-4
Intelligent Power Management (If Equipped)	40-7	Adjusting Hitch Upper Limit	50-5
Using The Brakes	40-8		
Using Mechanical Front-Wheel Drive	40-9		
Using Differential Lock	40-9		

Continued on next page

Page	Page
Adjusting Hitch Drop Rate	50-6
Setting Hitch Slip Response	50-7
Using Float Operation.....	50-8
Hitch Components.....	50-9
Using External Raise and Lower Switches.....	50-9
Using Hitch Manual Lowering Feature	50-10
Using Correct Center Link Position	50-10
Sway Blocks	50-11
Deluxe Stabilizers.....	50-12
Walterscheid Couplers	50-13
Quick Coupler.....	50-14
Adjusting Implement Level	50-16
Changing Lateral Float.....	50-16
Hitch Conversion—Convertible Quick Coupler.....	50-17
Detaching Implement from Quick Coupler.....	50-18
Converting Category 4—Convertible Quick Coupler Lower Hooks	50-18
Converting Category 3/4 Convertible Quick Coupler Upper Hook	50-19
Wagon Hitch	50-20
Pickup Hitch.....	50-21
3 in 1 Hitch System.....	50-22
Using Front Hitch (If Equipped)	50-23
TouchSet Depth Control	
Using TouchSet™ Depth Controls.....	55-1
Attaching Implement and Control System	55-2
TouchSet™ Scraper Control—for Scrapers Equipped with Scraper Control Unit	55-3
Hydraulics and Selective Control Valves	
Configuring Selective Control Valves On CommandCenter™	60-1
Connecting Hydraulic Hoses	60-4
Disconnecting Hydraulic Hoses.....	60-5
Determining Total Flow Demand	60-6
Using Six Position SCV Control Levers.....	60-7
SCV Lever—Neutral Position	60-8
SCV Lever—Extend and Extend Detent Position.....	60-8
SCV Lever—Retract and Retract Detent Position.....	60-9
SCV Lever—Float Position.....	60-9
Operator Presence Sensor.....	60-10
Remote Hydraulic Connections	
Hydraulic Component Identification.....	65-1
Using Load-Sensing Hydraulic System—Power-Beyond	65-1
Examples Using Load-Sensing Hydraulic System—Power-Beyond	65-2
Using Hydraulic Spray Pumps.....	65-3
Implement Connection, Example 1—Pressure Control Valve Applications (Grain Drills or Air Seeders with Constant Down-Pressure System)	65-4
Implement Connection, Example 2—Motor Application Using Motor Case Drain	65-5
Implement Connection, Example 3—Closed Center Valve with Pump at High Pressure	65-6
Implement Connection, Example 4—Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip.....	65-7
Implement Connection, Example 5—Planter with Vacuum Motor, Return Line to Motor Return and Lift Assist ...	65-8
Implement Connection, Example 6—Planter with Vacuum Motor and Return Line to Motor Return	65-9
Using Hydraulic Motor Return	65-10
Using Hydraulic Motor Case Drain (Sump)	65-10
Using Implement Requiring Large Volumes of Oil	65-11
Drawbar and PTO	
Observing Drawbar Load Limitations	70-1
Adjusting Drawbar Length, Height and Side-to-Side	70-2
Installing and Using Clevis Assembly.....	70-3
Attaching PTO-Driven Implement.....	70-4
Using PTO Shield	70-5
Using Correct Engine Speed	70-5
Operating Rear PTO.....	70-6
Setting Rear PTO Engagement Rate	70-7
Using Correct PTO Shaft.....	70-7
Changing PTO Stub Shaft.....	70-8
Performance Ballasting	
General Ballasting Information	75-1
General Guidelines for Tractor Weight Based on PTO Power Rating	75-2
General Weight Split Guidelines.....	75-2
Ballast Types	75-3
Ballasting Suggestions for Specific Types of Implements	75-7
Determining Ballasted Tractor Weight, Weight Split, Axle Loads and Required Tire Inflation Pressures.....	75-8
Unballasted Tractor Weight Chart	75-10
Maximum Load Per Wheel	75-11
Worksheet to Calculate Ballast Changes	75-12
Power Hop.....	75-12
QUIK-TATCH Weights	75-13
Rear Wheel Weights.....	75-13
Liquid Ballast	75-14
Implement Codes	75-16
Weight Added to Rear Axle with Hitch Mounted Implements.....	75-17
Wheel Slip	75-18

Continued on next page

	Page		Page
Front Wheels, Tires, and Treads			
Service Tires Safely.....	80-1	Rear Dual Wheel Row Crop Settings—620 And 650 Tires	81-10
Wheel tightening Stand—DFR219 or JDG10741	80-1	Dual Rear Wheel Tread Setting and Hub Extensions	81-11
Tire Combinations	80-2	Rear Dual Wheel Tread Settings—710 and 800 Tires	81-12
Tire Combination Tables	80-3	Clamp-On Dual Usage	81-12
Tire Inflation Pressures.....	80-4	Transport	
Recommended Tire Pressures (Group 42)	80-5	Driving Tractor on Roads.....	85-1
Recommended Tire Pressures (Group 43)	80-6	Transporting with Ballast	85-1
Recommended Pressures—Group 44	80-7	Towing Loads.....	85-2
MFWD and Independent Link Suspension Front Wheel Bolts Tightening	80-8	Safety Chain	85-3
MFWD Toe-In Check	80-9	Towing Tractor	85-4
1300 MFWD Axle Toe-In Adjustment	80-9	Releasing Park Brake (Powershift Transmission).....	85-5
1500 MFWD Axle Toe-In Adjustment	80-10	Releasing Park Brake Au- toPowr™ Transmission)	85-6
Independent Link Suspension Adjust Toe-In	80-10	Freeing a Mired Machine	85-8
MFWD Steering Stop Settings	80-11	Transporting on Flat-Bed Carrier	85-9
Independent Link Suspension Steering Stop Settings.....	80-12	Fuels, Lubricants, and Coolant	
Eight Position Wheels Settings.....	80-13	Diesel Fuel.....	90-1
MFWD Fender Settings	80-15	Fuel Tank	90-2
Independent Link Suspension Fender Settings	80-15	Lubricity of Diesel Fuel	90-2
MFWD and Independent Link Suspension Front Tire, Fender and Steering Stop Settings Example	80-16	John Deere Break-In™ Plus Engine Oil	90-3
1300 MFWD Front Tire, Fender and Steering Stop Settings	80-17	Biodiesel Fuel	90-4
1500 MFWD Front Tire, Fender and Steering Stop Settings	80-18	Testing Diesel Fuel	90-4
Independent Link Suspension Front Tire, Fender and Steering Stop Settings	80-19	Minimizing the Effect of Cold Weather on Diesel Engines	90-5
Independent Link Suspension Bolt On Dual Front Tire, Fender and Steering Stop Settings	80-20	Diesel Engine Oil	90-6
1500 MFWD Bolt On Dual Front Tire, Fender and Steering Stop Settings	80-21	Engine Oil and Filter Service Intervals—Tier 2 and Stage II Engines.....	90-7
Independent Link Suspension or 1500 MFWD Clamp On Dual Front Tire, Fender and Steering Stop Settings	80-22	Engine Oil and Filter Service Intervals—Tier 3 and Stage III A Engines	90-8
Clamp-On Dual Usage	80-22	Heavy Duty Diesel Engine Coolant	90-9
Rear Wheels, Tires, and Treads		Drain Intervals for Diesel Engine Coolant.....	90-9
Service Tires Safely.....	81-1	John Deere COOL-GARD™ II Coolant Extender	90-10
Tire Combination Tables.....	81-1	Supplemental Coolant Additives.....	90-10
Recommended Tire Pressures (Group 47)	81-2	Operating in Warm Temperature Climates	90-10
Recommended Tire Pressures (Group 48)	81-4	Additional Information About Diesel Engine Coolants and John Deere COOL-GARD™ II COOLANT EXTENDER..	
Guidelines.....	81-5	Testing Diesel Engine Coolant.....	90-12
Rear Wheel.....	81-5	Transmission and Hydraulic Oil.....	90-12
Adjusting and Tightening—Heavy-Duty Dual Wheels (10 or 12 Bolt Hubs).....	81-7	Transmission and Hydraulic Oil.....	90-13
Wheel tightening Stand—DFR219 or JDG10741	81-8	MFWD Oil	90-13
Rear Drive Wheel Tread Settings for Single Wheels	81-8	Mixing of Lubricants.....	90-13
Rear Dual Wheel Tread Settings—320, 480 and 520 Tires	81-9	Lubricant Storage	90-13
		Transmission, Hydraulic, and Gear Case Oil	90-14
		Maintenance and Service Intervals	
		Service Intervals.....	95-1
		Hood	95-1

Continued on next page

Page	Page
Service Interval Chart—Daily or 10 Hours—100 Hours (Initial)—250 Hours—500 Hours—750 Hours95-2	Testing Coolant..... 104-3
Service Interval Chart—Annual, 1500 Hours, 2000 Hours and 4500 Hours95-3	
Daily or 10 Hour Service	Annual Service
Checking Engine Oil 100-1	Cleaning, Inspecting, Replacing
Checking Tires 100-1	Primary Engine Air Filter 105-1
Checking Transmission/Hydraulic Oil Level 100-2	Replacing Cab Air Filters and Recirculation Filters..... 105-2
Draining Air Brake Tank..... 100-2	Handling Batteries Safely 105-5
Lubricating Hitch Components 100-3	Servicing Batteries..... 105-6
Checking Coolant Level (Coolant Recovery Tank) 100-3	Inspecting Auxiliary Drive Belt 105-7
Draining Water Separator 100-4	Inspecting Seat Belts..... 105-7
	Checking Independent Link
	Suspension Upper and Lower
	Rod and Head End Accumulator
	Charge Pressure 105-7
Initial 100 Hour Service	1500 Hour Service
Checking Coolant Level (Coolant De-aeration Tank)..... 101-1	Draining Differential And Clean Oil Reservoir .. 106-1
Changing Engine Oil and Filter..... 101-1	Draining PowerShift (PST) Transmission and Cleaning Filter 106-2
250 Hour Service	Draining IVT™/AutoPowr™ Transmission And Cleaning Transmission Filter 106-3
Changing Engine Oil and Filter..... 102-1	Draining Independent Link Suspension (If Equipped)..... 106-5
Checking Neutral Start System—Au- toPowr™ Transmission 102-2	Cleaning Hydraulic Oil Suction Screen..... 106-5
Checking Neutral Start System—Pow- erShift Transmission..... 102-2	Replacing Transmission/Hydraulic Filters And Refill Transmission/Hy- draulic Oil. 106-6
Checking Transmission PARK Position 102-3	Changing MFWD Differential Case Oil 106-8
Checking Wheel and Wheel Weight Bolts 102-3	Lubricating Independent Link Suspension Axle—Tie Rod Internal Ball Joints..... 106-9
Lubricating MFWD Axle..... 102-4	Changing MFWD Or Independent Link Suspension Wheel Hub Oil 106-11
Lubricating MFWD U-Joints..... 102-5	Lubricating Draft Link Support Shaft Bushing 106-11
Lubricating Independent Link Suspension Axle—External Fittings 102-6	
Lubricating Independent Link Suspension Axle U-Joints 102-7	
Checking MFWD Differential Case Oil Level.... 102-7	
Checking Manual Brakes..... 102-8	
Checking the Manually-Operated Hitch for Wear 102-9	
Check Remote Controlled Hitch for Wear 102-10	
Check for Wear at Tow Hitch (Piton Fix)..... 102-11	
Check for Wear at Ball-Type Tow Hitch 102-11	
Check Tow-Hook on Pick-Up Hitch for Wear .. 102-12	
Lubricating Front Hitch (If Equipped)..... 102-13	
Draining Fuel Tank Sump 102-13	
Radar Sensor	
Clean Radar 102-13	
Checking MFWD or Independent Link Suspension Wheel Hub Oil Level..... 102-14	
500 Hour Service	
Replacing Fuel Filter Elements..... 103-1	
750 Hour Service	
Cleaning MFWD Axle Vent Filter 104-1	
Fuel Tank Vent Filter..... 104-1	
Servicing Air Intake System..... 104-2	
	2000 Hour Service
	Adjusting Engine Valve Clearance 107-1
	Draining, Flushing and Refilling 107-1
	4500 Hour Service
	Replacing Engine Crankshaft Damper 109-1
	General Services
	Servicing and Connecting Snap to Connect Fittings 110-1
	Welding Near Electronic Control Units 110-1
	Keep Electronic Control Unit Connectors Clean 110-2
	Cleaning Radiator, Coolers and Air Conditioning Condenser..... 110-2
	Checking Air Conditioning System 110-3
	Replacing Auxiliary Drive Belt 110-4

Continued on next page

	Page		Page
Removing and Installing Fan Belt.....	110-6	Hitch Control Center (HCC) Diagnostic	
Checking Weep Hole.....	110-9	Trouble Codes.....	130-16
Back Flushing the Optional Fuel Water		Hitch Valve (HV1) Diagnostic Trouble	
Separator—If Equipped.....	110-10	Codes.....	130-17
Maintaining Optional Fuel Water		(JDL) Diagnostic Trouble Codes	130-17
Separator Filter Element—If Equipped	110-11	PDU Diagnostic Trouble Codes.....	130-18
Cleaning Optional Fuel Water		PTI Codes Diagnostic Trouble Codes	
Separator Filter Element—If Equipped	110-13	AutoPowr™	130-24
Electrical Services		PowerShift Control Unit (PTP)	
Introduction to Electrical System Section	120-1	Diagnostic Trouble Codes	130-26
Load Center Fuses.....	120-1	Suspended Front Axle (SFA)	
Implement Power Relay Module.....	120-4	Diagnostic Trouble Codes	130-28
Handling Halogen Light Bulbs Safely	120-5	SCV Can Controller SCC Diagnostic	
Replacing Front Grille Flood Light		Trouble Codes.....	130-29
Bulb—Standard Lighting	120-6	(SSU) Diagnostic Trouble Codes	130-31
Handling HID Light Bulbs Safely	120-6	(SV 1-6) Diagnostic Trouble Codes	130-34
HID Bulbs	120-7	Tractor Electric Control Unit TEC	
Adjusting Front Grille Lights	120-8	Diagnostic Trouble Codes.....	130-35
Aiming Head Lights	120-9	Vehicle Control Unit (VCI) Diagnostic	
Replacing Front, Side And Rear Cab		Trouble Codes.....	130-36
Roof Bulbs.....	120-9	Storage	
Replacing Brake or Turn Signal Light Bulb.....	120-10	Placing Tractor in Storage	135-1
Replacing Dome Light Bulb.....	120-10	Long-Term Storage.....	135-1
Replacing Courtesy Light	120-11	Paint Finish Care.....	135-2
Replacing Map Light.....	120-12	Specifications	
Replacing Extremity Warning Light		General Specifications.....	140-1
Bulb (if Equipped).....	120-13	Hitch, Weight, And Wheel Base	
Troubleshooting		Specifications	140-3
Engine	125-1	Ground Speeds With PST	140-4
Transmission	125-4	Ground Speeds	
Hydraulic System.....	125-5	AutoPowr.....	140-5
Hitch	125-6	Unified Inch Bolt and Screw Torque Values.....	140-6
Selective Control Valves.....	125-8	Metric Bolt and Screw Torque Values	140-7
Depth Control	125-9	Identify Zinc-Flake Coated Fasteners.....	140-7
Electrical System	125-10	EC Declaration of Conformity	140-8
Operator Enclosure	125-12	Identification Numbers	
Tractor Operation	125-13	Serial Number Plates.....	145-1
Independent Link Suspension	125-14	Keep Proof of Ownership	145-4
Diagnostic Trouble Codes		Keep Machines Secure	145-5
Introduction To Diagnostic Trouble Codes.....	130-1	Lubrication and Maintenance Records	
Armrest Control Unit Diagnostic		Service Records	
Trouble Codes.....	130-2	250 Hours.....	150-1
Active Seat Control Unity (ASU)		500 Hours.....	150-1
Diagnostic Trouble Codes	130-4	750 Hours.....	150-1
Automatic Temperature Control Unit		Annually	150-2
(ATC) Diagnostic Trouble Codes.....	130-4	1500 Hours.....	150-2
BRC Brake Control Unit Diagnostic		2000 Hours.....	150-2
Trouble Codes.....	130-5	4500 Hours.....	150-3
Cab Control Unit Diagnostic Trouble Codes.....	130-7	Glossary	
Central Control Unit Diagnostic Trouble		Glossary of Terms.....	155-1
Codes.....	130-8		
Cab Load Center Diagnostic Trouble Codes ..	130-10		
Cab Switch Module Diagnostic Trouble			
Codes.....	130-11		
Engine Control Unit (ECU) Diagnostic			
Trouble Codes	130-12		

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.



TS1389 —UN—07DEC88

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

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.

 **DANGER**

 **WARNING**

 **CAUTION**

TS187 —19—30SEP88

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

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—23AUG88

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

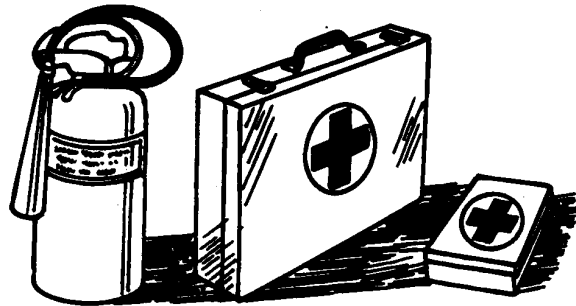
DX,READ -19-16JUN09-1/1

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.



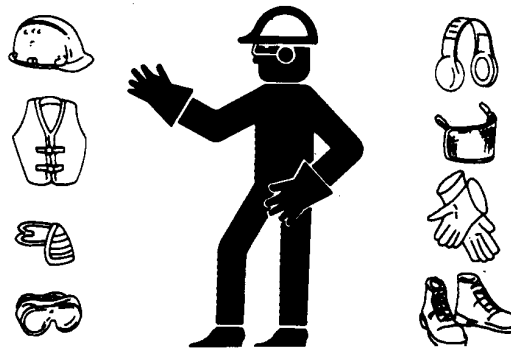
TS201 —UN—23AUG88

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

Wear Protective Clothing

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

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



TS206 —UN—23AUG88

DX,WEAR2 -19-03MAR93-1/1

Protect Against Noise

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.



TS207 —UN—23AUG88

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

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.



TSS202 —UN—23AUG88

DX,FIRE1 -19-03MAR93-1/1

Fire Prevention

To reduce the risk of fire, your tractor should be regularly inspected and cleaned.

- Birds and other animals may build nests or bring other flammable materials into the engine compartment or onto the exhaust system. The tractor should be inspected and cleaned prior to the first use each day.
- A buildup of crop material and other debris may occur during normal operation. This is especially true when operating in very dry conditions or conditions where airborne crop material or crop dust is present. Any such build up must be removed to ensure proper machine function and to reduce the risk of fire. The tractor must be inspected and cleaned periodically throughout the day.

- Regular and thorough cleaning of the tractor combined with other routine maintenance procedures listed in the Operator's Manual greatly reduce the risk of fire and the chance of costly downtime.

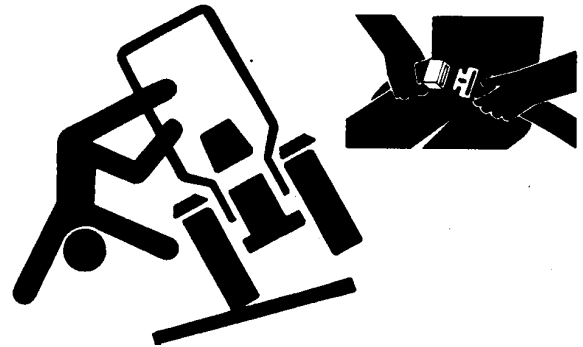
Follow all operational and safety procedures posted on the machine and the Operator's Manual. Be careful of hot engine and exhaust components during inspection and cleaning. Before carrying out any inspection or cleaning, always shut OFF the engine, place the transmission in PARK or set parking brake, and remove the key. Removal of the key will prevent others from starting the tractor during inspection and cleaning.

DX,WW,TRACTOR,FIRE,PREVENTION -19-06AUG10-1/1

Use Foldable ROPS and Seat Belt Properly

If this tractor is equipped with a foldable ROPS, keep the ROPS in the fully extended and locked position. If the tractor is ever operated with ROPS folded (e.g., to enter a low building), drive with extreme caution. Do NOT use seat belt with the ROPS folded.

Return the ROPS to the raised, fully extended and locked position as soon as the tractor is operated under normal conditions. Always fasten your seat belt when the ROPS is fully extended and locked.



TSS205 —UN—23AUG88

DX,FOLDROPS -19-31AUG99-1/1

Stay Clear of Rotating Drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

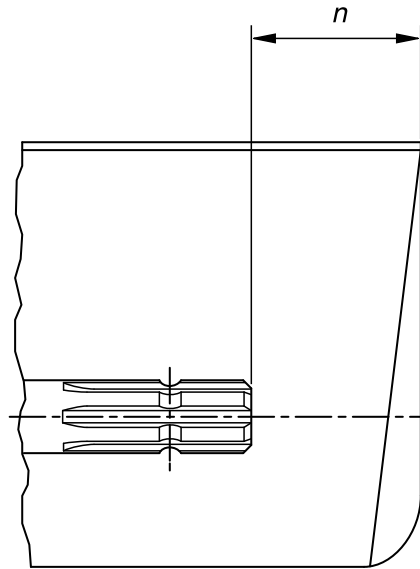
Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.

Do not install any adapter device that results in a portion of the rotating implement shaft, tractor shaft, or the adapter to be unguarded. The tractor master shield shall overlap the end of the splined shaft and the added adaptor device as outlined in the table.

PTO Type	Diameter	Splines	$n \pm 5 \text{ mm (0.20 in.)}$
1	35 mm (1.378 in.)	6	85 mm (3.35 in.)
2	35 mm (1.378 in.)	21	85 mm (3.35 in.)
3	45 mm (1.772 in.)	20	100 mm (4.00 in.)



TS1644 —UN—22AUG95



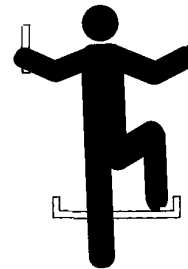
H96219 —UN—29APR10

DX,PTO -19-30JUN10-1/1

Use Steps and Handholds Correctly

Prevent falls by facing the machine when getting on and off. Maintain 3-point contact with steps and handrails. Never use machine controls as handholds.

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—30AUG00

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

Read Operator Manuals for ISOBUS Implements

In addition to GreenStar Applications, this display can be used as a display device for any implement that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and implement control functions placed on the display are provided by the implement and are the

responsibility of the implement manufacturer. Some of these implement functions could provide a hazard either to the Operator or a bystander. Read the operator manual provided by the implement manufacturer and observe all safety messages in manual and on implement prior to use.

NOTE: ISOBUS refers to the ISO Standard 11783

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

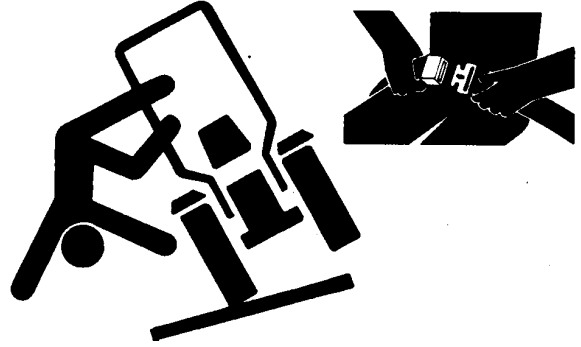
Use Seat Belt Properly

Use a seat belt when you operate with a roll-over protective structure (ROPS) or cab to minimize chance of injury from an accident such as an overturn.

Do not use a seat belt if operating without a ROPS or cab.

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

Inspect seat belt and mounting hardware at least once a year. Look for signs of loose hardware or belt damage, such as cuts, fraying, extreme or unusual wear, discoloration, or abrasion. Replace only with replacement parts approved for your machine. See your John Deere dealer.



TSS205—UN—23AUG88

DX,ROPS1 -19-29OCT07-1/1

Vibration

All operator's seats approved by John Deere are component type-approved in accordance with 78/764/EEC, being allocated an average of the vibration acceleration actually measured at the seat (a_{wS}), equivalent to $\leq 1.25 \text{ m/s}^2$.

This value must NOT be used to calculate vibration stress as per 2002/44/EC! Local John Deere dealers can provide assistance in assessing vibration stress.

Measures to reduce vibration may include:

- Appropriate style of driving, e.g. not too fast
- Suspended front axle
- Suspended cab
- Correctly adjusted operator's seat
- Correct tire pressure

DX,VIBRATION,EU -19-19AUG09-1/1

Operating the Tractor Safely

You can reduce the risk of accidents by following these simple precautions:

- Use your tractor only for jobs it was designed to perform, for example, pushing, pulling, towing, actuating, and carrying a variety of interchangeable equipment designed to conduct agricultural work.
- This tractor is not intended to be used as a recreational vehicle.
- Read this operator's manual before operating the tractor and follow operating and safety instructions in the manual and on the tractor.
- Follow operation and ballasting instructions found in the operator's manual for your implements/attachments, such as front loaders
- Make sure that everyone is clear of machine, attached equipment, and work area before starting engine or operation.
- Keep hands, feet, and clothing away from power-driven parts

Driving Concerns

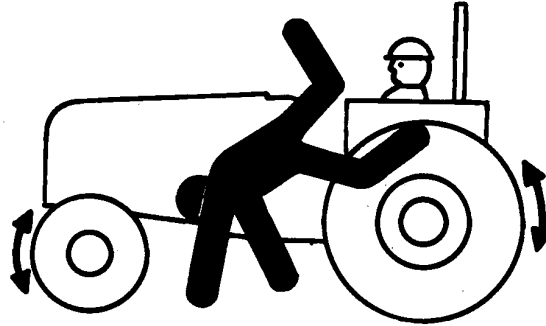
- Never get on or off a moving tractor.
- Keep all children and nonessential personnel off tractors and all equipment.
- Never ride on a tractor unless seated on a John Deere approved seat with seat belt.
- Keep all shields/guards in place.
- Use appropriate visual and audible signals when operating on public roads.
- Move to side of road before stopping.
- Reduce speed when turning, applying individual brakes, or operating around hazards on rough ground or steep slopes.
- Couple brake pedals together for road travel.
- Pump brakes when stopping on slippery surfaces.

Towing Loads

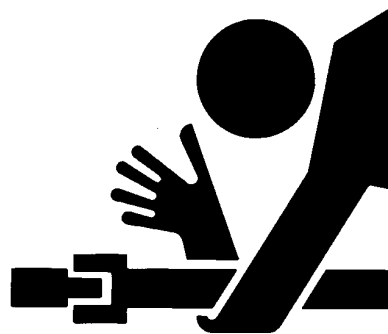
- Be careful when towing and stopping heavy loads. Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control.
- Consider the total weight of the equipment and its load.
- Hitch towed loads only to approved couplings to avoid rearward upset.

Parking and Leaving the Tractor

- Before dismounting, shut off SCVs, disengage PTO, stop engine, lower implements/attachments to ground



TS290 —UN—23AUG88



TS276 —UN—23AUG88

and securely engage park mechanism, including the park pawl and park brake. In addition, if tractor is left unattended, remove key.

- Leaving transmission in gear with engine off will NOT prevent the tractor from moving.
- Never go near an operating PTO or an operating implement.
- Wait for all movement to stop before servicing machinery.

Common Accidents

Unsafe operation or misuse of the tractor can result in accidents. Be alert to hazards of tractor operation.

The most common accidents involving tractors:

- Tractor rollover
- Collisions with motor vehicles
- Improper starting procedures
- Entanglement in PTO shafts
- Falling from tractor
- Crushing and pinching during hitching

DX,VW,TRACTOR -19-21AUG09-1/1

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—24JUN10

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

Limited Use in Forestry Operation

The intended use of John Deere tractors when used in forestry operations is limited to tractor-specific applications like transport, stationary work such as log splitting, propulsion, or operating implements with PTO, hydraulic, or electrical systems.

These are applications where normal operation does not present a risk of falling or penetrating objects.

Any forestry applications beyond these applications, such as forwarding and loading, requires fitment of application-specific components including Falling Object Protective Structure (FOPS) and/or Operative Protective Structures (OPS). These components are available at specialized John Deere dealers.

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

Operating the Loader Tractor Safely

When operating a machine with a loader application, reduce speed as required to ensure good tractor and loader stability.

To avoid tractor rollover and damage to front tires and tractor, do not carry load with your loader at a speed over 10 km/h (6 mph).

To avoid tractor damage do not use a front loader or a sprayer tank if the tractor is equipped with a 3 Meter Front Axle.

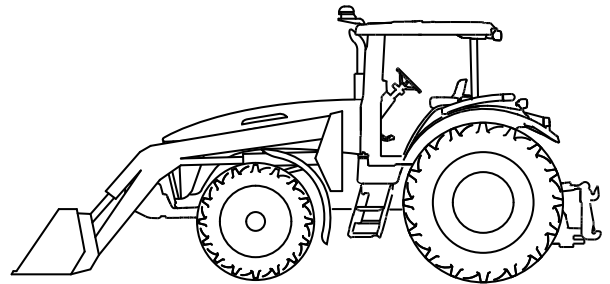
Never allow anyone to walk or work under a raised loader.

Do not use loader as a work platform.

Do not lift or carry anyone on loader, in bucket, or on implement or attachment.

Lower loader to ground before leaving operators station.

The Rollover Protective Structure (ROPS) or cab roof, if equipped, may not provide sufficient protection from load



TS1692 —UN—09NOV09

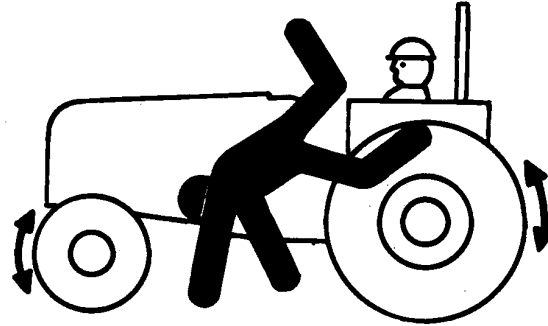
falling onto the operators station. To prevent loads from falling onto the operators station, always use appropriate implements for specific applications (that is, manure forks, round bale forks, round bale grippers, and clampers).

DX,WW,LOADER -19-11NOV09-1/1

Keep Riders Off Machine

Only allow the operator on the machine. Keep riders off.

Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



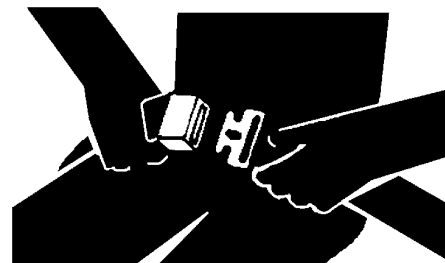
TS290 —UN—23AUG88

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

Passenger Seat

The passenger seat is intended only for transport of a passenger in on-road operations (i.e. transport from farm to field).

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



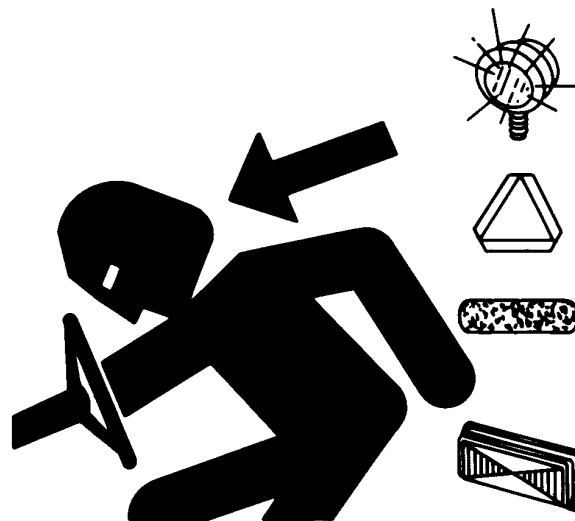
RXA0103436 —UN—15JUN09

DX,SEAT,EU -19-19AUG09-1/1

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.

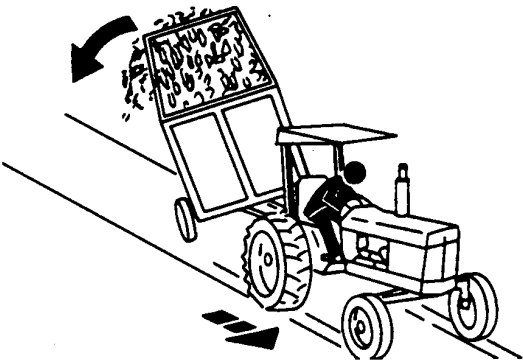


TS951 —UN—12APR90

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

Towing Trailers/Implements Safely (Mass)

Stopping distance increases with speed and mass of trailer/implement, and when transporting on slopes. Towed mass with or without brakes that is too heavy for the tractor or is towed too fast can cause loss of control. Consider the total weight of the equipment and its load.



TSS216 —UN—23AUG88

Trailer/implement brake system

- unbraked	25 km/h (15.5 mph)
- independent	25 km/h (15.5 mph)
- overrun brake	25 km/h (15.5 mph)
- hydraulic brake	25 km/h (15.5 mph)
- single-line air brake	25 km/h (15.5 mph)
- dual-line air brake	Maximum design speed

Top speed

There may be legal limits in force that restrict travel speeds to figures lower than those quoted here.

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

DX,TOW3,EU -19-19AUG09-1/1

Use Caution On Slopes and Uneven Terrain

Avoid holes, ditches, and obstructions which cause the tractor to tip, especially on hillsides. Avoid sharp uphill turns.

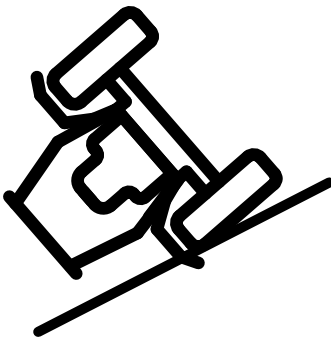
Never drive near the edge of a gully or steep embankment - - it might cave in.

Driving forward out of a ditch, mired condition, or up a steep slope could cause tractor to tip over rearward. Back out of these situations if possible.

Danger of overturn increases greatly with narrow tread setting, at high speed.

Hitch towed loads only to drawbar. When using a chain, take up the slack slowly.

Not all conditions that can cause a tractor to overturn are listed. Be alert for any situation in which stability may be compromised.



Use Caution on Hillsides

RXA0103437 —UN—01JUL09

DX,VW,SLOPE -19-21AUG09-1/1

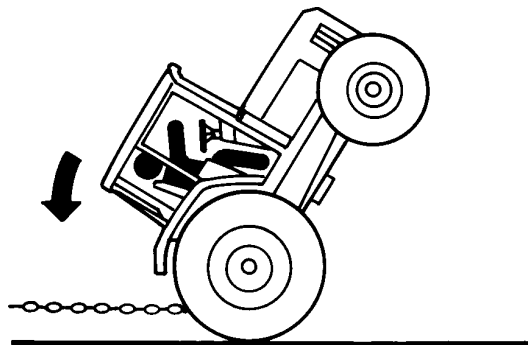
Freeing a Mired Machine

Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back your tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If necessary, dig mud from the front of all wheels and drive slowly ahead.

If necessary to tow with another unit, use a tow bar or a long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Always hitch to the drawbar of the towing unit. Do not hitch to the front pushbar attachment point. Before moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.



TS1645—UN—15SEP95



TS263—UN—23AUG88

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

Avoid Contact with Agricultural Chemicals

This enclosed cab does not protect against inhaling vapor, aerosol or dust. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.

Before leaving the cab, wear personal protective equipment as required by the pesticide use instructions. When re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.

Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.



TS220—UN—23AUG88



TS272—UN—23AUG88

DX,CABS -19-25MAR09-1/1

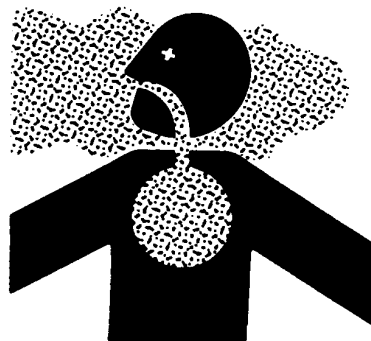
Handle Agricultural Chemicals Safely

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.
- 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.



A34471

T5220 —UN—23AUG88

A34471 —UN—11OCT88

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

Handling Batteries Safely

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

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

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

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

Avoid hazards by:

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

If acid is spilled on skin or in eyes:

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

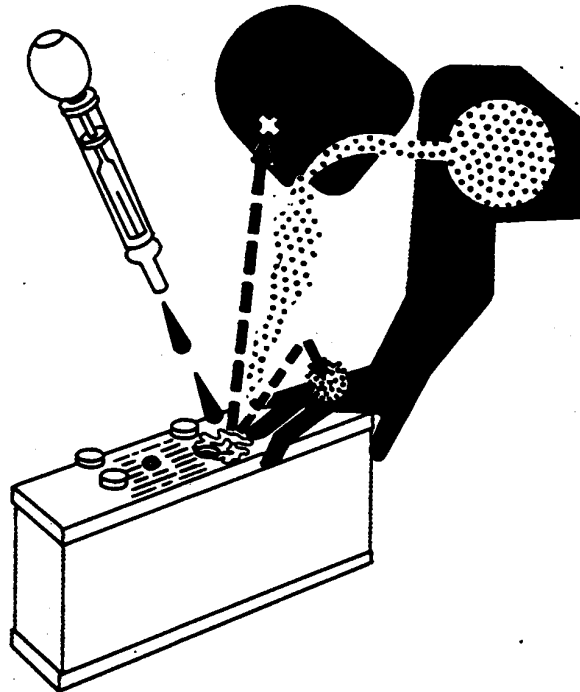
If acid is swallowed:

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

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



TS204 —UN—23AUG88



TS203 —UN—23AUG88

DX,WW,BATTERIES -19-02DEC10-1/1

Avoid Heating Near Pressurized Fluid Lines

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



TS953 —UN—15MAY90

DX,TORCH -19-10DEC04-1/1

Remove Paint Before Welding or Heating

Avoid potentially toxic fumes and dust.

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

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

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



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

Dispose of paint and solvent properly.

DX,PAINT -19-24JUL02-1/1

TS220 —UN—23AUG88

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.



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

TS249 —UN—23AUG88

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.



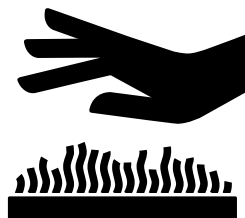
TS218 —UN—23AUG88

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

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.



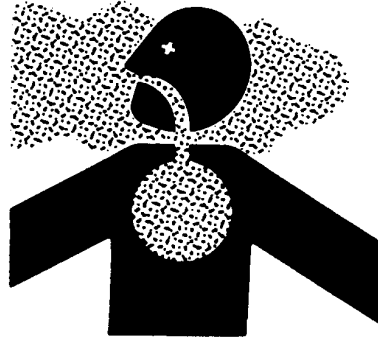
RG17488 —UN—21AUG09

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

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—23AUG88

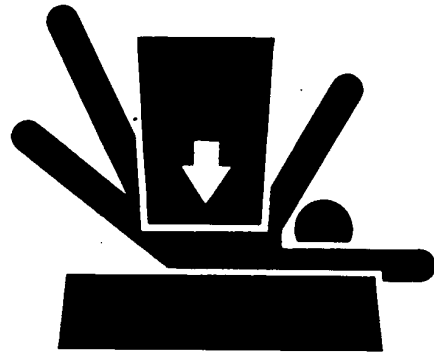
DX,AIR -19-17FEB99-1/1

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

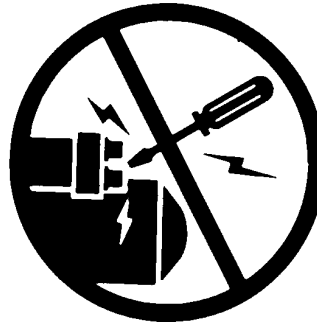
DX,LOWER -19-24FEB00-1/1

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.



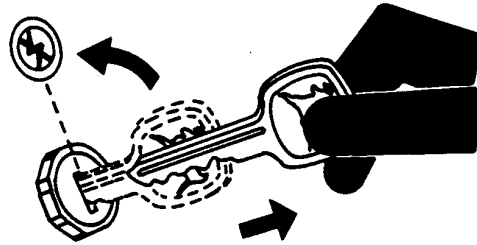
TS177 —UN—11JAN89

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

Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



TS230 —UN—24MAY89

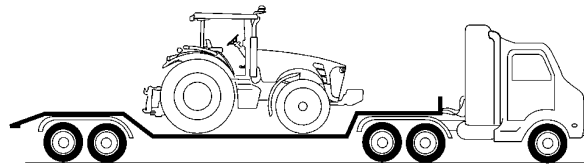
DX,PARK -19-04JUN90-1/1

Transport Tractor Safely

A disabled tractor is best transported on a flatbed carrier. Use chains to secure the tractor to the carrier. The axles and tractor frame are suitable attachment points.

Before transporting the tractor on a low-loader truck or flatbed rail wagon, make sure that the hood is secured over the tractor engine and that doors, roof hatch (if equipped) and windows are properly closed.

Never tow a tractor at a speed greater than 10 km/h (6 mph). An operator must steer and brake the tractor under tow.



RXA0103709 —UN—01JUL09

DX,WW,TRANSPORT -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—23AUG88

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

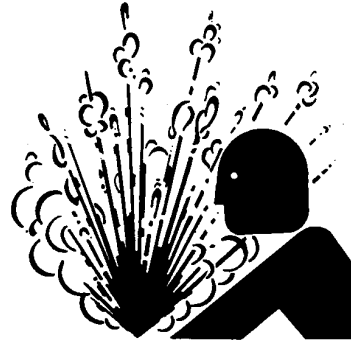
Service Accumulator Systems Safely

Escaping fluid or gas from systems with pressurized accumulators that are used in air conditioning, hydraulic, and air brake systems can cause serious injury. Extreme heat can cause the accumulator to burst, and pressurized lines can be accidentally cut. Do not weld or use a torch near a pressurized accumulator or pressurized line.

Relieve pressure from the pressurized system before removing accumulator.

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

Accumulators cannot be repaired.



TSS281 —UN—23AUG88

DX,WW,ACCLA2 -19-22AUG03-1/1

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.

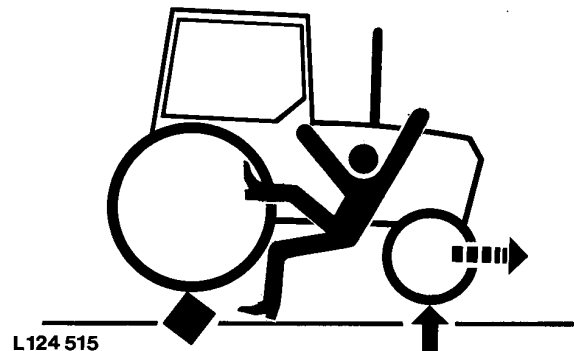


RXA0103438 —UN—11JUN09

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

Service Front-Wheel Drive Tractor Safely

When servicing front-wheel drive tractor with the rear wheels supported off the ground and rotating wheels by engine power, always support front wheels in a similar manner. Loss of electrical power or transmission hydraulic system pressure will engage the front driving wheels, pulling the rear wheels off the support if front wheels are not raised. Under these conditions, front drive wheels can engage even with switch in disengaged position.



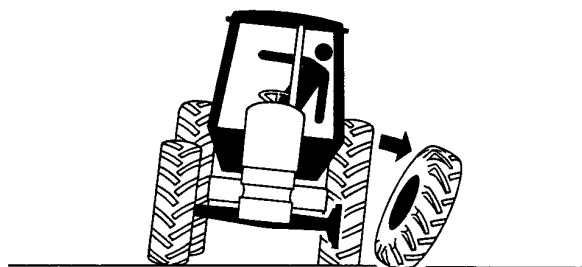
L124 515

L124515 —UN—06AUG94

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

Tightening Wheel Retaining Bolts/Nuts

Retighten wheel retaining bolts/nuts at the intervals specified in section Break-In Period and Service.



L124 516

L124516 —UN—03JAN05

DX,WWW,WHEEL -19-19AUG09-1/1

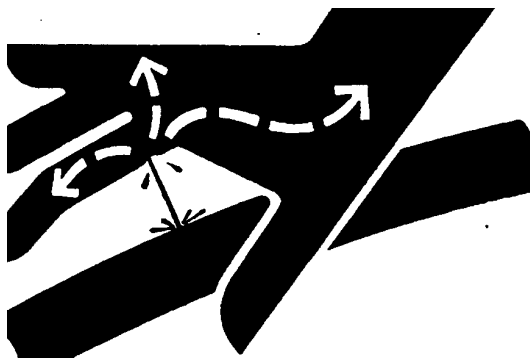
Avoid High-Pressure Fluids

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



X9811 —UN—23AUG88

Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

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

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,WWW,HPCR1 -19-07JAN03-1/1

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

Dispose of Waste Properly

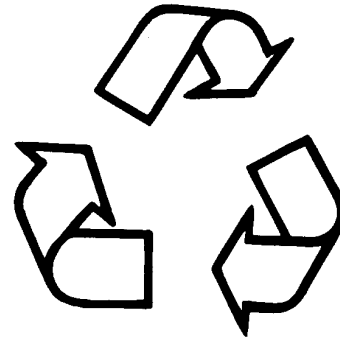
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



TS1133 —UN—26NOV90

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

Safety Signs

Replace Damaged or Missing Safety Signs

IMPORTANT: Install new safety signs if old signs are damaged, lost or can not be read. Install a new safety sign when replacing any part that previously had a safety sign.

Keep safety signs clean and in good condition. Replacement signs are available from your John Deere™ dealer.

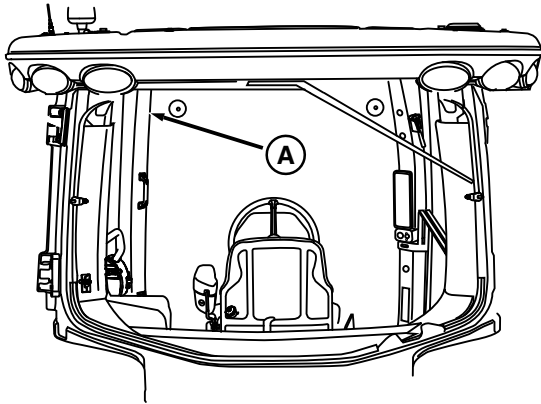


TS231 —19—07OCT88

John Deere is a trademark of Deere & Company

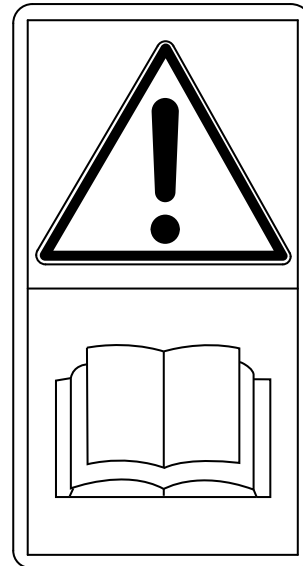
OURX935,0000B0C -19-01SEP09-1/1

Operator's Manual



Tractor Left Hand Corner Post

RXA0069435 —UN—24NOV08



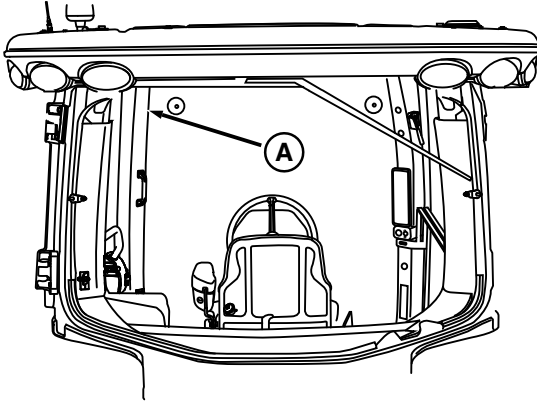
A—Operator's Manual Decal

RXA0068163 —UN—22JUN03

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

OURX935,00008CC -19-03MAR09-1/1

Passenger Seat



RXA0059435 —UN—24NOV08



A - Left Corner Post Passenger Seat Label

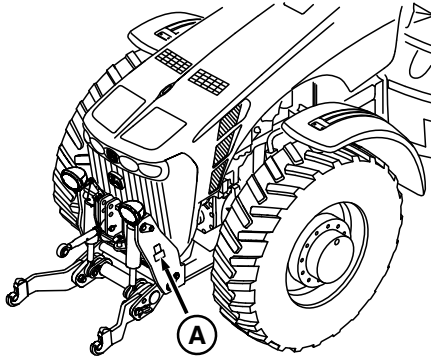
RXA0110198 —UN—03SEP10

Comply With Label In Left Corner Post

The passenger seat shall not be used during field operation.

OURX935,000005A -19-02SEP10-1/1

External Front Hitch Control Switch (If Equipped)



RXA0087040 —UN—21FEB06

A--Warning Label Placement On Front Hitch

Stay clear of three-point hitch lift range when operating hitch using external control switch.



A--Warning Label for Front Hitch

RXA0068161 —UN—22JUN03

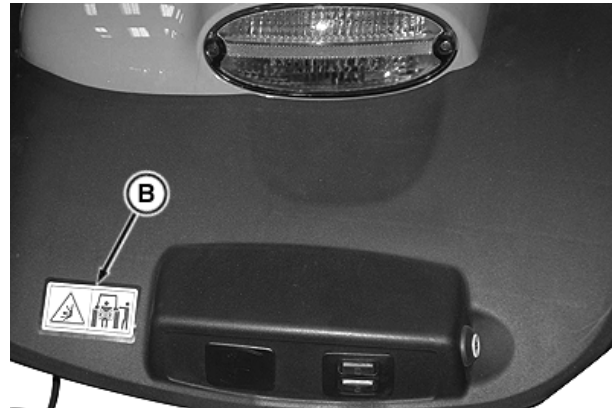
OURX935,0000B03 -19-04SEP09-1/1

External Rear Hitch Control Switch



RXA0100902 —UN—06MAR09

Left-Hand External Hitch Control Switch



RXA0100900 —UN—06MAR09

Right-Hand External Hitch Control Switch



RXA0068162 —UN—22JUN03

A—Left-Hand External Hitch Control Switch



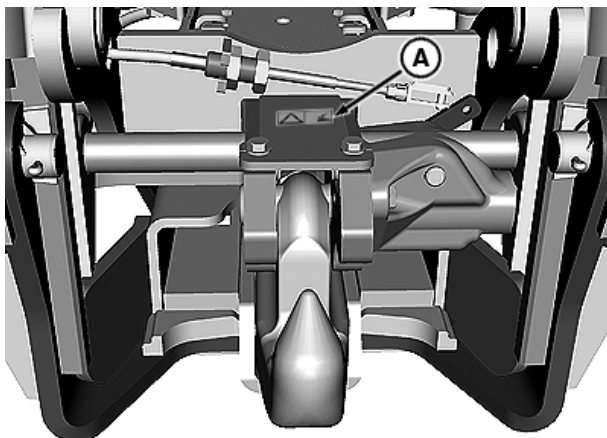
RXA0068161 —UN—22JUN03

B—Right-Hand External Hitch Control Switch

Stay clear of three-point hitch lift range when operating hitch using external control switch.

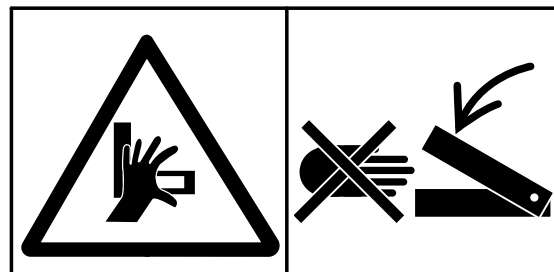
OURX935,0000B0A -19-01SEP09-1/1

Pick-Up Hitch (If Equipped)



RXA0095953 —UN—11SEP07

A—Pick-Up Hitch



RXA0083866 —UN—01SEP05

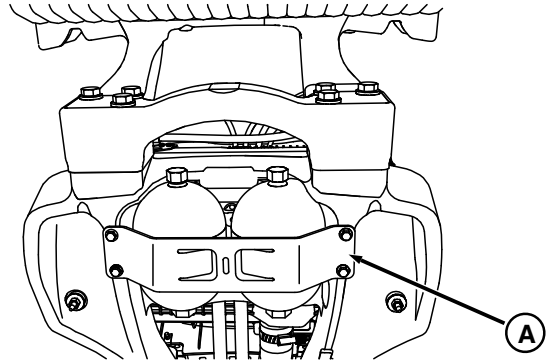
A— Pick-Up Hitch

Stay clear of Pick-Up hitch travel range whenever hitch is in operation.

OURX935,0000B05 -19-31AUG09-1/1

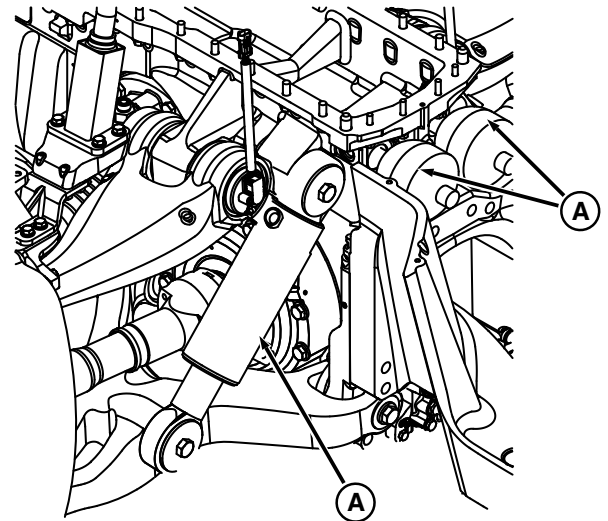
Accumulators—Independent Link Suspension tractors (If equipped)

Read Technical Manual and follow all safety precautions before performing maintenance on accumulator.



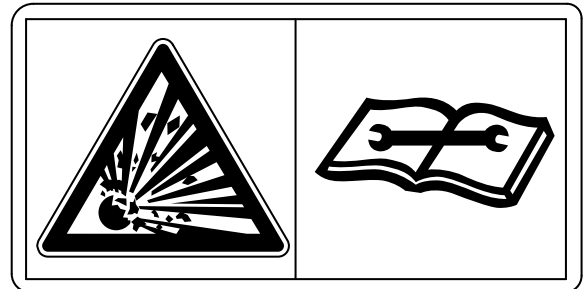
Independent Link Suspension Accumulator—Rod Side

RXA0085582 —UN—06JAN06



Independent Link Suspension Accumulator—Piston Side

RXA0085581 —UN—06JAN06



A—Accumulator Warning

RXA0088157 —UN—22JUN03

OURX935,0000B06 -19-31AUG09-1/1

Implement Detected

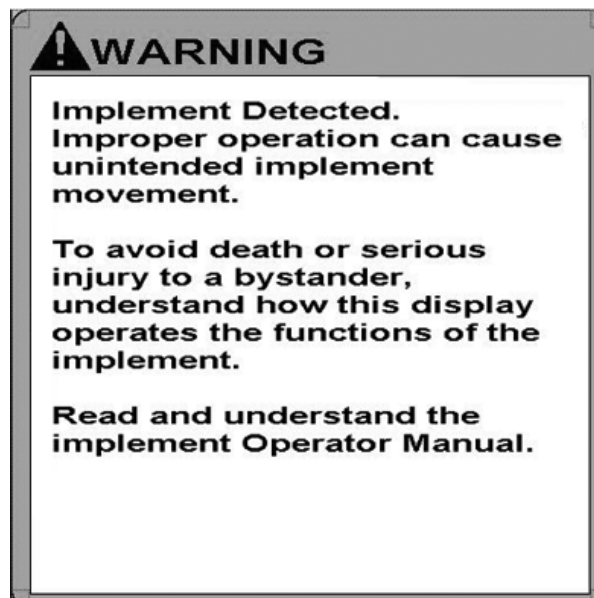
CAUTION: Implement Detected

Improper operation can cause unintended implement movement.

To avoid death or serious injury to a bystander, understand how this display operates the functions of the implement.

Read and understand the implement Operator Manual.

This message occurs when the system detects an ISOBUS implement. For more information, see the "ISO Implements" section as well as READ OPERATOR MANUALS FOR ISOBUS IMPLEMENTS in the Safety section.



RXA0102975 — 19—22MAY09

OURX935,000098B -19-02JUL10-1/1

Auxiliary Control

CAUTION: Auxiliary Control

Improper operation can cause unintended implement movement.

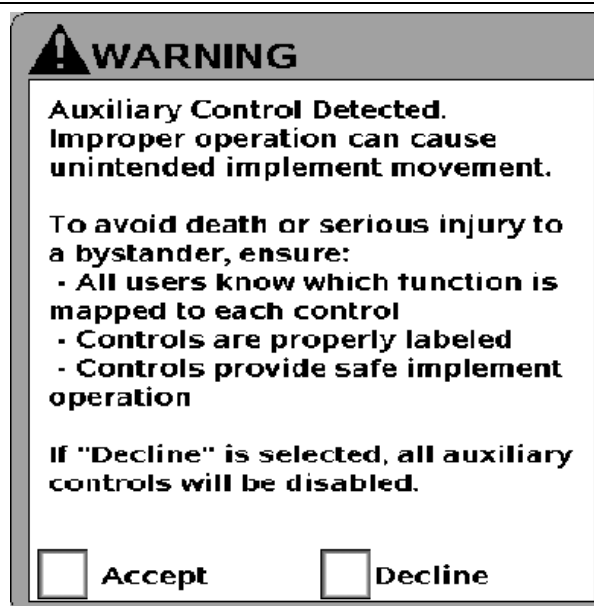
To avoid death or serious injury to a bystander, ensure:

- All users know which function is mapped to each control
- Controls are properly labeled
- Controls provide safe implement operation

If "Decline" is selected, all auxiliary controls will be disabled.

This message occurs when the system detects an auxiliary control. If necessary, review or change the auxiliary control mappings (see "Auxiliary Controls" section).

If "Decline" is selected, all auxiliary controls will be disabled. If "Accept" is selected, all auxiliary controls are enabled.



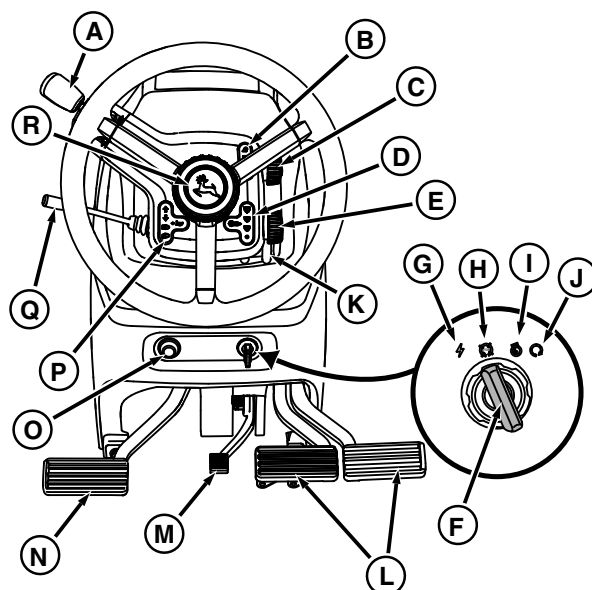
RXA0102976 — 19—20MAY09

OURX935,000098C -19-02JUL10-1/1

Controls and Instruments

Front Console

- | | |
|------------------------------------|---|
| A—Left-Hand Reverser (If Equipped) | J—Start |
| B—Light Selection Cluster | K—Steering Column Tilt Release Lever |
| C—Light Selector Knob | L—Brake Pedals |
| D—Windshield Wiper Cluster | M—Steering Wheel Tilt Release |
| E—Windshield Wiper Control Knob | N—Clutch Pedal |
| F—Key Switch | O—Starting Aid Switch (If Equipped) |
| G—Accessories | P—Turn Signal Icon, Road/Field Light Icon and Horn Icon |
| H—OFF | Q—Turn Signal Lever |
| I—Run | R—Steering Wheel Telescope Release |



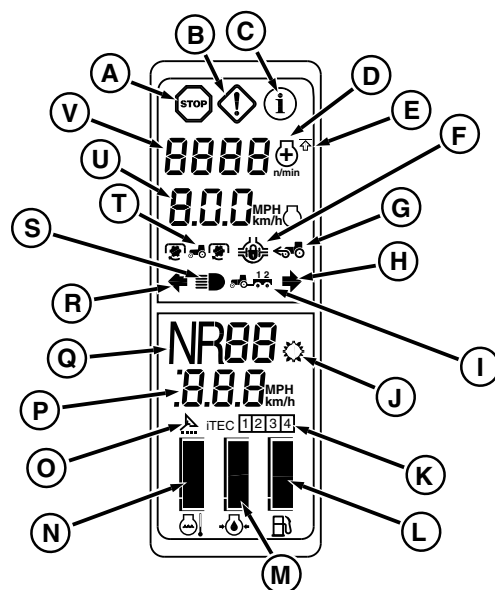
Front Console

OURX935,00003BB -19-07JAN09-1/1

RXA0098411 —UN—06MAR09

Corner Post Display

- | | |
|--|---|
| A—Stop Indicator | L—Fuel Level Gauge |
| B—Service Alert Indicator | M—Engine Oil Pressure Gauge |
| C—Information Indicator | N—Coolant Temperature Gauge |
| D—FieldCruise™ Indicator | O—AutoTrac™ Indicator |
| E—Power Increase Indicator | P—Speed |
| F—Differential Lock | Q—Set Speed AutoPowr™ ¹ Gear ² /Direction |
| G—MFWD Indicator (Wheel Tractors Only) | R—Left Turn Indicator |
| H—Right Turn Indicator | S—High Beam Indicator |
| I—Trailer Indicator (If Equipped) | T—Rear PTO Indicator |
| J—APS Indicator (If Equipped) | U—Travel Speed |
| K—iTEC Indicator | V—Tachometer |



Corner Post Display

FieldCruise is a trademark of Deere & Company
 AutoTrac is a trademark of Deere & Company
 AutoPowr is a trademark of Deere & Company

¹AutoPowr Equipped Tractors

²PST Equipped Tractors

OURX935,0000753 -19-08APR09-1/1

RXA0100096 —UN—08APR09

STOP, Service Alert and Information Indicators

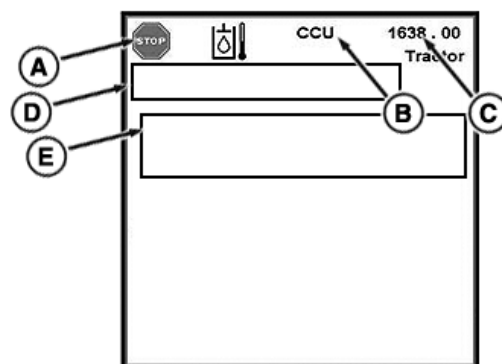
NOTE: All STOP, Service Alert, and Information Indicators are accompanied by an informative message, diagnostic trouble code, and/or fault description shown on CommandCenter™.

STOP Indicator (A): Light flashes and alarm sounds continuously. A serious malfunction has occurred, requiring immediate attention or the tractor will be damaged. Control unit (B) is identified along with the code (C) which is also listed in Diagnostic Trouble Codes section of this Operator's Manual. The malfunction (D) is listed as well as solution (E).

IMPORTANT: Engine shuts down automatically if STOP signal is received when operator is out of the seat for longer than three seconds and the transmission control is in PARK. CommandCenter display can be reset by cycling key switch.

Immediately stop operations, reduce engine speed to idle, then shut down engine and turn key "ON" to observe CommandCenter display for problem identification. It may

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Corner Post Display

A—STOP Indicator
B—Control Unit
C—Code

D—Malfunction
E—solution

be necessary to access the stored codes, see Using Diagnostics, Stored Codes and CAN Statistics. Correct problem before restarting.

RXA0103999 —UN—27JUL09

Continued on next page

OURX935,0000A0B -19-28JUL09-1/2

Likewise for Service Alert Indicators (A) or Information Indicators (B) it may be necessary to access the stored codes, see Using Diagnostics, Stored Codes and CAN Statistics.

When control unit detects a malfunction or condition "out of range", a diagnostic trouble code (D) containing the control unit (C) followed by an industry standard number is displayed. Numbers to the left of the decimal indicate the malfunction and numbers to the right of decimal indicate the condition. The Malfunction (E) is on the CommandCenter™ page.

Follow solution (F) on the CommandCenter or See Diagnostic Trouble Code section of this Operator's Manual for possible actions an operator can take. If situation cannot be corrected or if code is not in Diagnostic Trouble Code section contact your John Deere dealer.

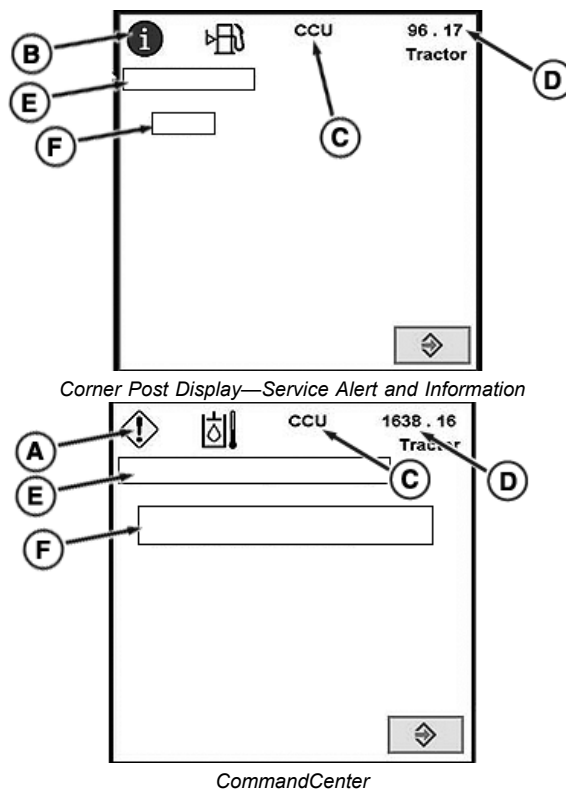
If a code is **not** in the Operator's Manual contact your local John Deere™ dealer. When either a Service Alert or Information Indicator is displayed, place tractor in park and shut off engine.

Service Alert Indicator: Light flashes and alarm sounds five times indicating a performance or operational problem has been detected, which needs to be resolved as soon as possible. Continued operations can cause a Service Alert to escalate into a STOP indicator. If appropriate corrective action is not taken soon (serviced, repaired, operated in a different manner), a significant reduction in performance and/or machine damage to will occur.

Information (INFO) Indicator: Light comes on continuously and alarm sounds for two seconds, indicating a fault condition. Tractor operations can continue without damage; but, performance of some functions may be degraded. Operating in a different manner may correct and clear the out of range condition.

Some Service Alerts and Information Indicators can be "acknowledged" and cleared by pressing the Select Switch on the CommandCenter. The display will return to

*CommandCenter is a trademark of Deere & Company
John Deere is a trademark of Deere & Company*



- A—Service Alert Indicator—Corner Post Display
- B—Information Indicator—Corner Post Display
- C—Control Unit
- D—Diagnostic Trouble Code
- E—Malfunction
- F—Solution

a normal mode. Continue tractor function, if condition still exists, the diagnostic trouble code may reappear later. Restart engine to verify active diagnostic trouble code still exists before contacting your John Deere dealer.

RXA0103995 —UN—17JUL09

RXA0103997 —UN—17JUL09

OURX935,0000A0B -19-28JUL09-2/2

Digital Indicators—Tachometer, Ground Speed and Transmission

A—Tachometer: Displays engine speed in multiples of 10. If "—" is displayed, no speed signal is being received.

B—Travel Speed Indicator: Displays travel speed in either miles-per-hour or kilometers-per-hour, depending on operator selected units (U.S. or Metric).

If "—" is displayed, no speed signal is being received.

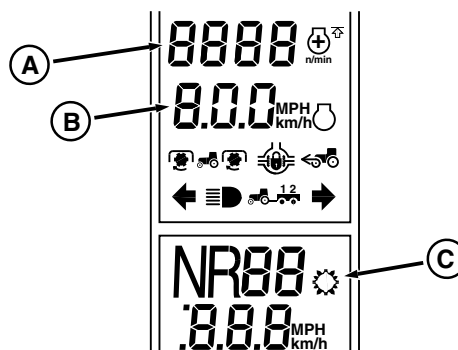
C—Transmission Information: Shows if transmission is in Neutral—N, Forward—F, Reverse—R or Park—P.

If "—" is displayed, no gear signal is being received.

AutoPowr™ Only: Shows speed bands 1 or 2 and speed settings.

PST Only: Shows gear selected.

AutoPowr is a trademark of Deere & Company



A—Tachometer
B—Travel Speed Indicator

C—Transmission Information

RXA0098902 —UN—26JAN09

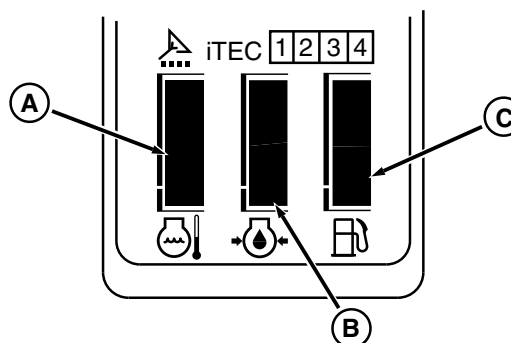
OURX935,0000755 -19-24MAR09-1/1

Gauges—Coolant Temperature, Engine Oil Pressure and Fuel Level

A—Coolant Temperature Gauge: Shows engine coolant temperature between 40 °C — 120 °C (104 °F—248 °F). All segments are off when coolant temperature is below 40 °C (104 °F). All segments are lit when temperature is 120 °C (248 °F) and above.

B—Engine Oil Pressure Gauge: Shows engine oil pressure, between 8 — 320 kPa (1 — 46 psi). All segments are off when oil pressure is extremely low, 0—7 kPa (0—1 psi). All segments are lit when pressure is 320 kPa (46 psi) and above.

C—Fuel Level Gauge: Displays fuel level in tank. Each lighted segment represents 4% of the fuel tank total capacity. When fuel tank is full, all segments are lit. When only the bottom segment is lit, the tank is nearly empty with approximately 40—60 L (10—15 gal.) remaining.



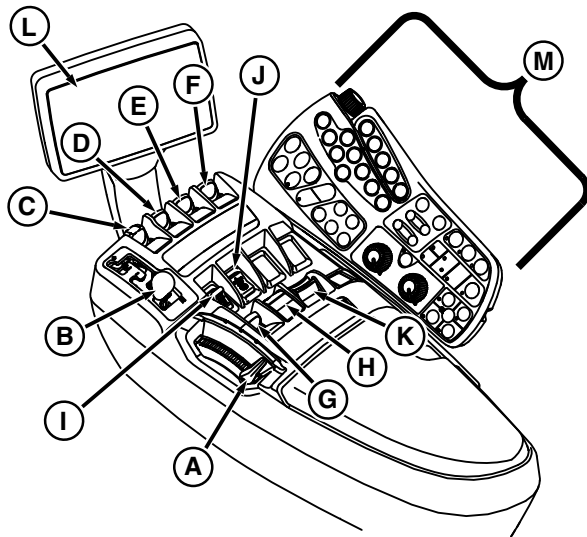
A—Coolant Temperature Gauge
B—Engine Oil Pressure Gauge

C—Fuel Level Gauge

RXA0099154 —UN—27JAN09

OURX935,000029C -19-21JUN10-1/1

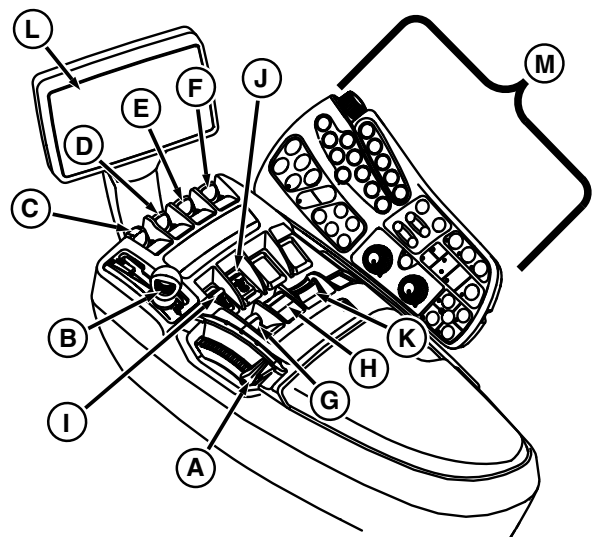
CommandArm™



RXA0099785 —UN—19NOV08

PST CommandARM™ Controls

- A—Engine Speed Control/Hand Throttle
- B—Speed Control Lever
- C—Hitch Command Lever
- D—SCV I Control Lever
- E—SCV II Control Lever
- F—SCV III Control Lever
- G—SCV IV Control Lever
- H—SCV V Control Lever



RXA0099786 —UN—19NOV08

IVT (Infinitely Variable Transmission)™ COMMANDARM Controls

- I— iTEC Sequence Switch
- J— AutoTrac™ Resume Switch
- K—Rear PTO Switch
- L— CommandCenter™
- M—CommandARM™ Controls

CommandARM is a trademark of Deere & Company
 IVT (Infinitely Variable Transmission) is a trademark of Deere & Company
 AutoTrac is a trademark of Deere & Company
 CommandCenter is a trademark of Deere & Company

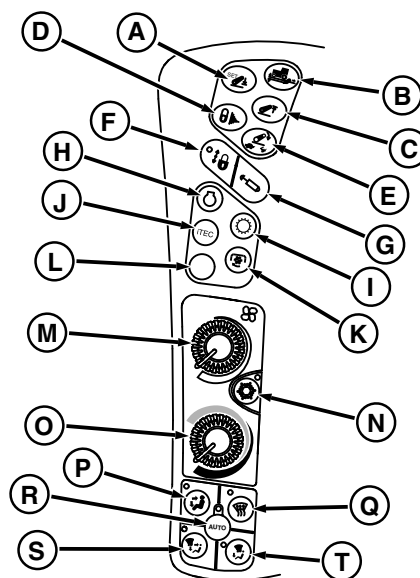
¹For IVT Equipped Tractors
²For PST Equipped Tractors

OURX935,000013B -19-08NOV10-1/1

CommandArm™ Controls

Controls indicated with an asterisk (*) are installed only on ClimaTrak™ equipped tractors.

- | | |
|-------------------------|----------------------------|
| A—Hitch Lower Limit | K—Rear PTO |
| B—Load Depth | L—Not Used |
| C—Hitch Upper Limit | M—Fan Speed * |
| D—Transport Lock | N—Air Conditioner Button * |
| E—Hitch Rate Of Drop | O—Temperature Knob * |
| F—Transport Lock—SCV | P—Cab And Floor * |
| G—SCV | Q—Defrost * |
| H—Engine Settings | R—AUTO * |
| I—Transmission Settings | S—Defrost, Cab And Floor * |
| J—ITEC | T—Windshield And Floor * |



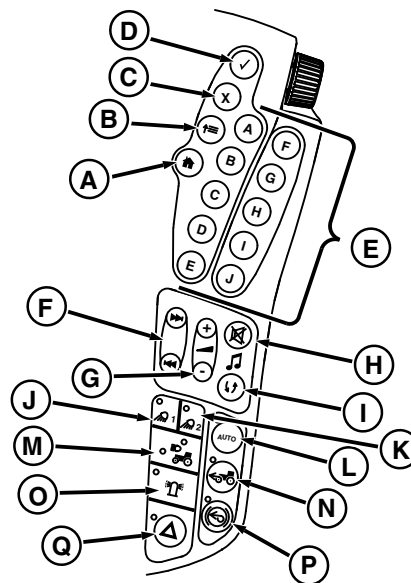
CommandARM™ Controls —Left Side

CommandARM is a trademark of Deere & Company
ClimaTrak is a trademark of Deere & Company

RXA009690 —UN—31OCT08

OURX935.000013C -19-08NOV10-1/2

- | | |
|--------------------------|-------------------------|
| A—Home Button | J—Field Lights 1 Button |
| B—Menu Button | K—Field Lights 2 Button |
| C—Cancel Button | L—AUTO |
| D—Confirm Button | M—Road/Loader Lights |
| E—Softkeys | N—MFWD |
| F—Radio Frequency Button | O—Beacon |
| G—Radio Volume Button | P—Brake Assist |
| H—Radio Mute | Q—Emergency Flashers |
| I—Radio Source Button | |



CommandArm Controls—Right Side

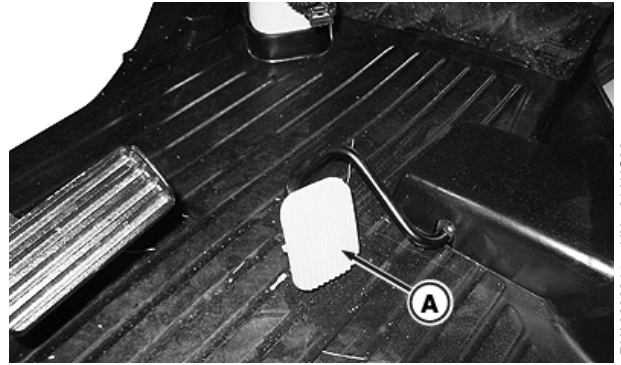
RXA009150 —UN—25SEP08

OURX935.000013C -19-08NOV10-2/2

Foot Operated Throttle Control (If Equipped)

Depress foot pedal (A) to control engine rpm.

A—Foot Throttle Pedal



RXA0098914 —UN—21AUG08

OURX935,00004B2 -19-26AUG08-1/1

Secondary Brake Lever

A—Secondary Brake Lever



RXA0100123 —UN—26JAN09

Secondary Brake

OURX935,0000162 -19-15NOV10-1/1

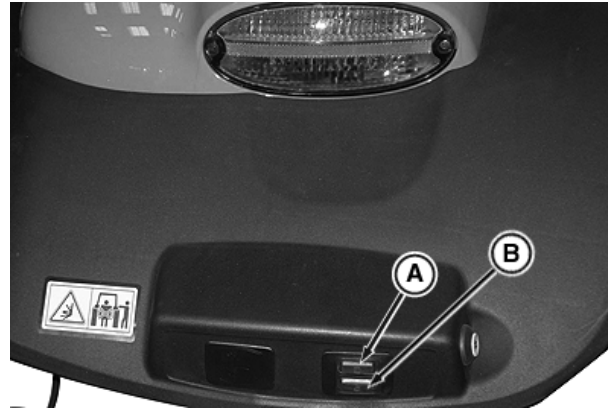
External Hitch Raise/Lower Switches

Tractors without fender extensions have external switches mounted on the valve stack.

Tractors with fender extensions have optional rear hitch fender mounted external raise/lower switches.

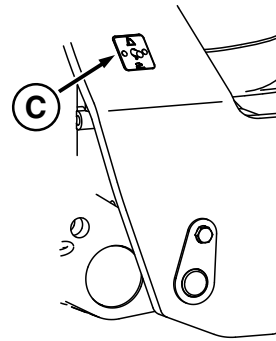
Tractors with optional front hitch have front hitch mounted front external raise/lower switches.

- | | |
|------------------------------------|-------------------------------|
| A—Fender Mounted Rear Hitch | C—External Front Hitch |
| External Raise Switch | Raise/Lower Switch |
| B—Fender Mounted Rear Hitch | |
| External Lower Switch | |



RXA0100898 —UN—06MAR09

Rear Hitch Fender Mounted External Raise/Lower Switches



RXA0098833 —UN—05AUG08

Front Hitch Mounted Front External Raise/Lower Switches

OURX935.000080B -19-03MAR09-1/1

CommandCenter

Activating The System

Depending how frequently tractor is used may impact on how the system activates or "boots up". There are two types of start ups;

- Warm startup - occurs when the display has been operated in the last 21 days and has NOT lost unswitched power.

- Cold startup - occurs when the display has not been operated in the last 21 days or has lost unswitched power. Cold startup takes longer than warm startup for the display to power up (approximately 30 seconds).

OURX935,00009E5 -19-10JUL09-1/1

CommandCenter™ Menu

RXA0098156 —UN—07NOV08

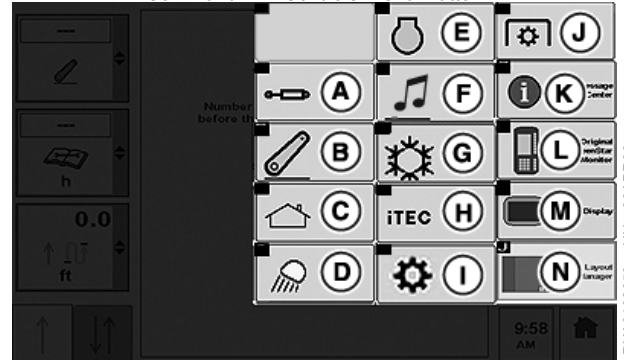
At the CommandArm Controls press Menu Button. Depending on tractor configuration, the number and order of displayed icons may vary. From the CommandCenter Menu operator can display any main page available. A brief description of each is listed below.

- **A—SCV:** Adjust any of up to six SCVs (See Section 60)
- **B—Hitch:** Adjust hitch. (See Section 50)
- **C—Home:** Tractor home page.
- **D—Lights:** Adjust lighting. (See Section 20)
- **E—Engine:** Adjust FieldCruise™ setting or engine rpm. (See Section 40)
- **F—Radio:** Adjust premium radio only. (See Section 25)
- **G—ClimaTrak:**™ Adjust ClimaTrak settings. (See Section 25)
- **H—iTEC:**™ Adjust iTEC functions. (See Section 45)
- **I—Transmission:** Adjust either PST (See Section 41) or IVT (Infinitely Variable Transmission)™/AutoPowr™ Settings (See Section 42) depending on tractor.
- **J—PTO:** Adjust PTO speed. (See Section 70)
- **K—Message Center:** Manages Message Center. (See Section 16)
- **L—Original GreenStar:**™ Adjust GreenStar components. (See Section 25)
- **M—Display:** Adjust Display functions. (See Section 16)

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FieldCruise is a trademark of Deere & Company
ClimaTrak is a trademark of Deere & Company
IVT (Infinitely Variable Transmission) is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company



CommandArm Controls Menu Button



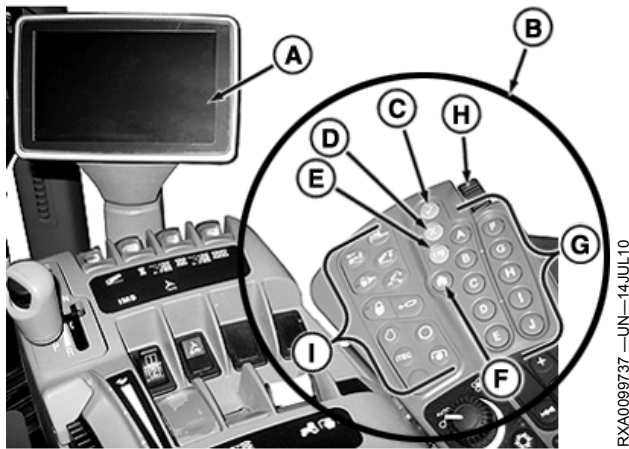
CommandCenter™ Menu

- **N—Layout Manager:** Adjust Layout Manager functions. (See Section 16)

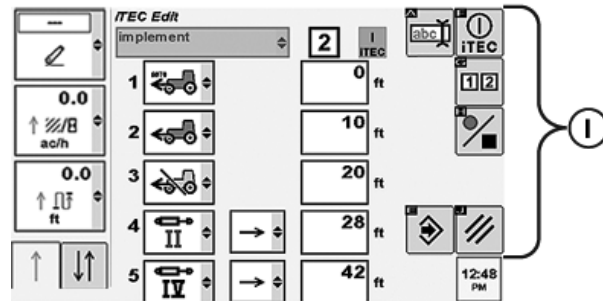
RXA0102059 —UN—09APR09

OURX935,0000131 -19-08NOV10-1/1

Primary Navigational Tools



CommandARM™ With CommandArm Controls And CommandCenter



Softkeys

RXA0104278 —UN—11AUG09

NOTE: Viewing information on the CommandCenter™ is similar to viewing information in a book. As you page forward more information is presented. Likewise every display of new information is another page in the CommandCenter allowing operator to fine tune tractor functions.

The CommandCenter (A) attached to CommandArm allows operator to view selected pages required to operate tractor.

There are two methods of navigating through CommandCenter pages:

1. Rotate CommandArm Controls (B) thumb wheel (H) to a specific box or softkey (I) and press Confirm button (C) to direct tractor to perform a function. Press Cancel button (D) to void a command.

NOTE: Softkeys, "A" through "J" (G) correlate to softkeys (I) on CommandCenter pages.

2. Use softkeys to quickly navigate through system to a page, then use thumb wheel to specific portion of a page.

There are a variety of input fields and buttons that allow the operator to navigate through pages to direct tractor functions

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CommandCenter is a trademark of Deere & Company

Primary CommandArm Controls navigational tools listed below:

A—CommandCenter allows operator to monitor and receive immediate visual feed back on all monitored functions associated with tractor operations.

B—CommandArm Controls is a key pad made up of buttons, shortcut keys and softkeys allowing operator to manage tractor functions.

C—Confirm Button used to select highlighted item.

D—Cancel Button cancels or deselects action previously selected.

E—Menu Button returns operator to the CommandCenter Menu.

F—Home Button returns operator to home page.

G—Softkey Buttons activate Softkeys

H—Thumb Wheel allows operator to perform specific functions such as changing information in input boxes. Rotating thumb wheel forward raises input box values. Rotating thumb wheel rearward lowers input box values.

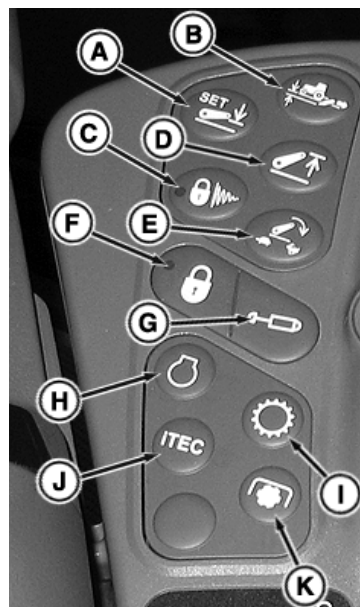
I—Softkeys allows operator quick access to a specific page or cursor placement on page.

OURX935,000011B -19-04NOV10-1/1

Shortcut Buttons

Listed below are CommandArm Controls Shortcut buttons that allow operator to go directly to a specific task.

- A—Hitch Lower Limit
- B—Hitch Load Depth
- C—Hitch Transport Lock/Hitch Dampening
- D—Hitch Upper Limit
- E—Hitch Drop Rate
- F—SCV Lock
- G—SCV
- H—Engine
- I—Transmission
- J—iTEC™
- K—PTO



Shortcut Buttons

iTEC is a trademark of Deere & Company

RXA0104070 —UN—24JUL09

OURX935,000011C -19-15NOV10-1/1

CommandCenter™ Page Layout

NOTE: Displayed page shown is reference only. Actual pages may appear differently due to connection of optional devices and tractor configuration.

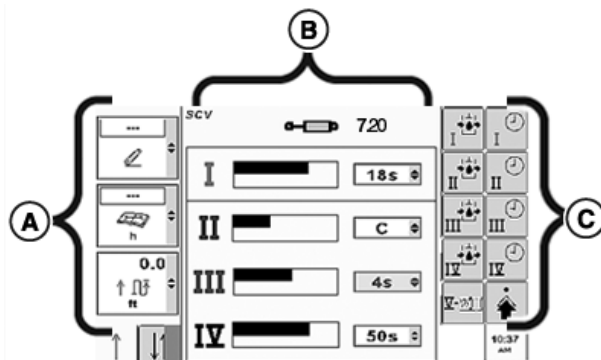
CommandCenter™ Left Region (A), Center Region (B) and Right Region (C) selections will be active on most pages.

- **A — Left Region:** allows operator the ability to choose and monitor three left region boxes at a time. Each box displays an ongoing function or specific tractor status.
- **B — Center Region:** allows operator to view and change tractor settings in a wide variety of applications.
- **C — Right Region:** displays softkey options available to the operator from current page.

Selecting a Right Region softkey displays a new page, function, or allows changing settings.

Left Region boxes are displayed in a strip of three individual boxes to be monitored while allowing operator to focus on specific functions active in page Center Region.

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Example of Page Layout

A—Left Region
B—Center Region

C—Right Region

RXA0104279 —UN—11AUG09

OURX935,000011D -19-08NOV10-1/1

CommandCenter™ Left Region

CommandCenter™ Left Region Boxes and their meanings are listed below;

1—Rear Hitch Position - Displays current rear hitch position.

2—Engine Coolant Temp - Engine coolant Temperature in °C or °F.

3—Distance Counter- Accumulated distance the tractor has traveled displayed in meters or feet.

4—Rear PTO Speed - Displays rear PTO speed in rpm.

5—% Slip - (Requires Radar) Displays current wheel slippage as a percent of ground speed compared to the true ground speed.

6—Fuel Remaining-Estimated time until fuel tank is empty.

7—Hours Since Service - Hours since the last service interval.

8—Area Per Hour - Area covered per hour. A number based on current implement width and speed traveled over time.

9—Fuel Consumption Per Area The amount of fuel used is accumulated over time based on the last area counter reset.

10—System Volts - Supply system voltage.

11—Engine Oil Pressure - Engine oil pressure in kPa or psi.

12—FieldCruise™ Set engine Speed in maximum rpm.

13—Power Display- Engine power using a bar graph display.

14—Fuel Consumption Per Hour - Displays Liters (Gallons) consumed per hour.

15—True Ground Speed Ground speed as measured by radar or GPS if equipped.

16—Wheel (Ground) Speed - Calibrated ground speed as measured at the axle.

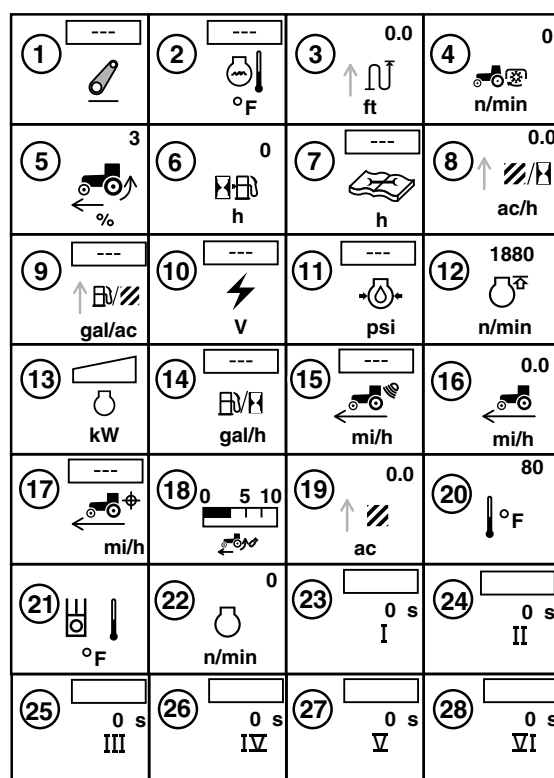
17—Set Speed - (IVT (Infinitely Variable Transmission)™/AutoPowr™ Only)

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IVT (Infinitely Variable Transmission) is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company



Listing Of Left Region Boxes

18—Hitch Slip Hitch Slip displayed.

19—Total Area Covered - Total area covered displayed in hectares or acres.

20—Ambient Temperature Air Temperature outside tractor.

21—Hydraulic Temperature Hydraulic oil Temperature.

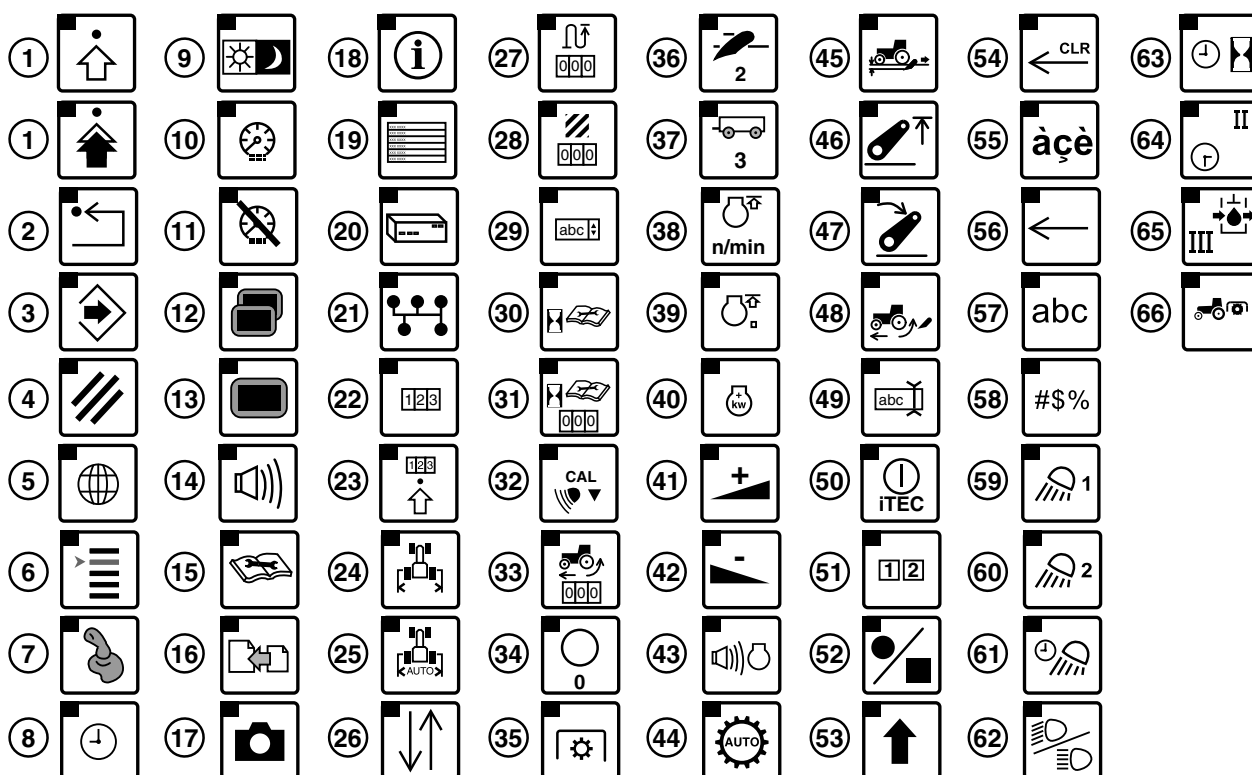
22—Engine RPM Engine speed in revolutions per minute.

23—28 (SCV I Through SCV VI respectively) Displays set flow rate, current flow rate, and detent time on SCV identified.

RXA0098405—UN—09MAR09

OURX935,0000132 -19-08NOV10-1/1

CommandCenter™ Right Region Softkeys



CommandCenter™ softkeys

- | | | | |
|--|--|----------------------------------|-------------------------------------|
| 1— Advanced Setting ¹ | 18— Information — Message Center | 35— IVT™/AutoPowr™ Auto Mode 1 | 52— Start/Stop Record Sequence—iTEC |
| 2— Back ¹ | 19— Diagnostic Addresses — Message Center | 36— IVT™/AutoPowr™ Auto Mode 2 | 53— Upper/Lower Case Toggle—iTEC |
| 3— Save/Enter ¹ | 20— Electronic Control Unit — Message Center | 37— IVT™/AutoPowr™ Auto Mode 3 | 54— Clear Editing Box — iTEC |
| 4— Cancel ¹ | 21— Bus Information — Message Center | 38— FieldCruise™ Settings | 55— Special Character — iTEC |
| 5— Regional Settings—Display | 22— Performance Monitor Main | 39— FieldCruise ON/OFF | 56— Back Space — iTEC |
| 6— High Light Color—Display | 23— Performance Monitor Settings | 40— Intelligent Power Management | 57— Standard Alphabet |
| 7— Auxiliary Control—Display | 24— Implement Width | 41— Increase—Radio | 58— Numbers — iTEC |
| 8— Date/Time—Display | 25— Implement Width Auto | 42— Decrease—Radio | 59— Field Position 1 — Lights |
| 9— Day/Night Setting—Display | 26— Area Counter Status | 43— Volume Compensation—Radio | 60— Field Position 2 — Lights |
| 10— Adjust Brightness—Display | 27— Reset Distance Counter | 44— Automatic Power Shift | 61— Egress Indicator — Lights |
| 11— Dim Mode—Display | 28— Reset Area Counter | 45— Load Depth—Hitch | 62— High/Low Beam — Lights |
| 12— Multiple Display—Display | 29— Area Counter Control Source | 46— Upper Limit—Hitch | 63— Egress Delay — Lights |
| 13— Main—Display | 30— Service Alarm Interval | 47— Drop Rate—Hitch | 64— Detent Time — SCV ² |
| 14— Adjust Volume—Display | 31— Reset Hours Since | 48— Hitch Slip—Hitch | 65— Flow Rate — SCV ² |
| 15— Diagnostics | 32— Calibrate Radar | 49— Toggle —iTEC | 66— Rear PTO Engagement |
| 16— Reprogramming — Message Center | 33— Zero Slip | 50— iTEC™ ON/OFF | |
| 17— Transfer Debug Files— Message Center | 34— IVT™/AutoPowr™ Auto Mode Off | 51— Sequence—iTEC | |

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IVT is a trademark of Deere & Company

AutoPowr is a trademark of Deere & Company

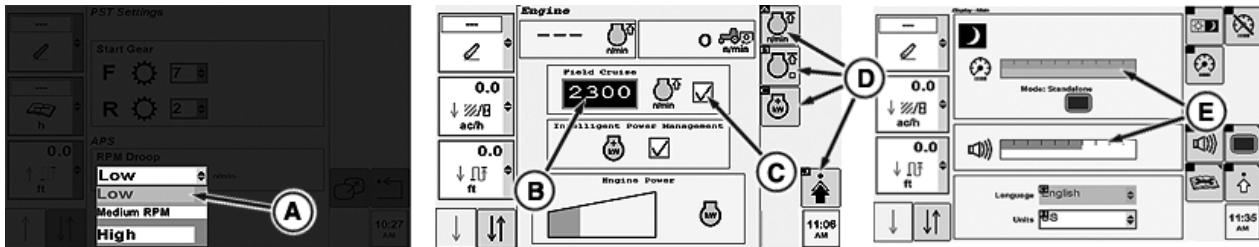
FieldCruise is a trademark of Deere & Company

iTEC is a trademark of Deere & Company

¹Softkey found throughout CommandCenter pages and function is constant throughout.

²Used for SCV 1 through SCV VII

CommandCenter™ Input Fields



Example Of CommandCenter™ Drop Down Boxes, Check Boxes, Input Boxes, Softkeys, and Bar Graphs

There are a variety of input fields and buttons that allow the operator to navigate through pages and the ability to change values.

(A) — Drop-Down Boxes

Drop-down box has a border with a numeric or text value and up/down arrows on the right side that allow operator to select specific value from a pre populated list.

Highlight drop-down box and press Confirm button. List will appear. Rotating thumb wheel will allow operator to move indicator through list to desired input values. Pressing Confirm button will select new value.

To close drop-down box without making a selection, press Cancel button. List will close and original value will remain.

(B)—Input Box

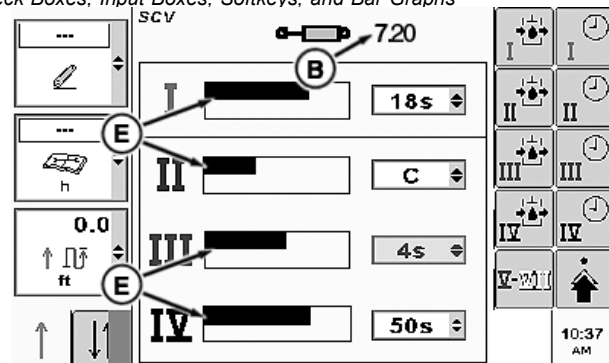
Input box has a border with a numeric value or text. This allows the operator to select and enter new values or text.

NOTE: The faster thumb wheel is rotated, the faster values will incrementally change. Rotating thumb wheel forward increases value and rotating thumb wheel rearward decreases value.

To change a value, highlight input box and press Confirm button. Input box is highlighted indicating that thumb wheel can be rotated to change current value to desired value. When finished, press Confirm button to accept new value.

If there is a large range of values, a numeric key pad will appear, allowing selection of each digit.

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Example Of Input Boxes And Bar Graphs

(C)—Check Box

Check box is a square with a border. The function controlled by a check box will toggle on or off depending if box is checked or left unchecked respectively.

(D)—Softkeys

Press softkeys to activate a prescribed function or navigate to a page.

(E)—Bar Graph

To change a value, highlight bar graph and press Confirm button. Rotate thumb wheel forward to increase value or rearward to decrease bar graph value. When finished, press Confirm button to accept new value.

Navigating To Specific Page

For Illustration 1:

Select CommandARM™ controls Menu button to display CommandCenter™ menu page.

For Illustrations 2 and 3:

1. Select CommandCenter menu.
2. From CommandCenter menu, select appropriate icon.
3. When appropriate page displays, following procedure described.

For Illustration 4 and 5:

4. Select CommandCenter menu.
5. From CommandCenter menu, select **appropriate icon**.
6. When appropriate page displays, select **Advanced Settings softkey**.
7. When advanced settings page displays, following procedure described.
8. When appropriate page displays, following procedure described.

For Illustration 6:

9. Select CommandCenter menu.
10. From CommandCenter menu, select **appropriate icon**.
11. When appropriate page displays, select **Advanced Settings softkey**.
12. When advanced settings page displays, select appropriate softkey to display an additional page.
13. When appropriate additional page displays, following procedure described.

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RXA0098156 —UN—07NOV08



Illustration 1 — CommandArm Controls Menu Button

RXA0099747 —UN—14JUL10



Illustration 3 — Display

RXA0103914 —UN—14JUL10

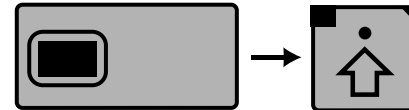


Illustration 4 — Display → Advanced Settings Softkey

RXA0104595 —UN—04SEP09

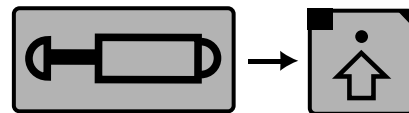


Illustration 5 — SCV → Advanced Settings Softkey

RXA0103987 —UN—17JUL09

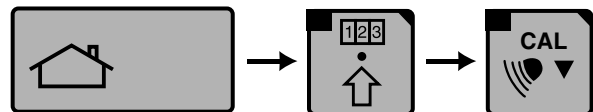


Illustration 6 — Home → Performance Monitor Advanced Settings Softkey → Calibration Softkey

RXA0104594 —UN—04SEP09

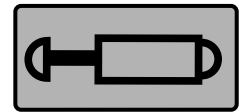


Illustration 2 — SCV

OURX935.0000120 -19-04NOV10-1/1

Selecting Highlight Color

RXA0098156 —UN—07NOV08

1. Select **Menu** button.
2. Select **Display**.
3. Select **Advanced softkey**.
4. Select **Highlight softkey**.
5. At Display Setting Highlight Color page, set highlight to green (A), blue (B), or red (C) by placing check in the appropriate check box.

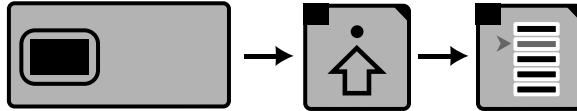
A—Green
B—Blue

C—Red

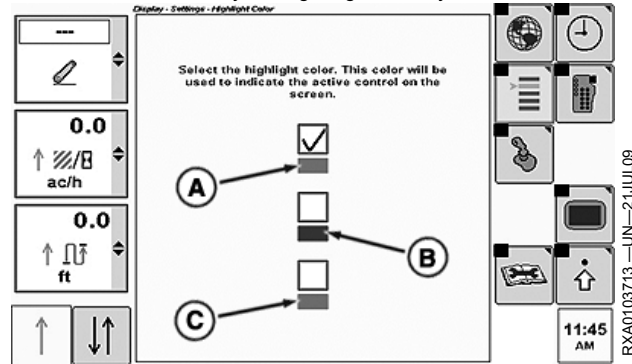


CommandARM™ Menu Button

RXA0103916 —UN—14JUL10



CommandCenter Menu → Display → Advanced Settings Softkey → High Light Softkey



Display Setting Highlight Color Page

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Setting Country, Language, And Units

RXA0098156 —UN—07NOV08

1. Select **Menu** button.
2. Select **Display**.
3. Select **Advanced Settings** softkey.
4. At the Display Settings Regional page scroll to drop down box (B), select the country/region tractor is currently used in. Listed below are countries/region that may be selected;

Argentina	Finland	Portugal
Austria	Germany	Romania
Australia & New Zealand	Greece	Russia
Belgium	Hungary	Slovakia
Bulgaria	Iceland	South Africa
Brazil	Italy	Sweden
Canada	Latin America	Switzerland
Czech Republic	Latvia	Turkey
Croatia	Lithuania	Ukraine
Denmark	Netherlands	United Kingdom
Estonia	Norway	USA
France	Poland	

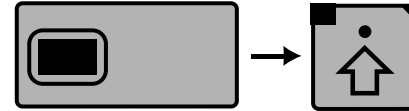
5. In drop down box (C), select primary operator's language.
6. In drop down box (D), select numeric format desired. ie U.S. or European.
7. In drop down box (F), select units required either customary U.S. or metric equivalent.
8. In drop down box (E), select date format desired.
9. In check box at the bottom of the page, select 24 hour clock check box (G) to change to 24 hour clock or leave unchecked for 12 hour clock.
10. Selecting Units Advanced Settings Box (H), gives the option to change between either US, Imperial, or metric units (A).

A—Units
B—Drop Down Box (Country)
C—Drop Down Box (Language)
D—Drop Down Box (Numeric Format)
E—Drop Down Box (Date Format)
F—Drop Down Box (Units)
G—24 Hour Clock Check Box
H—Units Advanced Settings

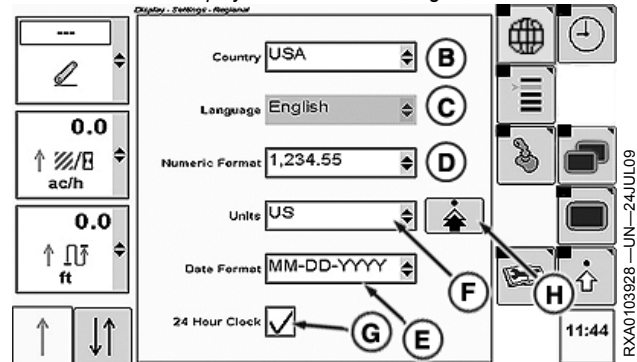


CommandARM™ Menu Button

RXA0103914 —UN—14JUL10

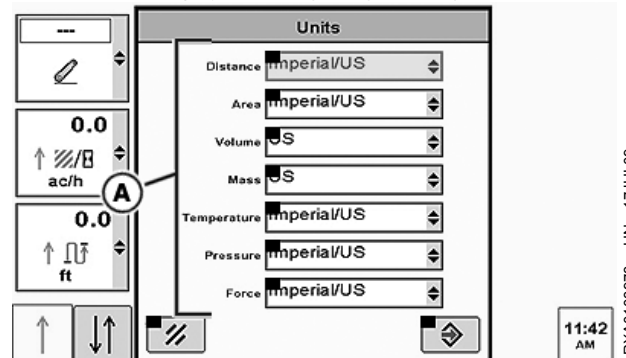


Display → Advanced Settings



RXA0103928 —UN—24JUL09

Display → Settings Regional Page



RXA0103973 —UN—17JUL09

Display → Settings Regional Units Page

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Setting Country, Language, And Units

RXA0098156 —UN—07NOV08

1. Select **Menu** button.
2. Select **Display**.
3. Select **Advanced Settings** softkey.
4. At the Display Settings Regional page scroll to drop down box (B), select the country/region tractor is currently used in. Listed below are countries/region that may be selected;

Argentina	Finland	Portugal
Austria	Germany	Romania
Australia & New Zealand	Greece	Russia
Belgium	Hungary	Slovakia
Bulgaria	Iceland	South Africa
Brazil	Italy	Sweden
Canada	Latin America	Switzerland
Czech Republic	Latvia	Turkey
Croatia	Lithuania	Ukraine
Denmark	Netherlands	United Kingdom
Estonia	Norway	USA
France	Poland	

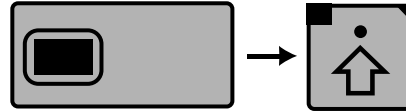
5. In drop down box (C), select primary operator's language.
6. In drop down box (D), select numeric format desired. ie U.S. or European.
7. In drop down box (F), select units required either customary U.S. or metric equivalent.
8. In drop down box (E), select date format desired.
9. In check box at the bottom of the page, select 24 hour clock check box (G) to change to 24 hour clock or leave unchecked for 12 hour clock.
10. Selecting Units Advanced Settings Box (H), gives the option to change between either US, Imperial, or metric units (A).

A—Units
 B—Drop Down Box (Country)
 C—Drop Down Box (Language)
 D—Drop Down Box (Numeric Format)
 E—Drop Down Box (Date Format)
 F—Drop Down Box (Units)
 G—24 Hour Clock Check Box
 H—Units Advanced Settings

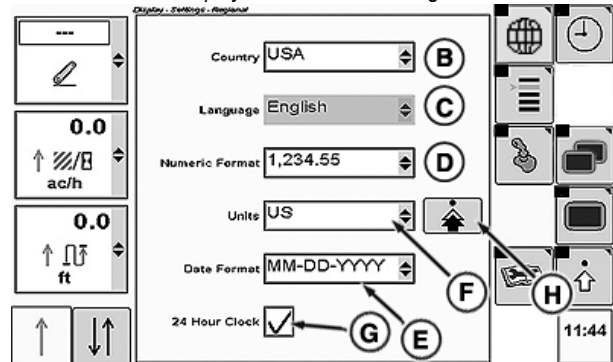


CommandARM™ Menu Button

RXA0103914 —UN—14JUL10

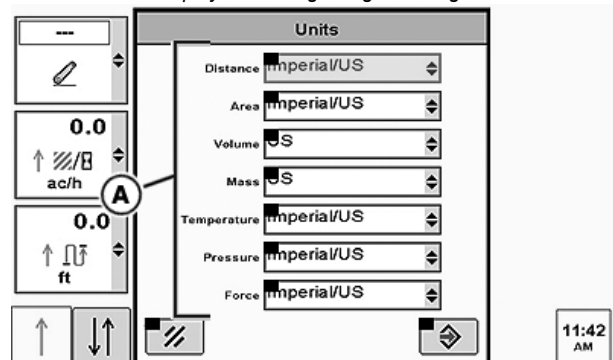


Display → Advanced Settings



RXA0103928 —UN—24JUL09

Display → Settings Regional Page



RXA0103973 —UN—17JUL09

Display → Settings Regional Units Page

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RXA0098156 —UN—07NOV08

Setting System Time

NOTE: Enter the current time at your location and your time zone and local offset will be calculated.

1. Select **Menu** button.
2. Select **Display**.
3. Select **Advanced Settings** softkey.
4. Select **Date/Time** softkey.
5. If GPS Time and Date check box (A) is checked, the following two lines of information cannot be changed.

If GPS Time and Date check box (A) is left unchecked;

- Select and place appropriate time in Time Zone box (B).

Argentina -2	Croatia +1	Russia
Austria +1	Denmark +1	Moscow +3
Australia	Germany +1	Samara +4
Brisbane +10	Estonia +2	Orenburg +5
Adelaide +10	France 0	Omsk +6
Perth + 9	Finland +2	Krasnoyarsk +7
Melbourne +11	Greece +2	Switzerland +1
Bulgaria +2	Iceland 0	Slovakia +1
Brazil	Italy +1	South Africa +2
Sao Paulo -3	Hungary +1	Sweden +1
Mato Grosso -4	Central America + 5	United Kingdom 0
Canada	Latvia +2	Ukraine +2
Vancouver -7	Lithuania +2	Turkey +2
Calgary -6	Netherlands +1	USA
Winnipeg -5	Norway +1	Los Angeles - 7
Toronto -4	Poland +1	Denver - 6
Halifax -3	Portugal 0	Chicago -5
Czech Republic +1	Romania +2	Atlanta -4

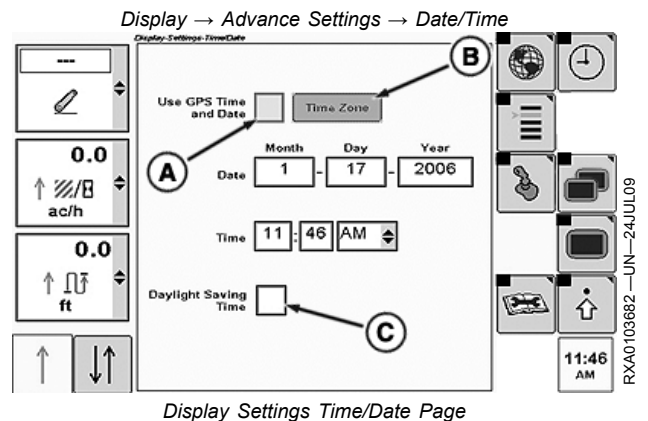
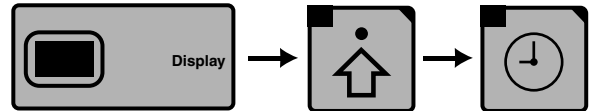
- Select month.
- Select day.

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CommandARM™ Menu Button

RXA0103929 —UN—24JUL09



A—GPS Time And Date
B—Time Zone Box

C—Daylight Savings Time

- Select year.
 - Select hour.
 - Select minute.
 - Select either AM or PM.
6. In Daylight Saving Time check box (C), place check if daylight saving time is used in your country/region.

OURX935,0000124 -19-04NOV10-1/1

Viewing Basic Diagnostic Readings

Basic display diagnostics such as operating voltage, and CAN bus status can be found on the Diagnostics Readings Page.

This information maybe requested by your John Deere™ dealer to aid diagnostics.

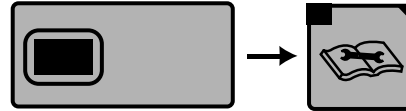
1. Select **Menu button**.
2. Select **Display**.
3. Select **Diagnostics softkey**.
4. System diagnostics are located on Display Settings Readings page.

RXA0098156 —UN—07NOV08

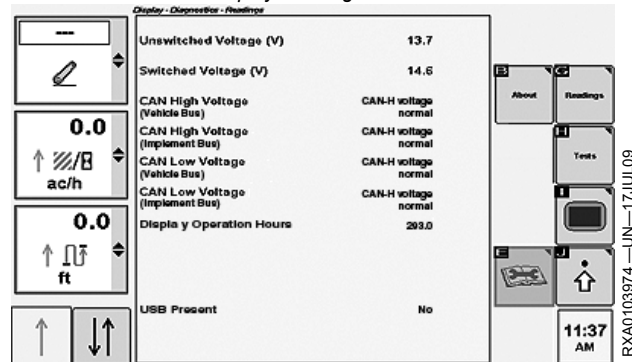


CommandARM™ Menu Button

RXA0103915 —UN—14JUL10



Display → Diagnostics



Display Diagnostics readings Page

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OURX935,0000125 -19-04NOV10-1/1

Message Center

Message Center is used to access detailed diagnostic information and to manually initiate re-programming sessions.

Message Center can also display detailed diagnostic information such as Control Unit Information and CAN Bus Information, used by your John Deere™ Dealer for advanced troubleshooting.

Softkeys are listed below:

- A—Message Center Reprogramming Page
- B—Transfer Debug Files
- C—Messages
- D—Diagnostic Addresses
- E—Trouble Codes
- F—Control Unit Information
- G— Bus Information

RXA0098156 —UN—07NOV08

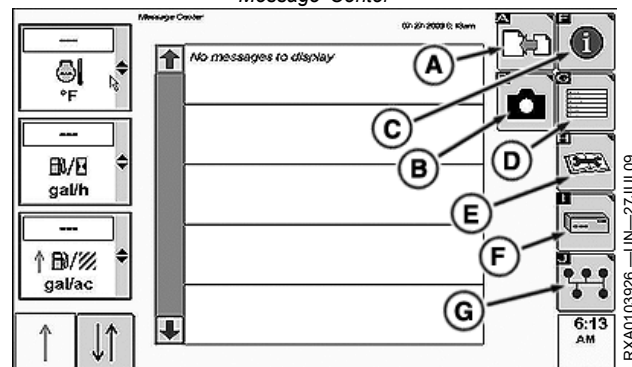


CommandARM™ Menu Button

RXA0099746 —UN—14JUL10



Message Center



Message Center Page

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OURX935,0000126 -19-04NOV10-1/1

Configuring Home Page

1. Select **Menu** button.
2. Select **Layout Manager**.
3. Layout Manager opens to any previously displayed home page.
4. Select Home Page drop down box (A) displays options which include three home page options (B) and five softkeys options (F), A through E.
5. Place check in Home Page Cycle check Box (C) to have desired page displayed.
6. To view home pages after they are included in the home page cycle, on CommandARM™ select Home button displaying home page 1. Selecting Home button consecutively displays consecutive home pages, 1, 2, or 3.

NOTE: For PST softkey options are: Area Status Counter (G), FieldCruise™ ON/OFF (H) or Automatic Power Shift (I). For IVT/AutoPowr softkey options are: Area Status Counter (G), FieldCruise™ ON/OFF (H), IVT/AutoPowr Auto Mode off (J), IVT/AutoPowr Auto Mode 1 (K), IVT/AutoPowr Auto Mode 2 (L) or IVT/AutoPowr Auto Mode 3 (M).

Adding softkeys to a home page simply allows operator the ability to activate or deactivate a function from the selected home page.

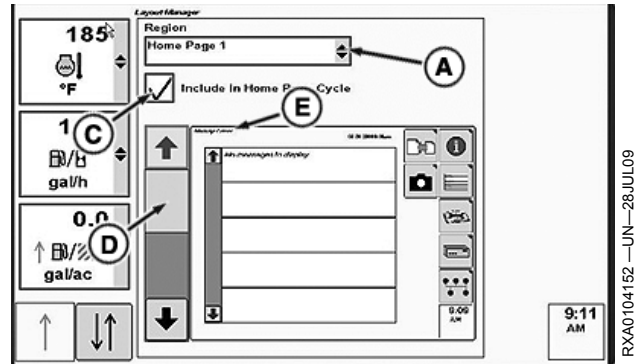
Softkeys, FieldCruise softkey (N) for example, are only added to the default Home page.

7. Open drop down box (D) to select pages or softkeys available for your tractor configuration.

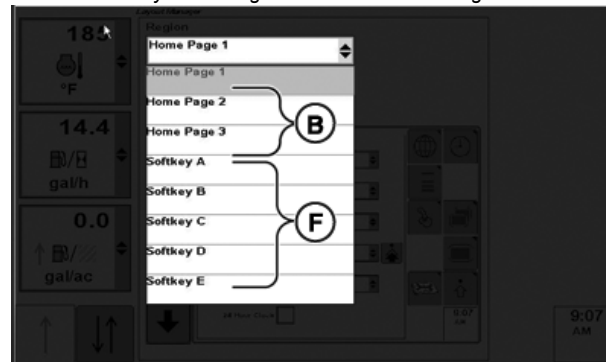
NOTE: Page Name (E) is printed across the top of page. All pages are not identified with a specific page.

8. To remove page from Layout Manager, select check box (C) again. Check box is unchecked and page is no longer displayed in Layout Manager.

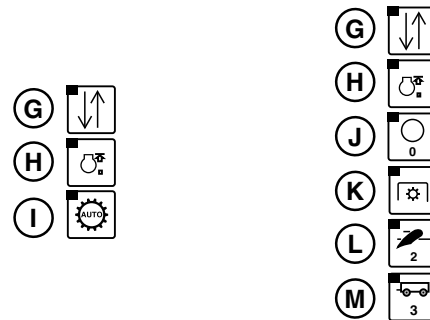
- | | |
|--|------------------------------|
| A—Home Page Drop Down Box | H—FieldCruise Softkey |
| B—Home Page Options | I—APS Softkey |
| C—Include In Home Page Cycle Check Box | J—IVT/AutoPowr Auto Mode Off |
| D—Drop Down Box | K—IVT/AutoPowr Auto Mode 1 |
| E—Page Name | L—IVT/AutoPowr Auto Mode 2 |
| F—Softkeys Available | M—IVT/AutoPowr Auto Mode 3 |
| G—Area Status Counter Softkey | N—FieldCruise Softkey |



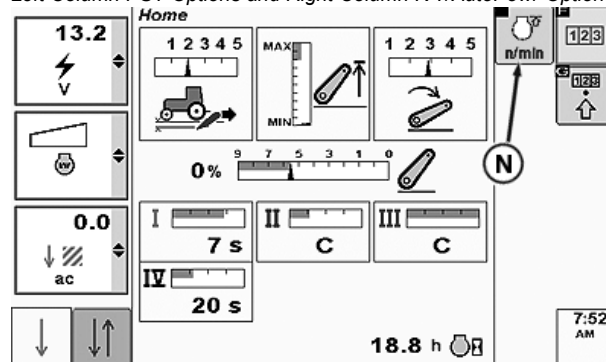
Layout Manager—Selected Home Page



Layout Manager—Drop Down Box Options



Left Column PST Options and Right Column IVT/AutoPowr Options



Default Home Page With FieldCruise Softkey Selected

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OURX935,0000127 -19-04NOV10-1/1

Setting Cab Lighting

1. Select **Menu** button.
2. Select **Display**.
3. Selecting Day/Night Settings softkey (A) toggles between day setting (B) or night Setting (C).
4. Select adjust Brightness softkey (D).

NOTE: As bar graph value goes up, cab lighting brightens.
As bar graph value decreases, cab lighting dims.

5. When bar graph (E) highlights, rotate thumb wheel forward to brighten cab lighting or rearward to dim cab lighting.
6. When Back Light Settings page displays, select check box (F).
7. Rotate thumb wheel to highlight bar scale (G).
8. Press Confirm button, then using thumb wheel scroll forward to lighten back lighting or rearward to darken back lighting.

NOTE: Selecting check box (F) will toggle between either stand alone (I) or synchronization with cab mode (J).

Selecting Dim Mode softkey (H) darkens CommandCenter. This feature allows operator to go from field operations when CommandCenter is required to driving on road without CommandCenter illumination affecting drivers night vision.

9. To change between sync with cab mode to stand alone mode, click on the appropriate icon (I or J).

- | | |
|------------------------------|-----------------------|
| A—Day/Night Settings Softkey | F—Check box |
| B—Day Setting Icon | G—Bar Graph |
| C—Night Setting Icon | H—Dim Mode Softkey |
| D—Adjust Brightness Softkey | I— Sync With Cab Mode |
| E—Bar Graph | J— Stand Alone Mode |

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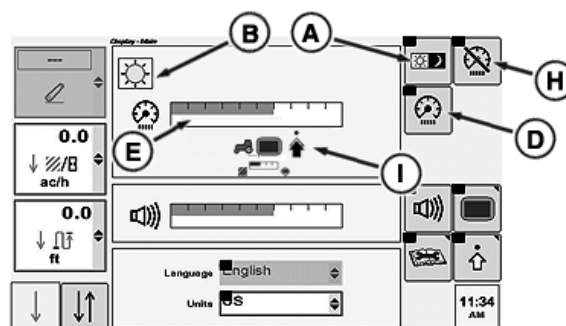


CommandARM™ Menu Button

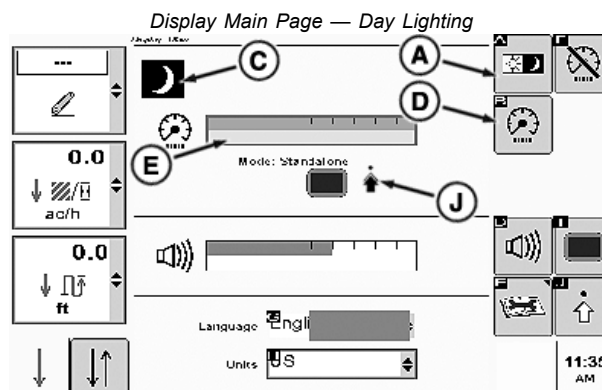
RXA0099747 —UN—14JUL10



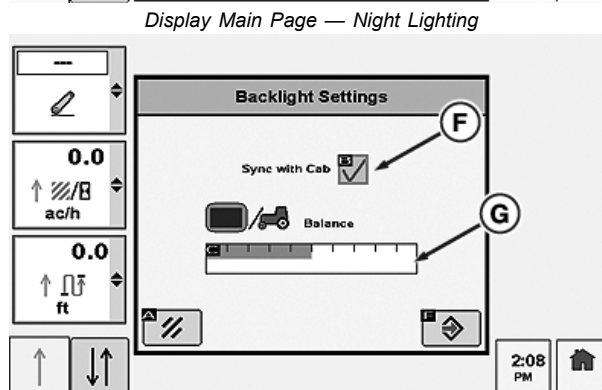
Display



RXA0103977 —UN—17JUL09



RXA0103978 —UN—17JUL09



RXA0099534 —UN—17OCT08

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Setting Service Interval

Service Interval: Alarm interval is adjustable between 0 and 1000 hours, in 10-hour increments. When hours of operation reaches setting, service alarm will sound with a corresponding message appearing on CommandCenter.

After service is performed, Hours-Since-Service display should be reset to zero.

1. Select **Menu** button.
2. Select **Home**.
3. Select **Performance Monitor Settings** softkey.
4. At Performance Monitor page using thumb wheel, scroll to Service Alarm Interval box (A).
5. Press Confirm button.
6. Rotate thumb wheel forward to increase or rearward to decrease hour setting displayed.
7. When desired entry is displayed, press Confirm button.

NOTE: Reset Hours Since Service button must be held for 3 seconds before hours will zero.

8. Using thumb wheel, scroll to Reset Hours Since Service Box (B) and select Time Since Last Reset button to reset time.

A—Service Alarm Interval Box B—Reset Hours Since Service Box

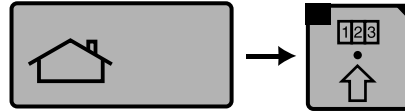
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RXA0098156 —UN—07NOV08

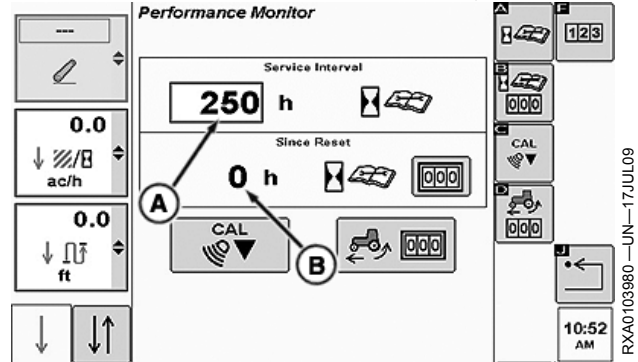


CommandARM™ Menu Button

RXA0103931 —UN—24JUL09



Home → Performance Monitor Settings
Performance Monitor



Performance Monitor Page

RXA0103980 —UN—17JUL09

OURX935,0000129 -19-04NOV10-1/1

Setting Implement Width, Area Counter and Distance Counter

RXA0098156 —UN—07NOV08

1. Select **Menu** button.
2. Select **Home**.
3. Select **Performance Monitor Main softkey**.
4. Select Implement Width softkey (B).
5. Select Confirm button. Implement Width Input box (C) highlights.
6. Using thumb wheel scroll to desired number to set the width of equipment.
7. Select Confirm button.
8. Select Reset Distance Counter softkey (S), hold for 3 seconds, this will zero Reset Distance Counter Display (T).

NOTE: If Area Counter Control Source manual mode (F) is selected, implement status can be changed (toggled) by selecting Area Counter Status softkey (A or P) or Area Counter Control Source softkey (D). Position indicator (Q) will toggle Up or Down. Implement must be down to begin counting distance or area.

9. Select Reset Area Counter softkey (U), hold for 3 seconds, this will zero Reset Area Counter display (R).
10. Select Area Counter Control Source softkey (D). At Area Counter Control Source drop down box (E), make selection from available area counter control source modes (V).

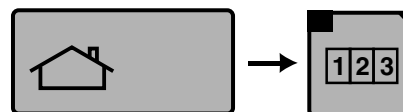
A—Area Counter Status Softkey	L—SCV II Mode
B—Implement Width Softkey	M—SCV III Mode
C—Implement Width Input Box	N—SCV IV Mode
D—Area Counter Control Source Softkey	O—SCV V Mode
E—Area Counter Control Source Drop Down Box	P—Area Counter Status Softkey
F—Manual Mode	Q—Positional Indicator
G—Auto Mode	R—Area Counter Display
H—Switch Mode	S—Reset Distance Counter Softkey
I—Hitch Control Unit (HCU) Mode	T—Distance Counter Display
J—Rear PTO Mode	U—Reset Area Counter Softkey
K—SCV I Mode	V—Area Counter Control Source Modes

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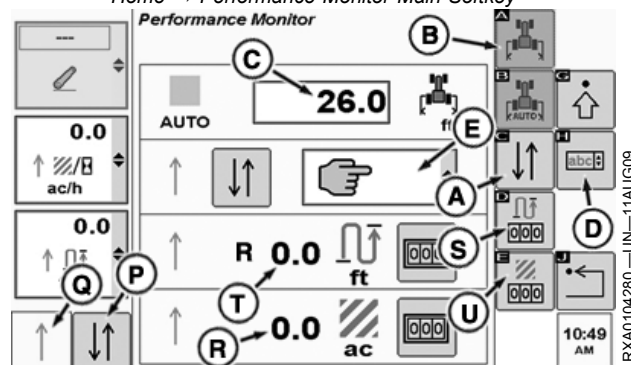


CommandARM™ Menu Button

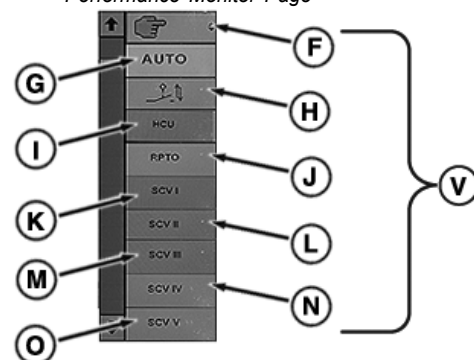
RXA0103917 —UN—10JUL09



Home → Performance Monitor Main Softkey



Performance Monitor Page



Area Counter Control Source Modes

RXA0104277 —UN—11AUG09

OURX935,000012A -19-04NOV10-1/1

Setting Alarm Volume

RXA0098156 —UN—07NOV08

1. Select **Menu** button.
2. Select **Display**.
3. Select **Adjust Volume softkey** (A) to highlight Adjust Volume bar graph (B).
4. Using CommandArm Controls thumb wheel, rotate forward to increase or rearward to decrease alarm volume respectively.



CommandARM™ Menu Button

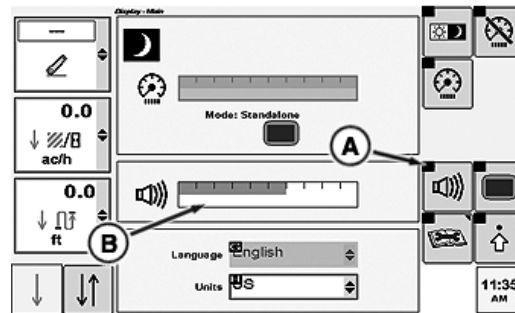
RXA0099747 —UN—14JUL10



Display

A—Adjust Volume Softkey

B—Adjust Volume Bar graph



Display Main Page

RXA0103981 —UN—17JUL09

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OURX935,000012B -19-04NOV10-1/1

Read Operator Manuals for ISOBUS Implements

CAUTION: Implement Detected

Improper operation can cause unintended implement movement.

To avoid death or serious injury to a bystander, understand how this display operates the functions of the implement.

Read and understand the implement Operator Manual.

This message occurs when the system detects an ISOBUS implement. For more information, READ OPERATOR MANUALS FOR ISOBUS IMPLEMENTS.

This display can be used as a display device for any implement that meets ISO 11783 standard. This includes capability to control ISOBUS implements. When used in this manner, information and implement control functions placed on the display are provided by the implement and are the responsibility of the implement manufacturer. Some of these implement functions could provide a hazard either to the Operator or a bystander. Read the operator manual provided by the implement manufacturer and observe all safety messages in manual and on implement prior to use.

NOTE: ISO 11783 is also named "ISOBUS".

OURX935,00009F6 -19-10JUL09-1/1

Connecting ISO Implements and Multiple ISO Displays

CAUTION: Implement Detected

Improper operation can cause unintended implement movement.

To avoid death or serious injury to a bystander, understand how this display operates the functions of the implement.

Read and understand the implement Operator Manual.

This message occurs when the system detects an ISOBUS implement. For more information, READ OPERATOR MANUALS FOR ISOBUS IMPLEMENTS.

1. Select **Menu** button.
2. Select **Display**.
3. Select **Advanced Settings** softkey.
4. Select **Multiple Display** softkey.

In some cases it may be necessary to operate with more than one ISO display. In such cases configure CommandCenter™ to operate in conjunction with a second ISO display.

General Recommendations:

- Ensure tractor ignition key is in **OFF** position when connecting alternate ISO displays or ISO implements.
- Turn tractor ignition key to **OFF** position for at least 15 seconds after changing any multiple display settings.
- Enable **Implement Bus Virtual Terminal** on only **ONE ISO Display**.
- Enable **Original GreenStar™ Monitor** on only **ONE ISO Display**.
- Enable **Controller Reprogramming** on Only **ONE ISO Display**.

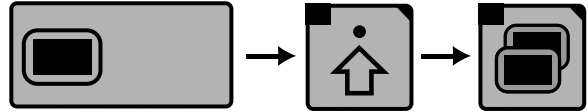
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RXA0098156 —UN—07NOV08



CommandARM™ Menu Button

RXA0103918 —UN—02AUG10



Display → Advanced Settings → Multiple Display

Default Factory Settings for Multiple Display Page 1		
	ON/OFF	FUNCTION INSTANCE
Vehicle Bus Virtual Terminal	√ (Checked)	0
Implement Bus Virtual Terminal	(Unchecked)	1
Task Controller	√ (Checked)	0
File Server	√ (Checked)	0
Default Factory Settings for Multiple Display Page 2		
	ON/OFF	
Performance Monitor	(Unchecked)	
Original GreenStar Monitor	(Unchecked)	
GreenStar 2 Pro Application	(Unchecked)	
Controller Programming	(Unchecked)	

The CommandCenter™ factory default settings (Multiple Display Page 1 and Page 2 Images allow ISO implement and Original GreenStar Monitor to be viewed on alternate ISO display.

Continued on next page

OURX935,000012C -19-04NOV10-1/2

Use table below as a guide to assist multiple display configurations. When a specific box is checked, that option is enabled on the CommandCenter.

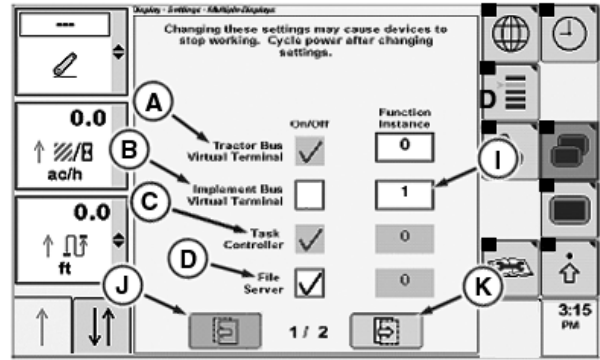
NOTE: Press Next (K) or Previous (J) to switch between the two Multiple Display pages.

NOTE: To enable or disable an option, use CommandArm Controls thumb wheel to navigate to appropriate check box, then press CommandArm Controls Confirm button to add or remove check mark.

Display Settings for Multiple Display Pages

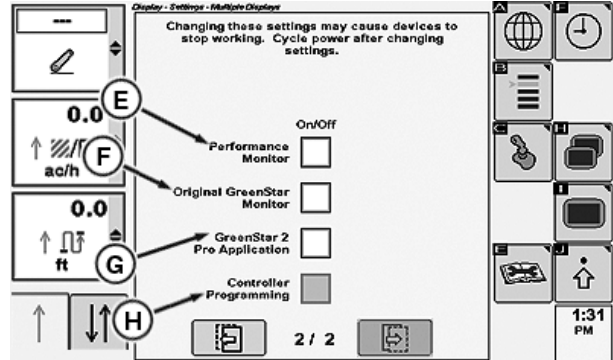
A—Tractor Bus Virtual Terminal	Tractor Bus Virtual Terminal cannot be disabled. No adjustment required.
B—Implement Bus Virtual Terminal	Implement Bus Virtual Terminal cannot operate simultaneously on two ISO displays. <ul style="list-style-type: none"> • Enable feature to view an ISO implement on the CommandCenter. • Disable feature to view an ISO implement on alternate ISO display. <p>NOTE: Consult ISO implement or ISO display manual if function instance value should be changed.</p>
C—Task Controller	Task Controller is enabled/disabled automatically based on vehicle type. No adjustment required.
D—File Server	Disable feature if the implement Bus Virtual Terminal is disabled.
E—Performance Monitor	Performance Monitor cannot operate on an alternate display. Enabling or disabling performance monitor will not effect CommandCenter functionality.
F—Original GreenStar™	Original GREENSTAR Monitor cannot operate simultaneously on two displays. <ul style="list-style-type: none"> • Enable feature to view Original GreenStar Monitor on CommandCenter • Disable feature to view Original GreenStar Monitor on an alternate ISO display. <p>NOTE: Original GreenStar Monitor functionality can only be viewed via Original GreenStar display, if equipped.</p>
G—GreenStar 2 System™ Pro applications	GreenStar 2 Pro applications cannot operate on the CommandCenter™. Disable feature to operate GreenStar 2 Pro applications on GreenStar display.
H—Controller Programming	Controller Programming can only be conducted via one display. <ul style="list-style-type: none"> • Enable this feature to program external ISO controllers via CommandCenter. • Disable this feature to program external ISO controllers via an alternate ISO display.

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RXA0104733 — UN—22SEP09

Multiple Display Page 1 (Default Settings)



RXA0104885 — UN—16SEP09

Multiple Display Page 2 (Default Settings)

- A—Tractor Bus Virtual Terminal Check Box
- B—Implement Bus Virtual Terminal Check Box
- C—Task Controller
- D—File Server
- E—Performance Monitor
- F—Original Green Star Monitor
- G—GreenStar 2 Pro Application
- H—Controller Programming
- I—Function Instance
- J—Previous
- K—Next

AUXILIARY CONTROLS

The following message occurs when the system detects an auxiliary control. If necessary, review or change the auxiliary control mappings. Immediately after the message the operator can either decline or accept by using thumb wheel and scrolling to appropriate box. Select appropriate response by pressing the Confirm button. If "Decline" is selected, all auxiliary controls will be disabled. If "Accept" is selected, all auxiliary controls are enabled.

NOTE: If a different control is installed, Auxiliary Control will need to be re-mapped to introduce new control inputs to implement functions. When Auxiliary Controls are detected or have changed, the operator is responsible to ensure:

- All users know which function is mapped to each control.
- Controls are properly labeled.
- Controls provide safe implement operation.
- Return to Auxiliary Control Setup and remap controls.

CAUTION: Auxiliary Control detected
Improper operation can cause unintended implement movement.

To avoid death or serious injury to a bystander, ensure:

- All users know which function is mapped to each control
- Controls are properly labeled
- Controls provide safe implement operation

If "Decline" is selected, all auxiliary controls will be disabled.

ISO compliant auxiliary controls may be used to control ISO compliant implement functions. Display Auxiliary Controls page is used to configure implement functions to available controls. The display does not operate the implement functions, but is used as an interface to map functions to input controls.

A two-switch ISO compliant auxiliary control device is used to control a drawn sprayer equipped with an ISO implement controller. The sprayer has two controlled functions: pump on/off and boom on/off. Using Auxiliary Control feature, each function may be mapped to one of the Auxiliary Control device switches.

Auxiliary Controls Setup

1. Select **Menu** button.
2. Select **Display**.
3. Select **Advanced Settings** softkey .
4. Select **Auxiliary Control** softkey.

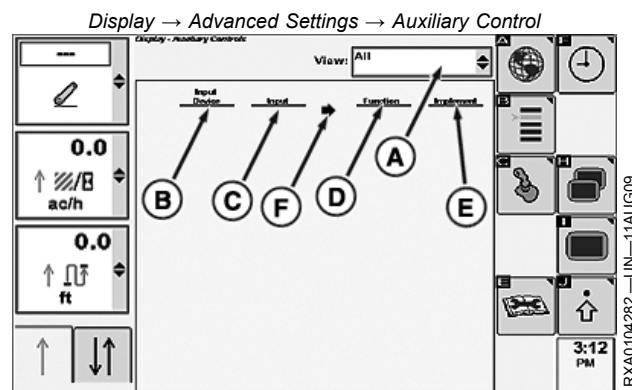
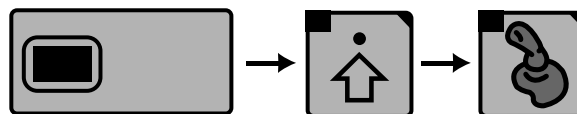
NOTE: Auxiliary Controls page allows the user to match inputs (C) with various implement functions (D). This

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CommandARM™ Menu Button

RXA0103919 —UN—02AUG10



Display Auxiliary Controls Page

A—View Drop Down Box

B—Input Device

C—Input

D—Function

E—Implement

F—Status Indicator

process is called **"Mapping"** an input to a function. Once this **"Mapping"** is completed, a function may be performed by activating the associated input.

The available functions and inputs depend on the ISO compliant implements/controls (E) that are currently connected.

5. Select View drop-down box A.

NOTE: An input device (B) consist of a number of inputs. These inputs may be buttons, switches, or dials.

6. Select input device.
7. Function and Implement will display, along with Auxiliary Control icon, when control is enabled.

To assign an input device's input controls to an implement's functions:

1. Select an implement function.
2. The row that contains the currently selected implement function will be indicated by a cursor colored rectangle.
3. Select the list control under the "Input Device" column in the currently selected row.

Continued on next page

OURX935,000012D -19-04NOV10-1/2

4. Choose an **"Input Device"** by selecting one of the items listed in this control.
5. Another list control will appear in the **"Input"** column (B).
6. Select an item from this list to select the specific input to map to the currently selected implement **"Function"**.

Functions which are in use are grayed out, but can be selected.

IMPORTANT: The input device selection list only shows inputs which are compatible to the implement functions.

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7. A status indicator (F) will appear to indicate if the input device's input (B) control was successfully mapped to the implement **"Function"** or not.

- A green status indicator indicates that the mapping is completed successfully.
- A red status indicator indicates that the mapping was not successful. In this case, check the assignments and change as necessary.

OURX935,000012D -19-04NOV10-2/2

CommandCenter™ Software Version

1. Select **Menu** button.
2. Select **Display**.
3. Select **Diagnostics** softkey.
4. Select **About** softkey.

Installed software version number (A) is found on CommandCenter™ page.

USB connection (B) in the Armrest is intended for dealer use only. It is important that nothing be inserted in this USB connection unless instructed by a John Deere™ dealer.

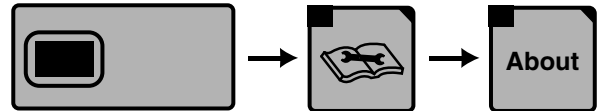
A—Software Version Number B—USB Connection

RXA0098156 —UN—07NOV08

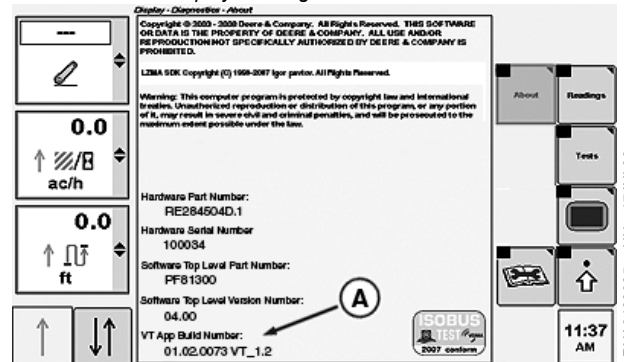


CommandARM™ Menu Button

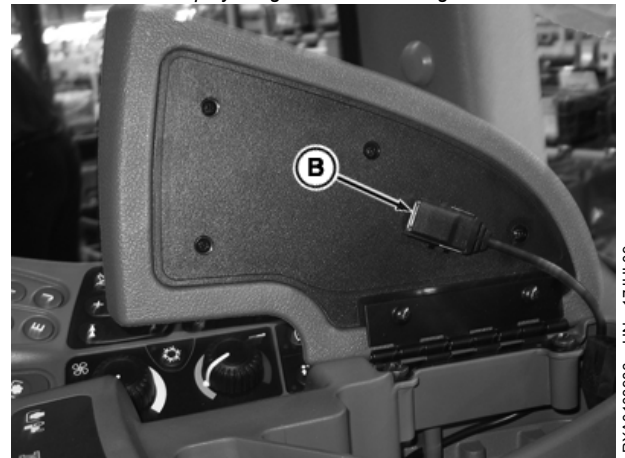
RXA0103983 —UN—20AUG10



Display → Diagnostics → About



Display Diagnostics About Page



CommandARM™ USB Connection

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OURX935,000012E -19-08NOV10-1/1

Calibrating Dual Beam Radar

RXA0098156 —UN—07NOV08

1. Select **Menu** button.
2. Select **Home**.
3. Select **Performance Monitor** softkey.
4. Select **Calibration** Softkey.
5. Place check in Dual Beam Radar check box (A).
6. Select Calibrate (B).

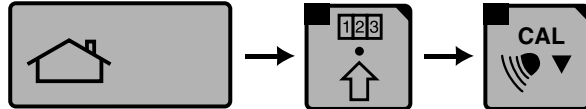
A—Dual Beam Radar Check Box.

B—Calibrate Box

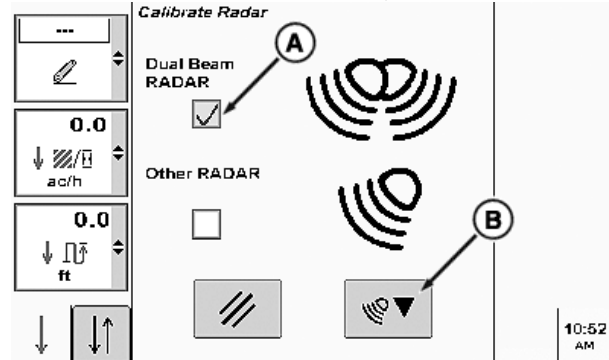


CommandARM™ Menu Button

RXA0103987 —UN—17JUL09



Home → Performance Monitor Settings → Calibrate Radar



Calibrate Radar Page

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OURX935,000012F -19-04NOV10-1/1

Manual Vehicle Speed Calibration

NOTE: The Vehicle Speed Calibration (Manual) procedure is not to be used with John Deere™ Dual Beam Radar.

Automatic vehicle calibration is used with JOHN DEERE Dual Beam radar or GPS signal device. See VEHICLE SPEED CALIBRATION (AUTOMATIC) in this Section.

On tractors equipped with no radar or single beam radar, a change in tire size or loading of tractor can affect wheel and ground speed which requires recalibration.

This procedure will compute tire rolling circumference value and radar proportion constant for the wheel and ground speed displays.

1. On a hard level dry surface, mark out a 400 ft. (122 m.) course. Place easily visible markers at the start and end of the course.
2. Drive tractor up to, but do not cross, course start line.
3. Select **Menu** button.
4. Select **Home**.
5. Select **performance Monitor** softkey.
6. Select **Calibration** softkey.
7. Select "Other RADAR" which will automatically place check in check box (A).
8. Select calibration Box (B) and begin down course.
9. Calibration results will display.

Calibration Results

If Calibration is Successful

Calibration Successful

If Calibration is Unsuccessful

Calibration Unsuccessful

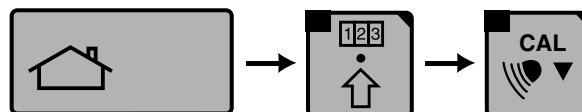
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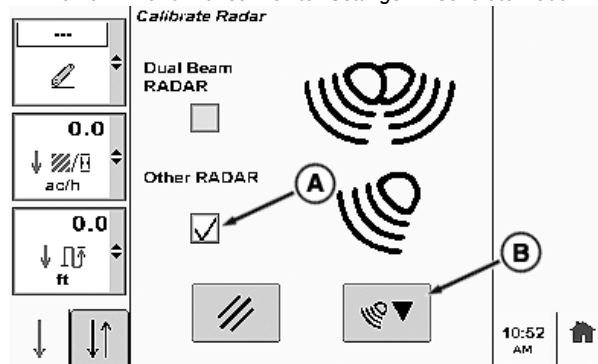


CommandARM™ Menu Button

RXA0103987 —UN—17JUL09



Home → Performance Monitor Settings → Calibrate Radar



Calibrate Radar Page

A—Other Radar Check Box

B—Calibrate Box

10. If failed message is received, perform procedure again.

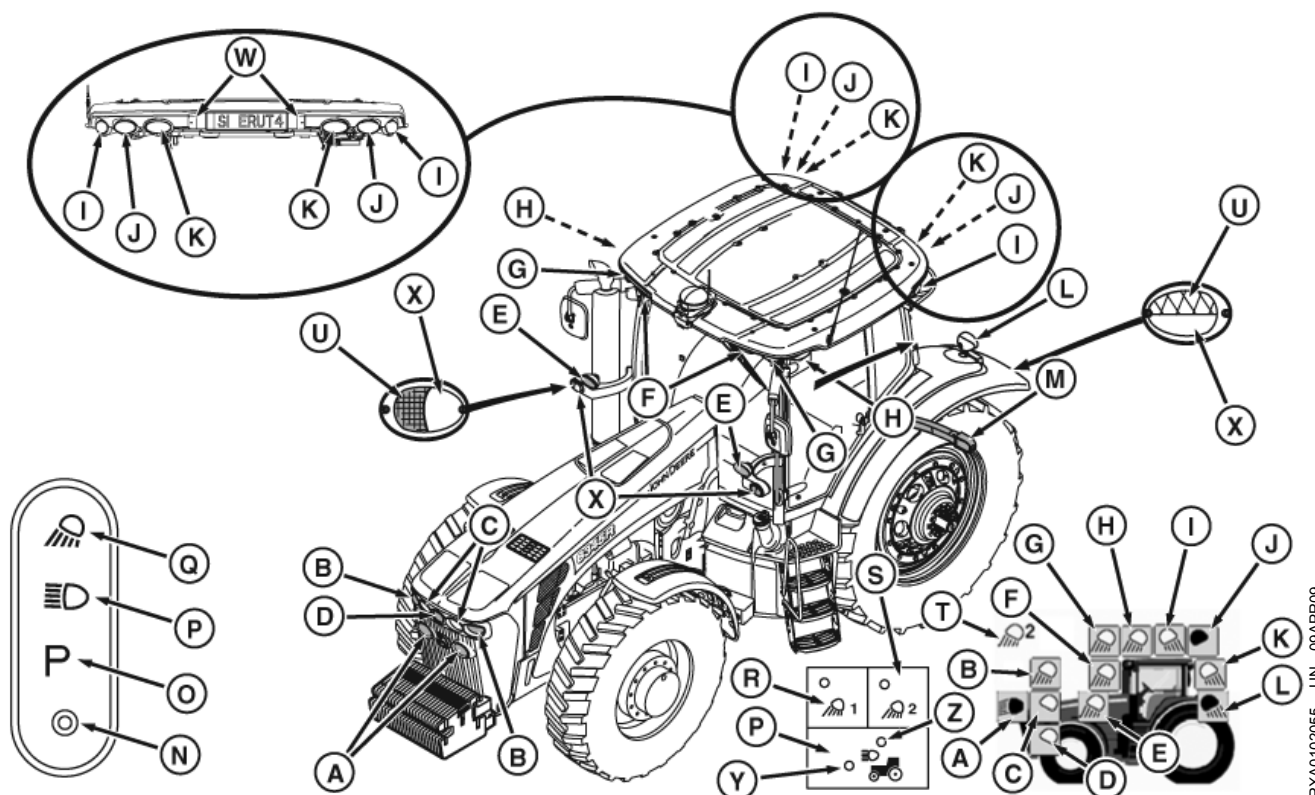
NOTE: If after three attempts vehicle speed calibration is unsuccessful, see your John Deere dealer.

RXA0099616 —UN—23OCT08

OURX935,0000130 -19-04NOV10-1/1

Lights

Road and Field Light Identification and CommandCenter™ Indicators



- A—Head Lights
- B—Front Outer Flood Lights
- C—Front Inner Flood Lights
- D—Spot Light (Optional)
- E—Mid Body Flood
- F—Front Inner Roof
- G—Front Outer Roof
- H—Front Side Roof Flood
- I—Rear Side Roof Flood
- J—Rear outer Roof
- K—Rear Inner Roof
- L—Rear Fender Flood
- M—Extremity Transport Lights
- N—Light, OFF Position

- O—Lights, Park Position
- P—Road Lights
- Q—Field Lights
- R—Field Lights 1
- S—Field Lights 2
- T—Indicator, Field Light Position
- U—Amber Hazard Lights

- V—Clearance Lights
- W—License Plate With Lamp
- X—Front Clear Lens/Rear Red Lens
- Y—Road Lights Indicator
- Z—Loader Lights Indicator

CAUTION: Avoid injury caused by accidental collision with another vehicle. Always comply with traffic regulations when driving tractor on a road. Dim headlights to low-beam for oncoming vehicles. Avoid using Field Lights which could blind or confuse other drivers.

Standard Lighting has four positions (N—Q) and operates regardless of key position.

0 (OFF) Position (N):

Turns all lights off.

NOTE: Refer to Programming Field Lights for lighting set-up information. Programmable lighting display is at the lower right-hand corner of the previous picture. Programmable lights are A through L.

Park Position (O):

Turns on red tail lights.

Road Position (P):

Selected by turning knob on upper right steering column and observed at CommandArm Controls lower right side.

Turns on high/low beam Head Lights (A), tail lights (L), and extremity lights (M).

If tractor is equipped with loader lights, pressing Road Position button (P) allows lights to be toggled between road light indicator (Y) and loader light indicator (Z). If tractor is not equipped with loader lights, only light indicator (T) will be on when hood lights are on.

Field Position (Q) :

Selected by turning knob on upper right steering column and observed at CommandArm Controls lower right side.

Turns on clear-lens lighting (A through L) programmed for either field position 1 (R) or field position 2 (S).

Automatic Battery Protection Feature

To prevent battery discharge if headlights or field lights are left on accidentally after shutting off engine. Electrical system will automatically start the following sequence:

Continued on next page

OURX935,0000CDE -19-17DEC09-1/3

- After 30 minutes have elapsed, lights will turn on and off 5 times
- After 5th time, lights will turn back on and stay lit for about 60 seconds

- After 60 seconds, lights will go off and stay off to prevent complete battery discharge

CommandCenter is a trademark of Deere & Company

OURX935,0000CDE -19-17DEC09-2/3

Using Delayed Egress Lighting (If Equipped)

RXA0099744 —UN—07NOV08

Select **lights**.

Select Egress soft key (C) for egress lighting.

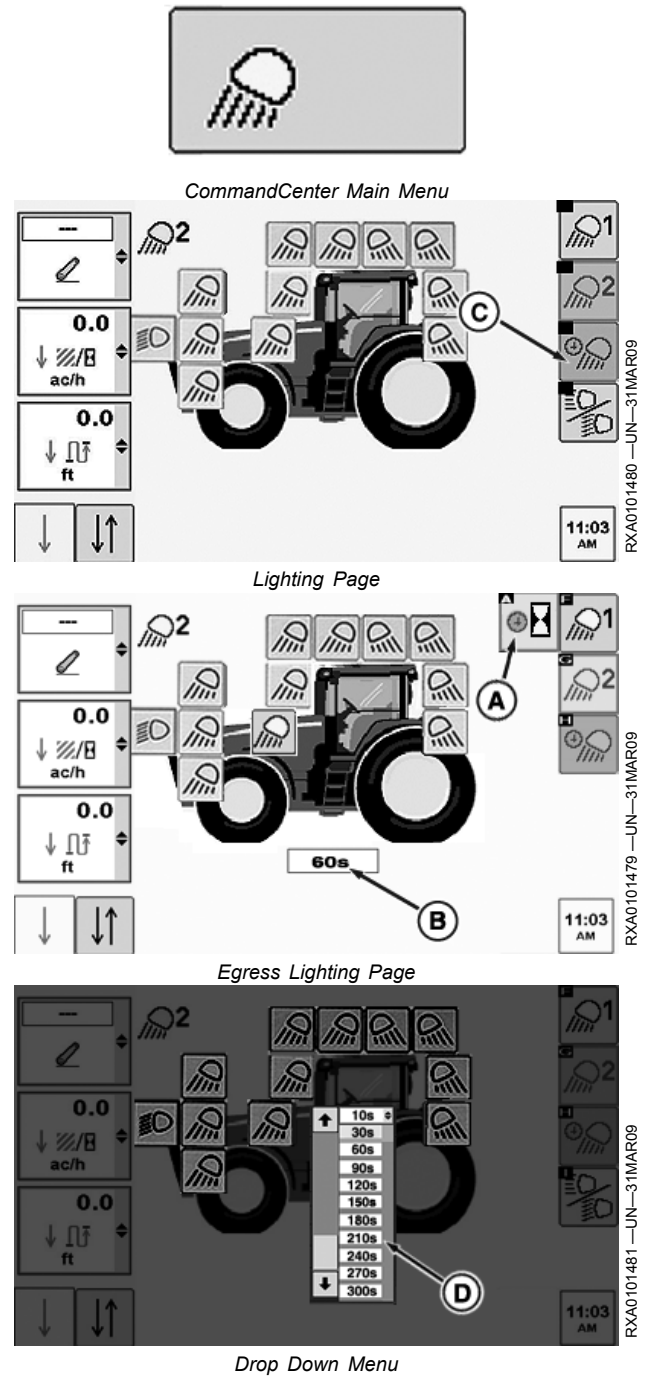
Select Egress Delay soft key (A).

Select Egress Delay drop down box (B). When drop down box appears, make egress delay time selection (D) before lights will automatically turn off. This could be from 10 to 300 seconds in thirty second increments.

Programming Egress lighting is the same as field lighting with all clear-lens lights selectable. Only operator selected clear-lens lights will come ON when egress lighting is selected.

A—Egress Delay Soft Key
B—Egress Delay Drop Down Box

C—Egress Soft Key
D—Egress Delay Time Selection



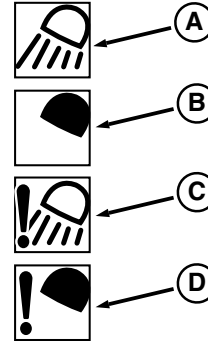
OURX935,0000CDE -19-17DEC09-3/3

Programmable Lighting State

Programmable lighting may appear in 4 states as indicated below;

A—Light Programmed ON
B—Light Programmed Off

C—Light Programmed On,
Faulted
D—Light Programmed Off,
Faulted



RXA0101485 —UN—02APR09

OURX935,000076E -19-12APR09-1/1

Programmable Lights

On steering wheel, turn selector knob (A) to either road lights (D) which control head lights. Field Lights (B) which control cab belt line lights, rear fender lights and cab roof line lights or park lights (C) which control the front clearance and brake lights only.

Operation of all clear-lens lighting Field Lights is programmable using the light switches on the steering wheel and CommandCenter pages. See Road And Field Light Identification With Commandcenter Indicators for further information on lights and display indicators.

Light display shows for 10 seconds whenever light switch is changed to a programmable setting. If no changes are made, display returns to last screen shown. Light indicators change from black-to-white when programmed ON.

OFF Position:

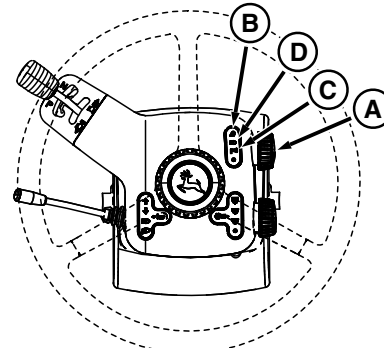
In the OFF position, all clear-lens lighting is programmed OFF (all black indicators). Changes to ON/OFF settings take place immediately.

Field Positions:

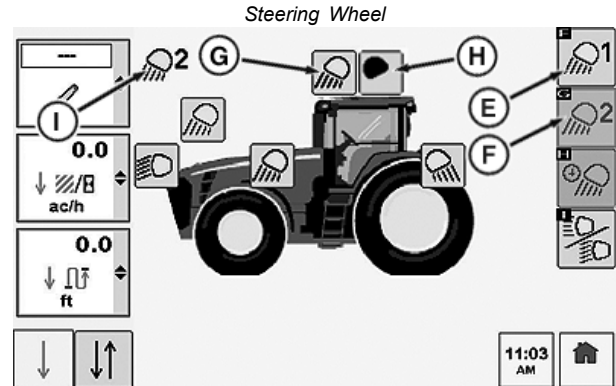
Turn light switch (A) to desired position and observe CommandCenter page. Selecting Field Position 1 soft key (E), controls field position 1 lights. Selecting Field Position 2 soft key (F), controls field position 2 lights. Selecting individual lights toggle lights on (G) or off (H). Indicator (I) informs operator which field position is currently being viewed.

Normally one field light position is programmed to operate only certain lights, such as rear facing field lights. Moving dimmer switch to high beam will give a second option to program lights such as all rear facing lights and side mounted roof lights. The other field position is used to operate all clear-lens lighting and again

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RXA0098075 —UN—18DEC08



CommandCenter™ Lighting Page

A—Selector Knob
B—Field Lights
C—Parking Lights
D—Road Lights
E—Field Position 1 Soft Key

F—Field Position 2 Soft Key
G—Light in ON Position
H—Light OFF Position
I—Field Position Indicator

moving the dimmer switch will allow for a fourth option for programmable lighting.

RXA0100034 —UN—18FEB09

Continued on next page

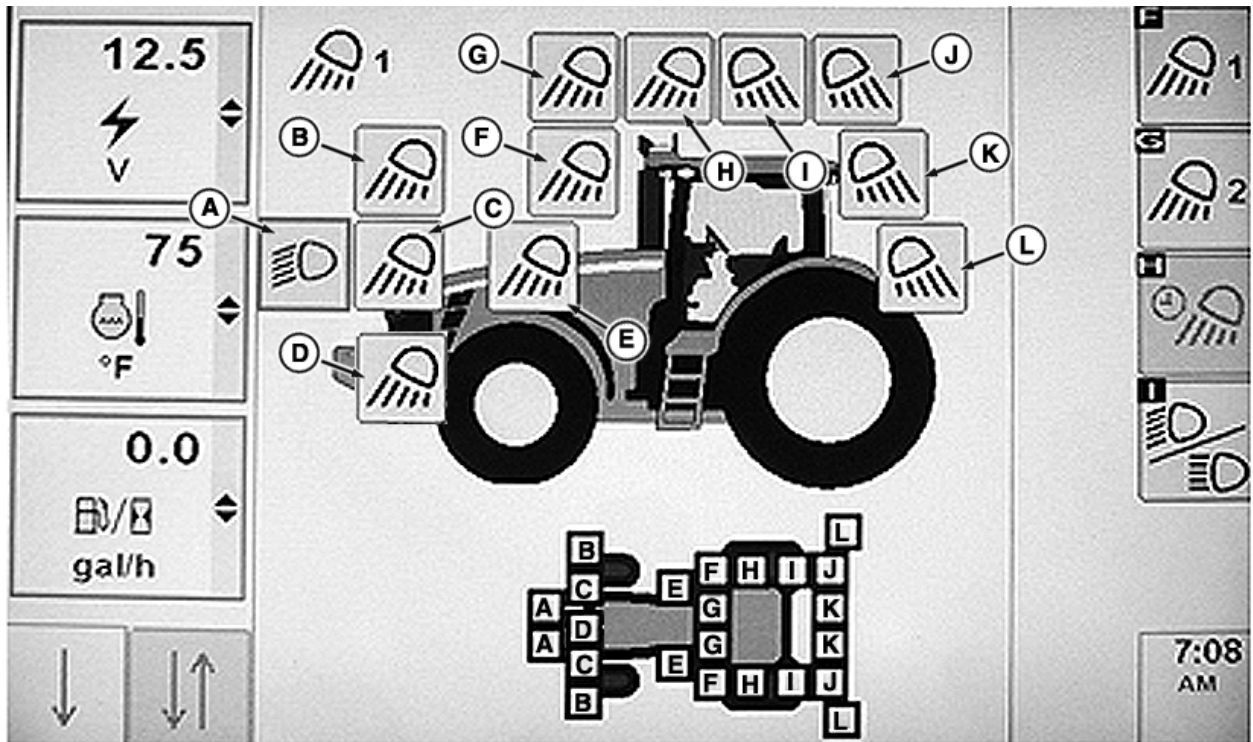
OURX935,0000B4C -19-16SEP09-1/2

While operating in the field, pressing Cab Switch Menu Lights Icon will display a quick view (3 seconds) of what lights are on before defaulting back to previous page displayed on CommandCenter™.

Attached is a diagram to assist in programmable lights placement and identification.



Lighting Quick Look



COMMANDCENTER LIGHTING PAGE

A—Headlights
B—Front Outer Lights
C—Front Inner Lights

D—Center Spot Light (Optional)
E—Mid-Body Flood
F—Front Inner Roof (Optional Flood)

G—Front Outer Roof
H—Front Side Roof
I—Rear Side Roof

J—Rear Outer Roof
K—Rear Inner Roof
L—Rear Fender Flood

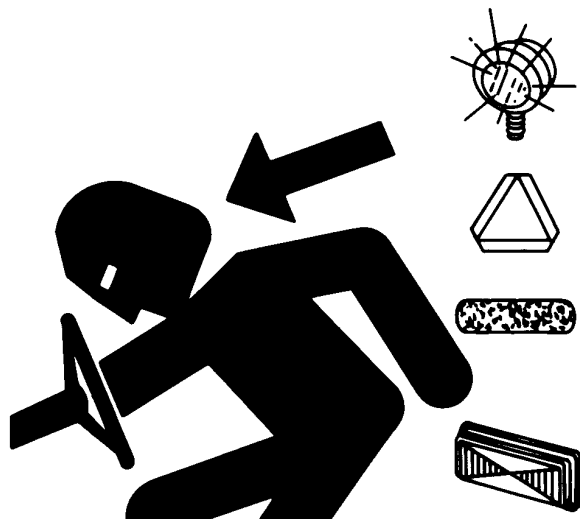
CommandCenter is a trademark of Deere & Company

OURX935,0000B4C -19-16SEP09-2/2

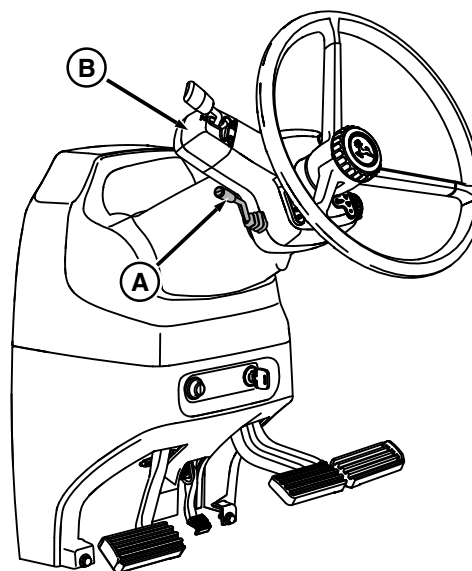
RXA0100801 —UN—25FEB09

RXA0101129 —UN—19MAR09

Operating Turn Signals and High/Low Beam



TS951 —UN—12APR90



RXA0098434 —UN—07JUL08

A—Turn Signal Lever

B—Left Hand Reverser (If Equipped)

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

NOTE: When turn signal is activated, a short audible chirping sound will be heard.

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Turn Signals:

Push Turn Signal Lever (A) up for a right turn, or pull down for a left turn. Return lever to center position after completing turn.

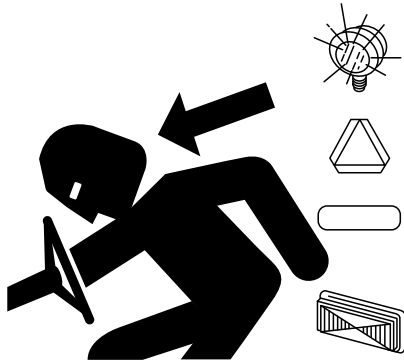
High/Low Beam:

Push lever (A) forward to activate high beam headlights; high beam indicator will come on. Pull lever into center position to operate low beam. Pull lever toward you and release will momentarily activate high beams.

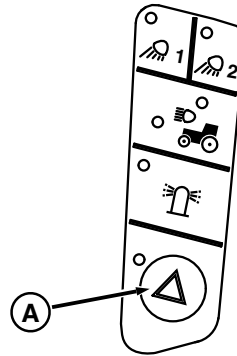
Dim headlights for oncoming vehicles.

OURX935,0000770 -19-16SEP09-1/1

Operating Hazard Lights



RXA0086584 —UN—09FEB06



RXA0086436 —UN—07 JUL08

A—Hazard Button

! CAUTION: To prevent possible personal injury, always operate flashing lights in compliance with all laws and local ordinances.

Press Hazard button (A) to activate flashing amber hazard lights.

OURX935,0000B4B -19-10SEP09-1/1

Operating Rotary Beacon Light (If Equipped)

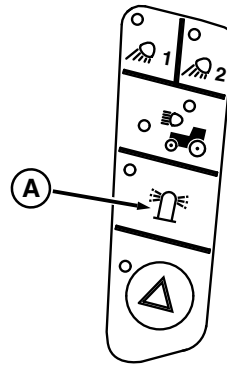
Push Rotary Beacon Switch (A) to activate the Rotary Beacon Light (B).

When Rotary Beacon Light is not being used:

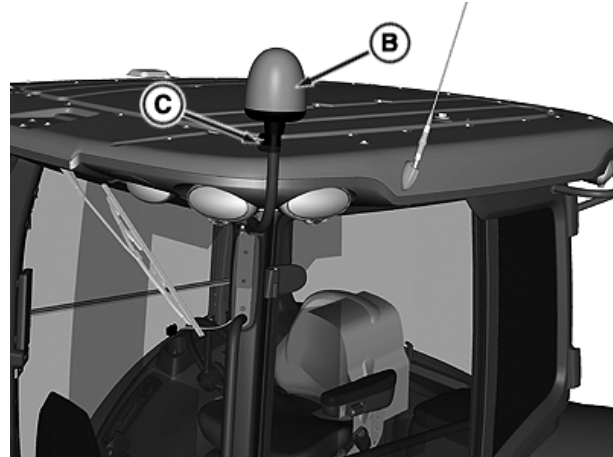
- Loosen nut (C) and remove light assembly.
- Install rubber protective cap (D) on connector.

A—Rotary Beacon Switch
B—Rotary Beacon Light

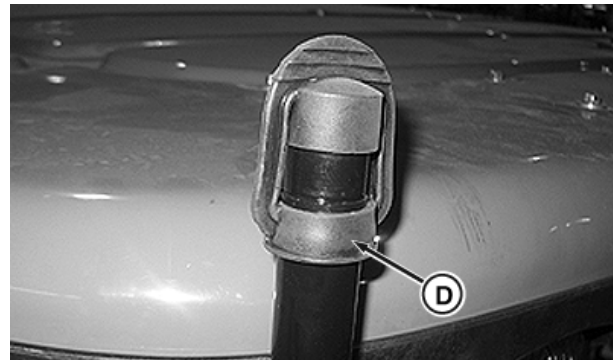
C—Nut
D—Protective Cap



RXA0098435 —UN—07JUL08



RXA0099172 —UN—25SEP08



RXA0100494 —UN—11FEB09

OURX935,0000772 -19-22JUN09-1/1

Using Seven-Terminal Outlet

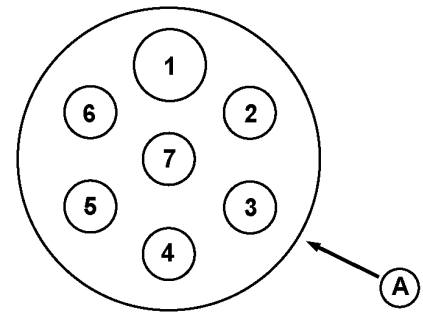
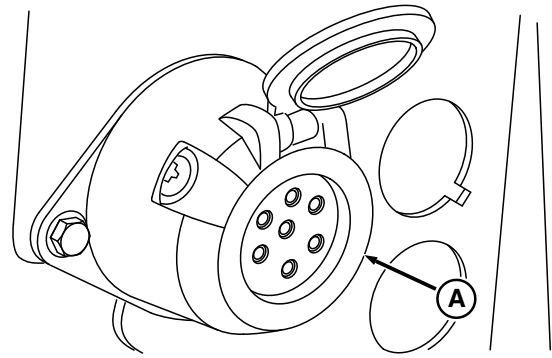
Outlet (A) is used to connect lights, turn signals, and remote electrical equipment on trailers or implements. Always use auxiliary light on towed implement when tractor rear signals and other lights are obscured.

Solid state circuits are rated for a fixed value. If any additional electrical devices need to be added to the tractor, we recommend a power strip or convenience outlets should be used in conjunction with an off/on switch. Splicing into a wire in the wrong location could cause the circuit to overload and shut the circuit down.

If extra implement lights and controls, such as switches are needed, contact your John Deere™ dealer. He can provide information on methods to tie in the light switch with one of the accessory wires located in the 7 pin terminal on the back of the tractor.

NOTE: Matching plug is available through your John Deere dealer.

Terminal	Function
1	Left Turn Light
2	Accessory
3	Ground
4	Right Turn Light
5	Left Tail Light
6	Brake
7	Right Tail Light



A—Seven Terminal Outlet

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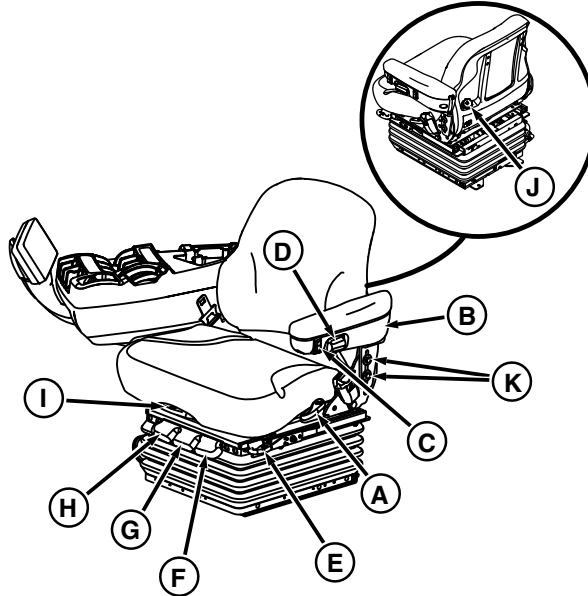
OURX935,0000773 -19-24DEC08-1/1

RXA0068235 —UN—17 JAN06

RW21249A —UN—29 APR99

Operator Station

Adjusting Air Suspension Seat



Seat With Fold-Down Armrest

A—Back Rest Tilt
B—Flip up Armrest
C—Height Adjustment

D—Armrest Tilt Adjustment
E—Fore-Aft Seat Adjustment
F—Fore-Aft Isolation

G—Lateral Isolation
H—Not Used With Air Seat
I—Seat Swivel

J—Lumbar Adjustment Knob
K—Back Rest Height Adjustment

Back Tilt Handle (A) - Allows seat back to tilt.

Flip Up Armrest (B) - Can be flipped up out of the way.

Height Adjustment (C) - Turn key to "ON". Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

Tilt Adjustment Knob (D) - Turn knob to adjust armrest angle.

Fore Aft Adjustment Handle (E) - Allows entire seat assembly to forward or backward.

Fore-Aft Isolation Handle (F) - Push down on handle to allow operator seat to slide forward or backward. Pull up on handle to lock seat in place.

Active Seat is a trademark of Deere & Company

Lateral Isolation Handle (G) - Push down on handle to unlock lateral seat suspension. Pull up on handle to lock seat in position.

Adjustment Damper (H) - Reserved for Active Seat™ Only.

Seat Swivel (I) - Lift up on handle to allow seat to swivel. Push down on handle to lock seat in position.

Lumbar Adjustment Knob (J) - Turn clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

Back Rest Adjustment (K) - Loosen cap screws to slide seat back up or down. Retighten cap screws.

RXA009794 —UN—16DEC08

OURX935,00005B5 -19-10SEP09-1/1

Adjusting Active Seat™ (If Equipped)

NOTE: Before operating tractor, adjust Active Seat to your height and weight. This will allow you to get the most from **ride zone protection**. Active Seat has a built-in buffer at the high and low end of vertical seat travel, resulting in a much smoother ride.

Back Tilt Handle (A) - Allows seat back to tilt.

Flip Up Armrest (B) Can be flipped up out of the way.

Height Adjustment (C) - Turn key to "ON". Press lower portion of switch to lower seat or press upper portion of switch to raise seat.

Tilt Adjustment Knob (D) - Turn knob to adjust armrest angle.

Fore Aft Adjustment Handle (E) - Allows entire seat assembly to forward or backward.

Fore-Aft Isolation Handle (F) - Push down on handle to allow operator seat to slide forward or backward. Pull up on handle to lock seat in place.

Lateral Isolation Handle (G) Push down on handle to unlock lateral seat suspension. Pull up on handle to lock seat in position.

Adjustment Damper (H) - Handle adjusts suspension shock. Moving lever to farthest down position provides the firmest ride; farthest up position provides softest ride.

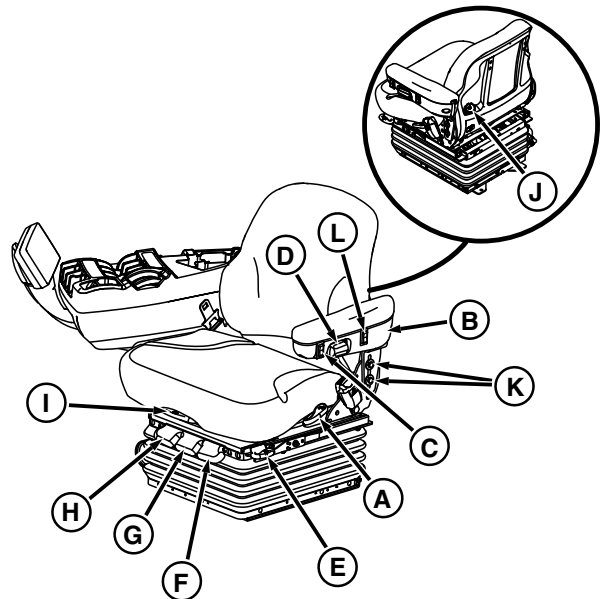
Seat Swivel (I) - Lift up on handle to allow seat to swivel. Push down on handle to lock seat in position.

Lumbar Adjustment Knob (J) - Turn clockwise to add support to lower back. Turn counterclockwise to lessen resistance to lower back.

Back Rest Adjustment (K) - Loosen cap screws to slide seat back up or down. Retighten cap screws.

Firmness Adjustment (L) - provides two different levels of seat suspension performance. Press upper portion "+"

Active Seat is a trademark of Deere & Company



- | | |
|----------------------------|-------------------------------|
| A—Back Rest Tilt | G—Lateral Isolation |
| B—Flip up Armrest | H—Not Used With Air Seat |
| C—Height Adjustment | I—Seat Swivel |
| D—Armrest Tilt Adjustment | J—Lumbar Adjustment Knob |
| E—Fore-Aft Seat Adjustment | K—Back Rest Height Adjustment |
| F—Fore-Aft Isolation | L—Firmness Adjustment |

of switch for the firmest ride or lower portion "—" for the softest ride.

Ride Zone Protection - The seat is ride zone protected. The seat will automatically adjust back into the protected zone when operator adjusts the seat height position at or near the vertical seat travel limits.

RXA0098795 —UN—16DEC08

OURX935,00005B6 -19-11APR09-1/1

Using Instructional Seat

CAUTION: This instructional seat has been provided only for training operators or diagnosing machine problems. Keep all other riders off the tractor and equipment. Always wear seat belts (A).

Instructional seat back tilts forward to be used as a writing surface (B). Flip up seat (C) tilts up allowing easier entrance and egress.

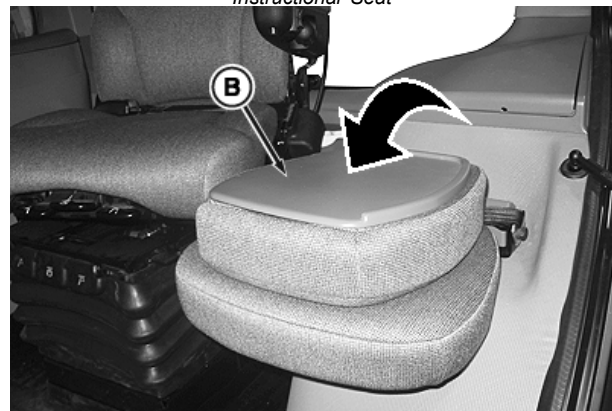
A—Seat Belt
B—Writing Surface

C—Flip Up Seat



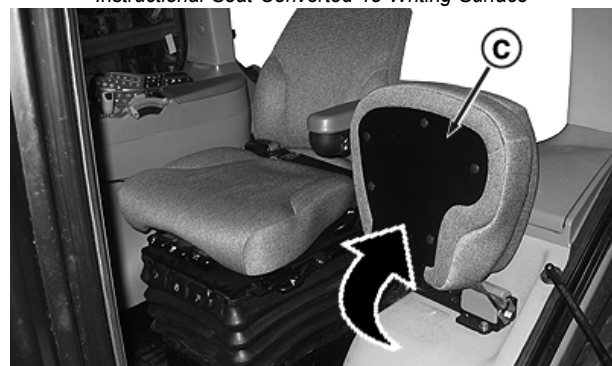
RXA0099739 —UN—07NOV08

Instructional Seat



RXA0099788 —UN—19NOV08

Instructional Seat Converted To Writing Surface



RXA0099980 —UN—12DEC08

Instructional Seat Folded Up For Easier Egress

OURX935,00005C1 -19-26FEB09-1/1

Heated Leather Seat (If Equipped)

NOTE: Heater will automatically turn off after 1 hour of use and can be turned on again manually, as needed.

The heated leather seat provides three heat settings for increased comfort during cold days. Heat intensity is controlled by a momentary switch (A) located in the left armrest. The four settings are: HIGH, MEDIUM, LOW, and OFF. When tractor is shut off, seat heater also turns off or after one hour of use switch will automatically turn off. To start or restart seat heater:

- Press switch one time for HIGH (Red LED ON).
- Press switch two times for MEDIUM (Amber LED ON).
- Press switch three times for LOW (Yellow LED ON).
- Press switch four times for OFF (LED OFF).

LED Diagnostics Blink Pattern

- LED On longer than Off—Heating wire failure.
- LED Off longer than On—Temperature sensor failure.

Clean seat with mild soap and warm water. Use automotive leather conditioner for conditioning. Conditioning should be done every 6 months if tractor is stored outside. If stored inside conditioning interval can be extended to 12 months.



Heated Leather Seat

RXA0077640 —UN—28SEP04



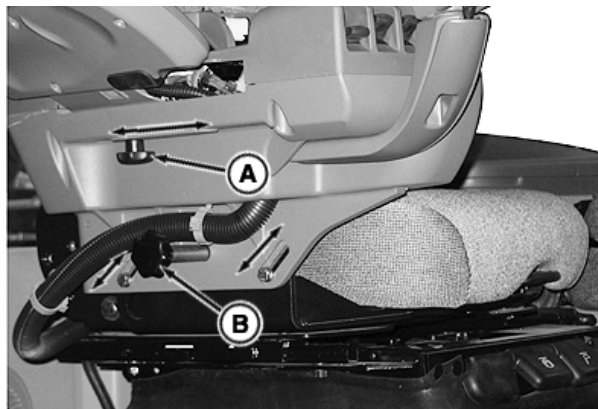
LED momentary switch

RXA0077642 —UN—28SEP04

A—Heated Seat Switch

OURX935,0000860 -19-04MAR09-1/1

Adjusting CommandARM™ Position



Right-Hand Side Shown

A—Fore/Aft Knob

B—Raise/Lower Knob

1. Loosen Fore/Aft Knob (A) and slide forward or rearward to desired position.
2. Loosen CommandARM Raise/Lower Knob (B) to desired height position.
3. Hand tighten knobs after making desired adjustment.

CommandARM is a trademark of Deere & Company

OURX935,0000B3C -19-02SEP09-1/1

RXA0100925 —UN—06MAR09

Operating Cab Heat, Defrost and Air Conditioning—Standard Equipment

Push Air Conditioning Switch (A) ON for cab cooling or defrosting. Leave switch OFF for heat.

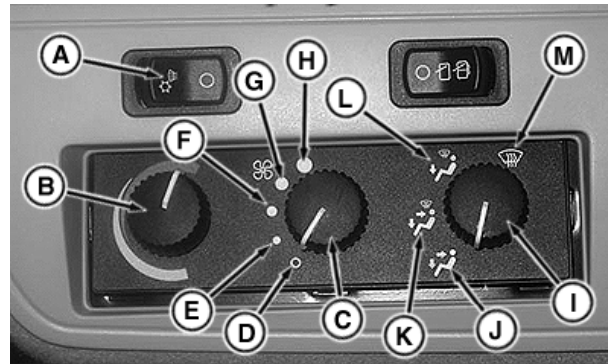
Turn Temperature Control Knob (B) to red zone for heating or blue zone for cooling.

IMPORTANT: If system is not cooling properly, turn air conditioning switch off to avoid possible compressor damage.

NOTE: Purge position is used for rapid cab cool down.

Turn fan speed control knob (C) to desired setting (D—H).

Turn air flow direction knob (I) for desired outlet (J—M).



Air Conditioning Controls

- | | |
|----------------------------|----------------------------|
| A—Air Conditioning Switch | H—Purge |
| B—Temperature Control Knob | I— Air Flow Direction Knob |
| C—Fan Control Knob | J— Cab And Floor |
| D—OFF | K—Defrost, Floor And Cab |
| E—Low Speed | L—Defrost And Floor |
| F—Medium Speed | M—Defrost |
| G—High Speed | |

OURX935,0000861 -19-25FEB09-1/1

RXA0100317 —UN—25FEB09

Operating Automatic Temperature Control (ClimaTrak™ ATC)

RXA0099741 —UN—07NOV08

CLIMATRAK is controlled through the CommandARM™ Controls and settings displayed on the CommandCenter™. Changes made through CommandArm Controls results in CommandCenter displaying HVAC page.

Rotate fan control knob (A) adjusts fan speed. Fan indicator arrow (B) moves in relation to fan speed.

Turn temperature control knob (C) to red zone for heating or blue zone for cooling. Temperature display (E) indicates current cab temperature. Ambient temperature (M) is displayed at CommandCenter right side.

The bottom portion of display (F) indicates which of several modes the heating and cooling unit is currently operating in. Pressing buttons (G through L) changes the display and operating mode. Selecting defrost or air flow options will automatically enable compressor. Listed below is each of those modes.

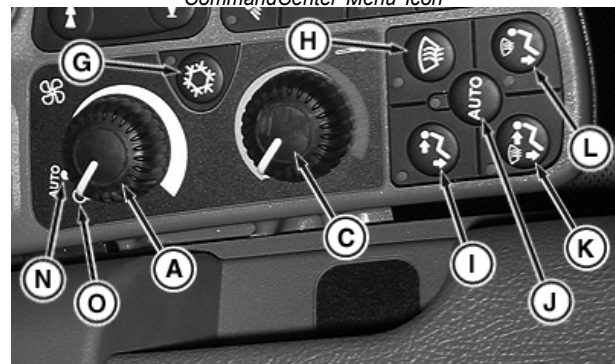
- **Air Conditioner Control Button (G)** turns air conditioner on and off.
- **Defrost (H)** turns on defroster and directs air flow to windshield.
- **Cab and Floor (I)** directs air flow at operator chest and feet simultaneously.
- **Auto (J)** automatically adjust direction of air flow.
- **Defrost and Cab (K)** directs cab air temperature to operator and windshield simultaneously.
- **Defrost and Floor (L)** directs cab air temperature to footwell and windshield simultaneously.

- | | |
|----------------------------------|--------------------------|
| A—Fan Control Knob | I— Cab And Floor |
| B—Fan Setting Indicator Arrow | J— Auto |
| C—Temperature Setting Knob | K—Defrost, Floor And Cab |
| D—Temperature Indicator Arrow | L— Defrost And Floor |
| E—Set Point Temperature Display | M—Ambient Temperature |
| F—HVAC Mode | N—Auto |
| G—Air Conditioner Control Button | O—OFF |
| H—Defrost | |

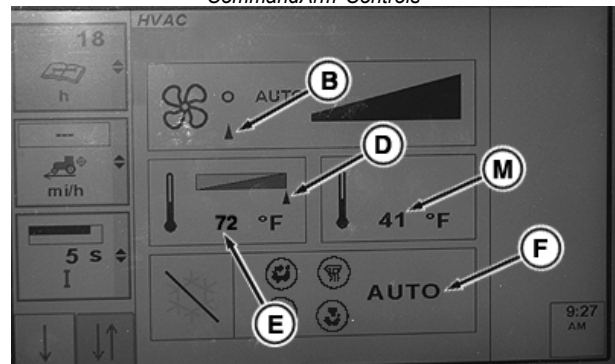
ClimaTrak is a trademark of Deere & Company
 CommandARM is a trademark of Deere & Company
 CommandCenter is a trademark of Deere & Company



CommandCenter Menu Icon



CommandArm Controls



CommandCenter HVAC Page

OURX935,00000BE -19-16SEP09-1/1

Adjusting Steering Wheel and Column

Telescope: Rotate knob (A) counterclockwise to extend or retract steering column. Rotate knob clockwise to lock.

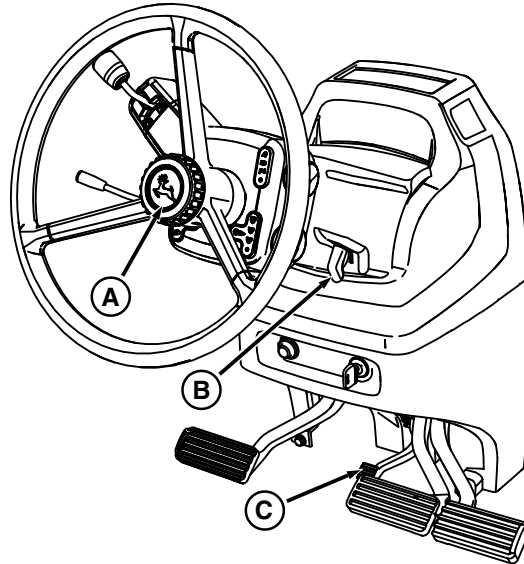
Tilt: Pull up on lever (B) and move steering column to desired position. Release lever to lock.

Memory: Push down on foot pedal (C) to permit steering column to move up and out of the way for easy entry or exit.

Push down on foot pedal and pull down on steering wheel to return steering column to previous setting.

A—Knob
B—Lever

C—Foot Pedal



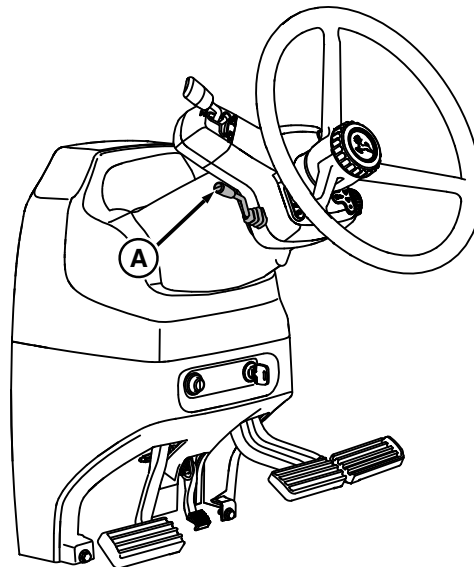
RXA0098499 —UN—07 JUL08

OURX935,0000545 -19-25FEB09-1/1

Operating Horn

Push button on the end of signal arm (A) to activate horn.

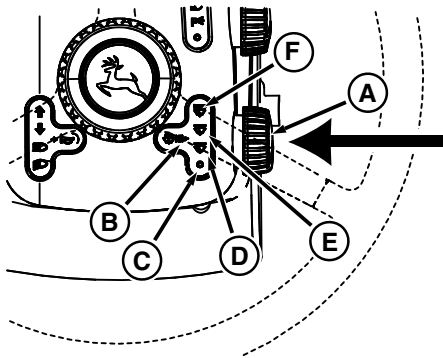
A—Signal Arm And Horn



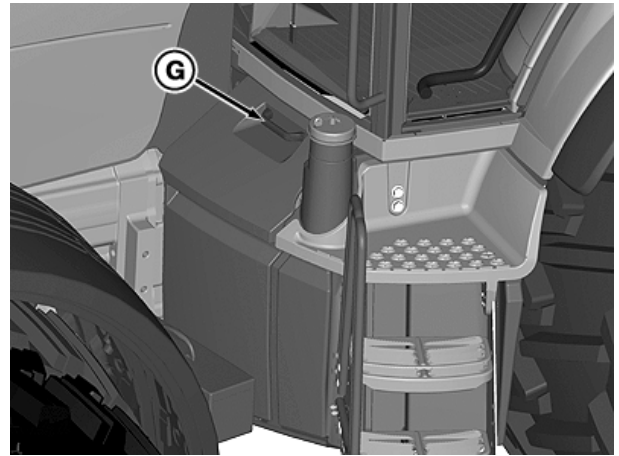
RXA0098438 —UN—26 JAN09

OURX935,00002A7 -19-27JAN09-1/1

Operating Front Windshield Wiper and Washer



RXA0098437 —UN—22DEC08



RXA0100829 —UN—06MAR09

A—Windshield Wiper/Washer Knob
B—Washer Icon
C—Off
D—Intermittent Speed
E—Slow Speed
F—Fast Speed

G—Battery Box Cover

Wiper/washer knob (A) has four positions:

- OFF
- Intermittent Operation
- Slow Speed
- Fast Speed

Push knob in to operate front windshield washer.

Fill reservoir with non-freezing windshield washer fluid. Reservoir is behind battery box cover (G).

OURX935.0000121 -19-11MAR09-1/1

Operating Rear Window Wiper and Washer (If Equipped)

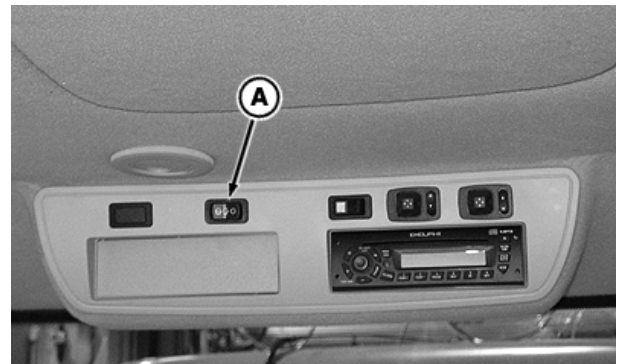
Switch (A) has three positions:

Right — OFF position.

Left — ON position. Rear window wiper is activated.

Far Left — Rear window washer ON when switch is held. Release switch to turn OFF rear window washer.

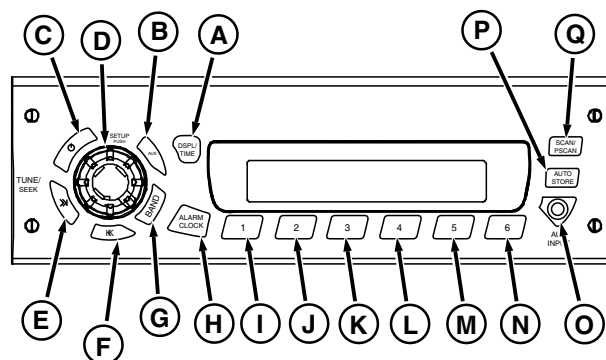
A—Rear Window Wiper/Washer Switch



RXA0098445 —UN—07JUL08

OURX935.0000122 -19-03SEP09-1/1

Operating Deluxe Radio



Radio

A—DISPLAY/TIME
B—AUX
C—Power
D—SETUP
E—Tune/Seek (+)

F—Tune/Seek (-)
G—BAND
H—ALARM CLOCK
I—Preset Station 1
J—Preset Station 2

K—Preset Station 3
L—Preset Station 4
M—Preset Station 5
N—Preset Station 6
O—AUX INPUT Port

P—AUTO STORE
Q—SCAN/PSCAN

Radio can be operated in any one of three modes:

1. Radio ON with tractor running.
2. Radio ON with tractor not running, but tractor key switch ON.
3. With tractor ignition OFF press radio Power Button, radio will play up to one hour, then shut off automatically.

Radio display can be changed to either time or station frequency

1. Press and hold DISP/TIME button (A) for 3 seconds.
2. Observe slow flash on display.
3. Press preset station (any of buttons 1 through 6 (I through N)).
4. Wait three to five seconds, press DISP/TIME button to toggle between time or station frequency.

Operating Radio

Press On/Off (C) to turn radio on or off.

Press BAND (G) to switch between AM, FM1, FM2, or FM3 bands.

Press AUX (B) to play external device connected via auxiliary input port (O) to radio front panel.

Press SETUP (D) repeatedly to adjust bass, treble, fade, seek sensitivity, dim, balance and speakers. Rotate SET UP knob for adjustment. Adjust brightness of display by pressing SETUP until "DIM" appears on display. Rotate SET UP knob to adjust.

Press TUNE/SEEK (E or F) buttons quickly to "tune" or search for the next higher or lower frequency and radio will

stop on that frequency even if no station exists. Holding Tune/Seek buttons longer than half a second initiates seek function. Seek function stops at next higher/lower frequency with a strong radio signal.

Press ALARM CLOCK (H) to enter alarm set mode, see Setting Deluxe radio Alarm and Clock in this section.

Plug external audio devices into AUX INPUT (O).

Pressing SCAN/PSCAN (Q) buttons to scan all stations on band you are using. When a strong frequency is found, radio will play for 8 seconds before continuing scanning. Display will show PSCN, frequency, preset number, and current band. Preset scan will continue until you press SCAN/PSCAN button again.

Storing Preset Stations (I through N)

1. Select FM1, FM2, FM3, or AM.
2. Tune to desired station.
3. Press and hold one of the six preset buttons (I through N) to store selected station.
4. Repeat procedure for remaining preset buttons.

Press AUTO STORE (P) until "AUTO" and the "AS" icon appear to automatically store six strongest stations of a selected band. Press AUTO again to restore original presets.

Playing Preset Stations

Press appropriate button 1-6.

RXA0100009 —UN—16DEC08

OURX935,0000AE5 -19-04SEP09-1/1

Setting Clock and Alarm—Deluxe Radio

NOTE: If no adjustments are made for 5 seconds during alarm set process, alarm clock setup will be cancelled and radio will return to normal operation, keeping whatever setting changes have been made.

Setting Clock

1. Switch ignition to ON position.
2. Press and hold DSPL/TM SET (C) button until "hours" and "minutes" digits flash and you hear a beep.
3. Press DSPL/TM SET button again until "hours" digits flash.
4. Rotate SETUP (B) knob to change the hour. Rotate knob clockwise to increase and counterclockwise to decrease the hour.
5. Press DSPL/TM SET button again until "minutes" digits flash.
6. Rotate SETUP knob to change minutes. Rotate knob clockwise to increase and counterclockwise to decrease minutes.
7. Press DSPL/TM SET button again to complete time set procedure. Display will return to default display.

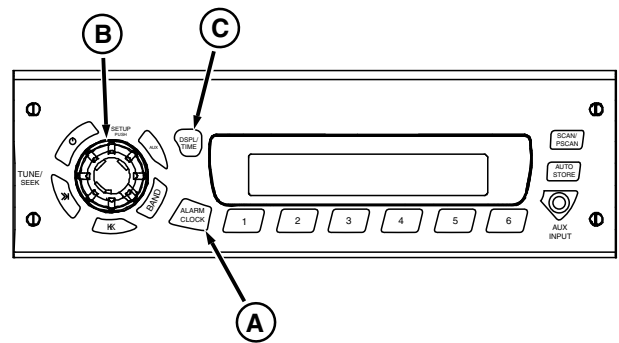
Change display clock function to 12 or 24 hour mode

The 12 hour mode distinguishes between AM and PM and 24 hour mode operates as military time.

1. To change mode press and hold the "DSPL/TM SET" button until clock display digits begin to flash (approximately 2 seconds).
2. To change from 12 to 24 hour time format, press and release the number "5" preset station button. If pressed a second time, it will toggle back from 24 to 12 hour mode.
3. Wait 5 seconds without pushing any radio buttons for clock to return to regular operation.

Setting The Alarm

1. With radio on, press and hold ALARM CLOCK (A) button until "ALARM" icon and SET are displayed. Hour digits for alarm time will begin to flash.



Radio

A—ALARM CLOCK
B—SETUP

C—DSP/TM SET

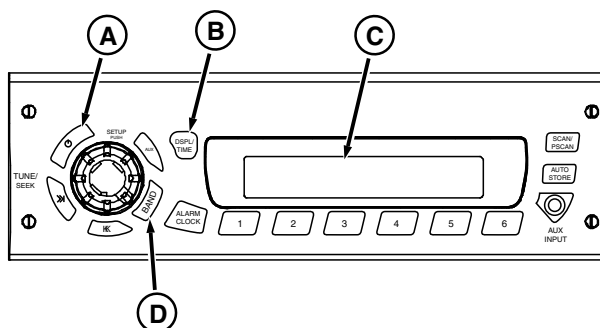
2. Rotate SETUP (B) knob to change the hour. Rotate knob clockwise to increase and counterclockwise to decrease hour.
3. Press ALARM CLOCK button again until minutes digits flash.
4. Rotate SETUP knob to change minutes. Rotate knob clockwise to increase and counterclockwise to decrease minutes.
5. Press ALARM CLOCK again until SET TONE appears on display.
6. Press ALARM button again until VOL appears on display. Press button again and you will hear alarm tone. Rotate SETUP knob clockwise to increase and counterclockwise to decrease volume.
7. Press ALARM CLOCK button again to finish and return display to normal operation. Alarm icon will appear on display to indicate that alarm is active.

RXA0098831 —UN—05AUG08

OURX935,0000AE6 -19-02SEP09-1/1

Changing World Tuner Settings—Deluxe Radio

1. Turn tractor key switch on and push radio Power button (A) to turn radio off.
2. Push and hold DISP/Time Button (B) for 2 or 3 seconds until time on radio display (C) flashes.
3. Promptly push BAND Button (D) to display regions for frequency selection.
4. Each time BAND Button is pushed, radio display cycles to next region.
5. When desired region is displayed for correct frequency band, press and hold BAND Button until display changes and the time is displayed, then release BAND Button.



Deluxe Radio

A—Power Button
B—DISP/TIME Button

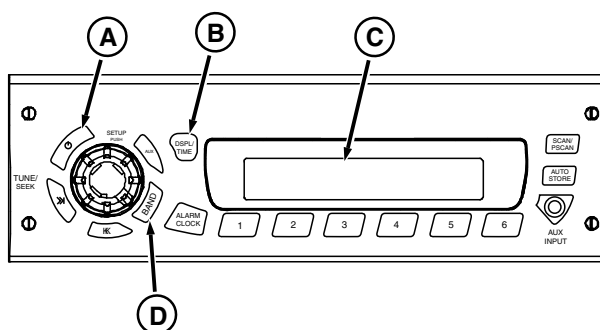
C—Display
D—Band Button

OURX935,0000AE7 -19-04SEP09-1/1

RXA0100930—UN—06MAR09

Changing World Tuner Settings—Deluxe Radio

1. Turn tractor key switch on and push radio Power button (A) to turn radio off.
2. Push and hold DISP/Time Button (B) for 2 or 3 seconds until time on radio display (C) flashes.
3. Promptly push BAND Button (D) to display regions for frequency selection.
4. Each time BAND Button is pushed, radio display cycles to next region.
5. When desired region is displayed for correct frequency band, press and hold BAND Button until display changes and the time is displayed, then release BAND Button.



Deluxe Radio

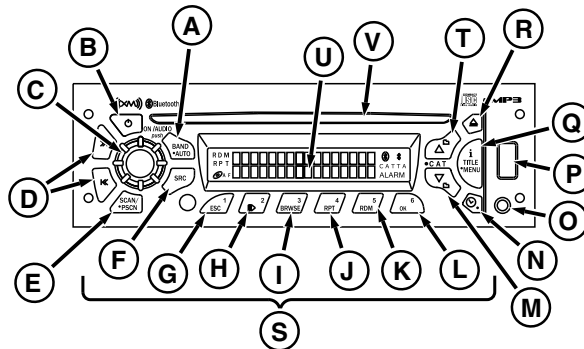
A—Power Button
B—DISP/TIME Button

C—Display
D—Band Button

OURX935,0000AE7 -19-04SEP09-1/1

RXA0100930—UN—06MAR09

Operating Premium Radio with Compact Disc (CD) Player



Radio

A—Band/Auto Button
B—Power
C—Audio Knob
D—Seek Buttons
E—SCAN/PSCAN
F—SRC

G—ESC
H—Pause/Play CD
I—Browse
J—RPT
K—RDM
L—OK

M—Down Button
N—Clock/Alarm
O—Auxiliary Input
P—USB Port
Q—iTitle Menu
R—Eject

S—Programmable Stations 1—6
T—Up Button
U—Display
V—CD Slot

General Radio Functions

Premium radio is equipped with:

- An AM band with 6 AM presets
- Two FM bands with a total of 12 FM presets
- Three satellite bands with a total of 18 satellite presets
- One weather band with 6 WX presets

Radio can be operated in any one of three modes;

1. Radio ON with tractor running.
2. Radio ON with tractor not running, but tractor ignition ON.
3. With tractor ignition OFF press radio Power Button, radio will play up to one hour, then shut off automatically.

Adjusting the Volume

To increase volume, rotate Audio knob (C) clockwise. To decrease volume, rotate knob counterclockwise.

One-Hour Timer With ignition off, press Power button (B) or AUDIO knob (C) to activate radio's one-hour timer. Radio turns off after one hour. Press Power button or ON/AUDIO knob again reactivates one-hour timer.

Display

Radio displays time when off.

BAND/AUTO: Press BAND/AUTO Button (A) to switch between FM1, FM2, AM, SAT1, SAT2, SAT3 and WX.

SEEK: Press Seek (D) (>> or <<) To switch radio to next higher/lower frequency.

Audio mutes during Seek UP/DOWN process. Select either >> or << button while radio searches for signal. Tuner stops at frequency tuned. Seek mode ends when tunable station is found or Seek is canceled. Radio returns to original station if Seek is cancelled. If no station is found, Seek continues searching until canceled.

To cancel Seek:

- Switch modes
- Change bands
- Press SCAN/PSCAN button
- Press any preset button
- Press and hold BAND/AUTO button
- Turn off power

NOTE: Quickly pressing Seek button causes radio to "tune" or search for the next higher or lower frequency and radio will stop on that frequency even if no station is there. Holding Seek Button longer than half a second initiates the "seek" function. The "seek" function stops at the next higher/lower frequency with a strong radio signal and will stop at that station. For example, changing from 107.1 to 107.3 by selecting the Up button (T) or changing from 107.3 to 107.1 by selecting the Down button (M).

AUTO STORE:

Auto Store temporarily stores the 6 strongest stations on push buttons 1-6 (S). Press and hold BAND/AUTO button for more than 2 seconds then an audible beep is heard and AUTOSTORE appears on display. Press and hold BAND/AUTO button again cancels AUTO STORE after original presets are restored. AS is displayed while AUTO STORE is active. Pressing BAND/AUTO Button while listening in one radio mode will not effect presets in any other mode.

SCAN/PSCAN

Press SCAN/PSCAN button (E) to scan all stations on the current band. When a strong frequency is found, radio plays for 8 seconds before continuing to scan. To end scan, press SCAN/PSCAN again. Radio beeps, then displays SCAN plus the frequency currently tuned.

Continued on next page

OURX935,0000CD1 -19-16NOV09-1/3

RXA0100031 — UN—06MAY09

Press SCAN/PSCAN Button and hold for more than 2 seconds to scan current band preset stations. Radio plays selected station for 8 seconds and then continues scanning. PSCN appears on display along with frequency, preset number, and current band. Preset scan continues until SCAN/PSCAN is pressed again.

Storing Preset Stations

- Turn radio ON
- Select band

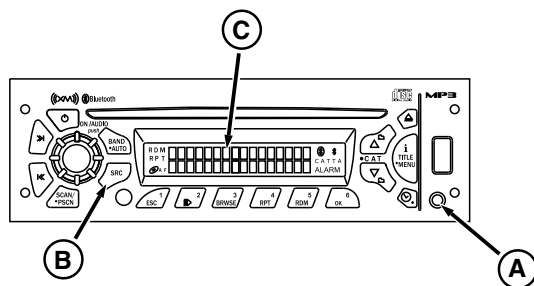
- Tune desired station.
- Press and hold desired preset buttons for more than 2 seconds (radio is muted)
- When station is set, an audible beep is heard.
- Repeat process for each of the remaining 6 preset station buttons

Playing Preset Stations

Press appropriate button 1-6 (G through L).

OURX935,0000CD1 -19-16NOV09-2/3

Auxiliary Mode—Premium Radio



Radio

A—Auxiliary Input

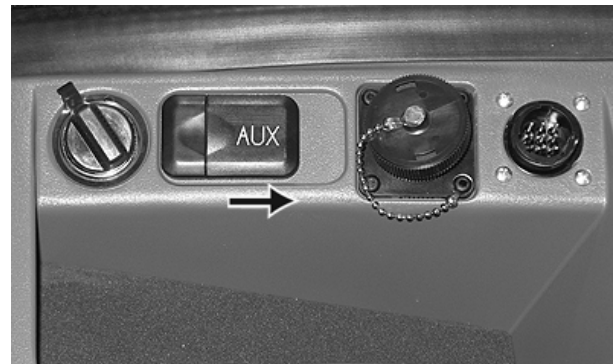
B—SRC Button

C—Display

Front Auxiliary Mode

In Front Aux Mode, play external audio devices connected via auxiliary input port (A). Front auxiliary mode is not an option until device is connected to auxiliary input port.

Rear Auxiliary Mode



Rear Aux Mode Input

NOTE: Rear auxiliary input port is located on the right console. Slide cover rearward to access port.

To use audio device connected via rear auxiliary input port, press SRC (B) button until radio display (C) shows "REAR AUX" and turn device on.

OURX935,0000CD1 -19-16NOV09-3/3

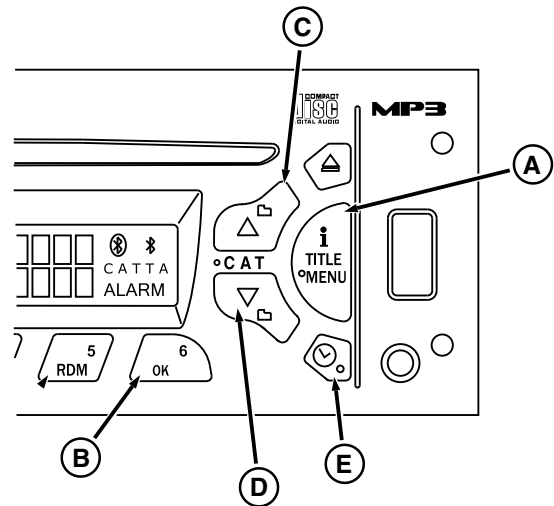
Setting Clock—Premium Radio

Clock function in 12-hour mode distinguishing between AM and PM or 24-hour mode displays military time. Clock is displayed when tractor key switch is on and radio is off. With radio and ignition off, display is blank.

Setting the Clock

1. Turn tractor key switch on.
2. Press and hold "i Title/Menu" button (A) for more than 2 seconds until Menu is displayed.
3. Press OK button (B) to enter clock submenu.
4. Turn AUDIO knob or press up button (C) or Down button (D) to change to SET TIME. Press OK button to enter set mode.
5. Turn AUDIO knob or press up/down buttons to change between 12-hour or 24-hour format. Press OK button to select one.
6. Display changes to clock configuration, causing hour digits to flash. Rotate AUDIO knob or press up/down buttons to change hour. Rotating knob clockwise while pressing up button will increase hour, rotating counterclockwise while pressing down button will decrease hour.

NOTE: At any point in the time set process not pressing a button or rotating knob within 8 seconds will cancel time set mode, return radio to normal operation and keep whatever setting changes that have been made. Pressing Power button or band buttons sets clock at whatever time selected.



Setting The Clock

A—iTitle/Menu Button
B—OK Button
C—UP Button

D—Down Button
E—Clock Alarm Button

7. Press OK button. Minute digits begin flashing. Rotate knob clockwise while pressing up button will increase minutes, rotate counterclockwise while pressing down button will decrease minutes.

OURX935,0000AEC -19-04SEP09-1/1

RXA0100807 —UN—06MAR09

Setting the Alarm—Premium Radio

Setting the Alarm

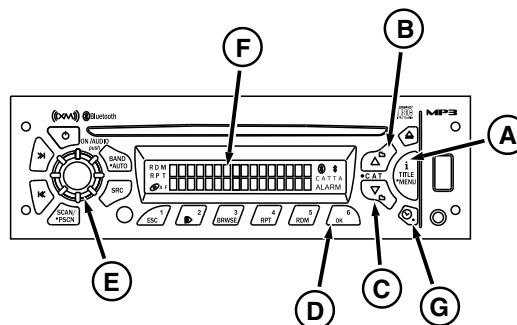
1. With radio on, press and hold “i Title/Menu” button (A) for more than 2 seconds until Menu displays.
2. Rotate AUDIO knob (E) or press Up button (B) or Down button (C) to change to SET ALARM. Press OK button (D) to enter alarm submenu.
3. Press OK button to turn on or off alarm. Alarm icon displays when enabling alarm. Rotate Audio knob or press up/down buttons to change to SET TIME and press OK button. Hour digits for the alarm time will begin to flash. Format is the same as set for clock.
4. Rotate Audio knob or press Up/Down buttons to change hour. Rotating knob clockwise and pressing up button increases hour. Rotating counterclockwise and pressing Down button will decrease hour.

NOTE: SET MUS, alarm sound is the same as the setting when radio was turned off. For example: Alarm heard is the same station last tuned to. If last station is no longer available, alarm sounds a medium priority tone for 2 minutes before changing to a high priority tone. If AUX input, a CD or other media were last used and there is no longer AUX input or CD available, the alarm reverts to radio.

5. Press OK button causing minute digits to flash. Rotate Audio knob or press up/down buttons to change minutes. Rotating knob clockwise and pressing up button will increase minutes. Rotating counterclockwise and pressing the down button will decrease the minutes.

NOTE: NOTE: If SET TONE is selected, alarm will sound medium priority tone for 2 minutes before changing to constant high priority tone.

6. To set alarm time, press OK button. Select between SET MUS (Music) or SET TONE, then press OK button.
7. Press OK button again to set alarm tone or music volume. Press OK Button, VOLUME is displayed as actual volume of the tone or music is heard. To



Setting The Clock

A—iTitle Menu
B—Up Button
C—Down Button
D—OK Button

E—Audio Knob
F—Display
G—Clock Alarm Button

increase volume, rotate the Audio knob clockwise or counterclockwise to decrease volume.

NOTE: At any point in the time set process, not pressing a button or rotating knob within 8 seconds will cancel time set mode, return radio to normal operation and keep whatever setting changes have been made.

8. Press OK button again to finish and return display to normal operation. ALARM icon will appear on display indicating alarm is active.

Turning Alarm Off:

When alarm is triggered, press and hold CLOCK/ALARM button (G) until ALARM icon on display disappears. If not held, it will automatically shut off after 63 minutes. Radio will return to mode (on or off) it was in before alarm sounded.

Activating Snooze Mode:

Press any button for less than 2 seconds when alarm sounds. SNOOZE will appear on radio display for 3 seconds and alarm will be postponed for 9 minutes. If any button is pressed during the 3 seconds, radio will return to the mode it was in before alarm sounded.

OURX935.0000AED -19-04SEP09-1/1

RX40100811—UN—06MAY09

Compact Disc (CD) Mode—Premium Radio

Playing Compact Disc (CD):

1. Turn ignition on and press ON (B) to turn radio on.
2. Insert a disc partway into CD slot (C), label-side up. CD player will automatically pull disc in. Radio displays CD READING, then CD icon followed by track number and elapsed time. until first track is played. Then CD begins playing.

NOTE: CD must be loaded into CD player. If no CD has been loaded, the option will not be available and go to the next available source. If no available source radio will remain on Rear AUX.

If CD is ejected and not removed within 15 seconds, CD will reload but will not start playing until SRC button is pressed.

3. CD Mode Displays

Press the iTitle/Menu Button (A) to toggle between different displays views:

- Artist Name
- Song Name
- Album Name

NOTE: CD player plays full size CDs, MP3 and WMA discs.

CD information including disc and track title is shown on display (I) when track starts to play. If there is more information than can appear on display at one time, display will advance every 2 seconds until all information has appeared.

4. Press SRC button (D) to play CD.

If CD is loaded, CD icon remains on until it is ejected. CD READING appears followed by track number and elapsed time.

NOTE: If CD is ejected but not removed within 15 seconds, CD will reload but not play until SRC button is pressed.

5. To remove CD from player, press Eject Button (E).

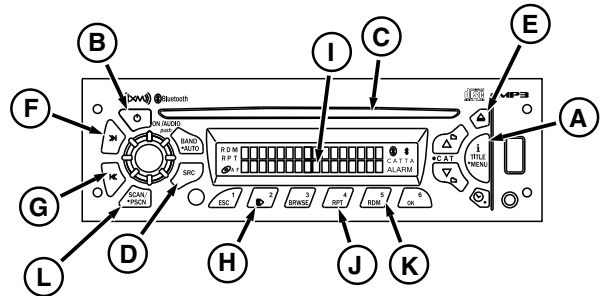
Button Functions

SEEK >> (F):

- Press for less than 2 seconds to forward to next track.
- Press and hold same button to fast forward, when released CD plays.

SEEK << (G):

- Press button for less than 2 seconds to go to the beginning of current track.



Radio With CD Player

A—i Title/Menu
B—Radio ON
C—CD Slot
D—SRC
E—Eject
F—SCAN >>

G—SCAN <<
H—Pause/Play
I—Display
J—Repeat
K—Random
L—SCAN/PSCAN

- Press button within first 10 seconds of the track, radio goes to previous track.
- Press and hold button to fast forward, when released CD plays.
- Press button again within first second to go to the beginning of previous track.
- Press and hold to fast reverse. Release button, disc begins playing.

PAUSE/PLAY (H):

- Press button to pause a CD. "PAUSE" is viewed on radio display (I) and audio is muted.
- Press button again to resume playing.

RPT (J):

- Press button to repeat current track playing. "Track Repeat" is displayed.
- Press button again to stop repeating.

RDM (K):

- Press button to activate random track selection. RDM icon on display indicates that tracks on the loaded disc are played randomly.
- Press button again to stop random track selection.

TRACK SCAN :

- Press SCAN/PSCAN (L) for less than 2 seconds to scan tracks on a disc. After playing 8 seconds of current track, radio will go to next track.
- When all tracks on disc have been scanned, SCAN ends and playback begins with first track of SCAN.
- Press SCAN again to deactivate scan.

OURX935,0000AEE -19-02SEP09-1/1

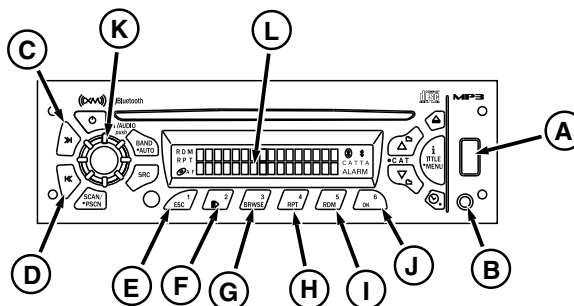
RXA0101846 —UN—06MAY09

Using iPod® — Premium Radio

Radio is capable of controlling and playing music from iPod. Do not connect iPhone® or iPod Touch® to radio. Insert iPod USB cable connector to radio USB connector (A) (the other end connected to your iPod). iPod READING appears on display (L). Insert 3.5mm Audio cable connector to radio Aux input jack connector (B) (the other end connected to iPod 3.5mm audio jack connector). If Audio cable is not connected, radio will display FRONT AUX JACK UNPLUGGED. After all connections have been made, and radio has finished reading iPod, iPod will begin playing. Elapsed time and track number are displayed. Play begins from current track played on iPod and continues sequentially through all tracks from the iPod last selected mode. After playing iPod last track last selected mode, play stops and radio displays iPod Menu. Buttons Functions:

- **SEEK >> (C) :**
 - Press for less than 2 seconds to forward to next track.
 - Press and hold to fast forward.
 - Release button, track continues playing.
- **SEEK << (D):**
 - Press for less than 2 seconds to go to the beginning of current track.
 - Press within first 10 seconds of track, radio goes to the previous track.
 - Press button within the first 14 second to go to the beginning of previous track.
 - Press and hold button to fast reverse.
 - Release button, track will continue to play.
- **ESC (E):** Press to exit or go back to previous menu when on a menu.
- **PAUSE/PLAY (F):**
 - Press to pause a track, "PAUSE" will be displayed and the audio will be muted.
 - Press PAUSE/PLAY again to resume playing the track.
- **BRWSE (G):** Press BRWSE button to enter iPod Menu and the following options.
 - Scroll and select with the On/AUDIO Knob (K).
 - Turn to right to increase, left to decrease and press knob to confirm selection.
- **RPT (H):** If RPT is pressed a second time REPEAT ALL TRACKS appears on display and RPT icon remains

iPod is a trademark of Apple, Inc.
 iPhone is a trademark of Apple, Inc.
 iPod Touch is a trademark of Apple, Inc.



Radio With CD Player

- | | |
|---------------------|----------------|
| A—USB Connector | G—BRWSE Button |
| B—Radio Aux Input | H—RPT Button |
| C—SEEK >> Button | I—RDM Button |
| D—SEEK << Button | J—OK Button |
| E—ESC Button | K—Audio Knob |
| F—Pause/Play Button | L—Display |

turned on. The same folder/playlist (iPod last selected mode) will continue to play until RPT button is pressed again. If RPT is pressed a third time, REPEAT OFF will appear on display. Function is off and RPT icon is off. Then display returns to default.

- Press button once to repeat current track. RPT icon & REPEAT ONE TRACK will appear on display
- The same file will continue to play until the RPT button is pressed again.
- **RDM (I):** press RDM button again to reach SHUFFLE OFF.
 - Pressing button activates shuffle tracks, albums or OFF selection. RDM icon on display indicates that this feature is on.
 - Press button again to cancel SHUFFLE TRACKS or SHUFFLE ALBUMS.
- **OK (J):** Press OK Button when on a menu to confirm selection.

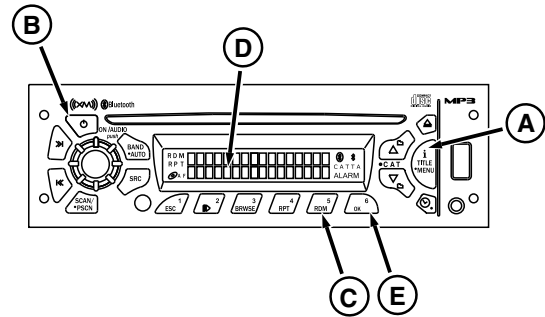
To remove iPod USB cable connector simply pull the device. Radio will return to previous mode/source.

RXA0100816—UN—06MAY09

OURX935,0000AEF -19-04SEP09-1/1

Changing World Tuner Setting—Premium Radio

1. Turn ignition switch on.
2. Using Power button (B), turn radio off.
3. Press and hold iTitle button (A) and RDM button (C) for three seconds.
4. When “Advanced Freq Zone” appears on display (D), press OK button (E).
5. Rotate audio knob until desired country appears on display.
6. Press OK button.
7. SEL appears to the right of selected country or region and after 5 seconds display returns to current time.



Country Code

A— iTitle Button
B—Power Button
C—RDM Button

D—Display
E—OK Button

RXA0102617 —UN—06MAY09

OURX935,0000AF2 -19-25SEP09-1/1

Setting up Hands Free (Bluetooth®) Mode – Premium Radio

Premium Radio has hands free capabilities through BLUETOOTH technology. Up to 16 mobile phones can be saved to Premium Radio at one time.

NOTE: Ensure device being paired is BLUETOOTH capable and has been enabled.

1. Press and hold I Title Menu button (A) until audible beep.
2. Rotate AUDIO knob (E) or press up/down buttons (B and C).
3. When HANDS FREE appears on display (F), press OK button (D).
4. Rotate AUDIO knob or press up/down buttons and select ON.
5. Press OK button.

NOTE: BLUETOOTH Status icon (icon) should appear on radio display.

Add Phone

1. Rotate AUDIO knob or press up/down buttons.
2. Watch display and select ADD PHONE by pressing OK button.

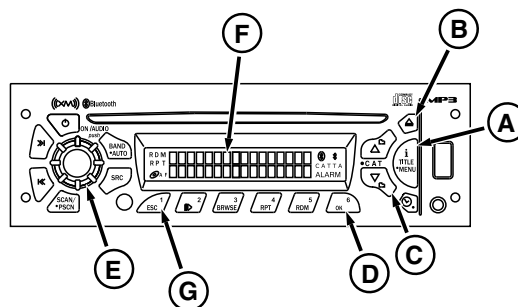
NOTE: When ADDING PHONE appears on display, radio is scanning for BLUETOOTH devices. Ensure paired BLUETOOTH device has been set to add a device and is searching for DEA355 Radio.

After 3 minutes, if no phone is added, radio displays NO PHONE FOUND.

3. ADDING PHONE will appear on radio display for 3 seconds and BLUETOOTH (icon) will blink up to 3 minutes.
4. Use PIN number 0000 to connect to radio.

NOTE: When mobile phone is successfully added to radio, PHONE CONNECTED will appear on display

Bluetooth is a trademark of Bluetooth SIG



Setting Up BLUETOOTH Mode

A—Title Menu Button	E—Audio Knob
B—Up Button	F—Display
C—Down Button	G—ESC Button
D—OK Button	

first line. Radio display second line will show BLUETOOTH phone name for 3 seconds.

Edit Phone:

1. Rotate AUDIO knob or press up/down buttons and when EDIT PHONE appears on display, press OK button.
2. The radio will display a list of mobile phones added.

NOTE: If 16 have been stored, the ADD PHONE option is disabled until a phone is deleted.

3. To delete a mobile phone, rotate AUDIO knob or press up/down buttons to select desired mobile phone, then press OK button.
4. Phone is deleted, and radio display returns to previous menu display.

Answer Phone:

1. To accept incoming call, press OK button.
2. To reject incoming call, press ESC button (G).

RXA0102670—UN—06MAY09

OURX935,0000AF3 -19-04SEP09-1/1

USB Mode – Premium Radio

Premium Radio is capable of controlling and playing audio via USB devices (less than 1 GB in size) with the following audio formats: MP1, MP2, MP3 (VBR), WMA (ver 9 and VBR) and AAC (MPEG4 and M4A). Radio will be able to read and play a maximum of 50 folders and play lists. Long files, folders or a combination can reduce the number of files and folders that can be played. If device contains more than 50 folders or 11 folder levels, radio will only allow access to and navigate to the maximum number and ignore additional items.

- Insert USB device fully into USB connection (A)
- USB READING appears on the radio display (B) and audio will begin playing.

File type, elapsed time and track number are displayed. First track begins playing and continues sequentially through all tracks. After playing last track of the last folder, play continues at first track of the first folder or root directory.

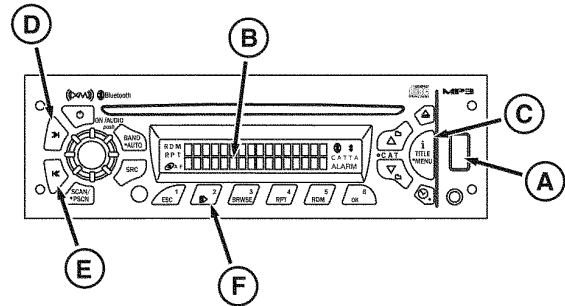
NOTE: When playing MP3 or WMA files, press the *i* Title Menu button (C) to toggle between different radio on display views.

- Track number
- Artist Name
- Song Name
- Album Name
- Folder/PLST Name

Button Functions:

SEEK >> (D)

- Press for less than 2 seconds to forward to next track.
- Press and hold to fast forward. Release button, track will continue to play.



USB Mode Premium Radio

A—USB Connection
B—Display
C—iTitle Menu

D—Seek >>
E—Seek <<
F—Pause/Play CD

SEEK << (E)

- Press for less than 2 seconds to go to beginning of current track.
- Press within the first 10 seconds of track, radio goes to previous track.
- Press button within the first 14 second to go to beginning of previous track.
- Press and hold button to fast reverse.
- Release button, track continues to play.

PAUSE/PLAY (F)

- Press to pause a track, "PAUSE" is displayed and audio is muted.
- Press PAUSE/PLAY again to resume playing the track.

OURX935,0000AF4 -19-10SEP09-1/1

RXA0102616 —UN—11FEB11

Operating Premium Radio Through CommandARM™ Controls

Press Scan Preset Station + button (A) to go to next higher preset radio station frequency or press Scan Preset Station button (B) to go to next lower preset radio station frequency. When frequency selection is made it will display in CommandCenter frequency input box (G).

As Volume Control buttons C or D are pressed, the volume bar graph high light (H) will move respectively to the right as volume increases or to the left as volume decreases.

Press Advanced Settings soft key (O) to access the following settings;

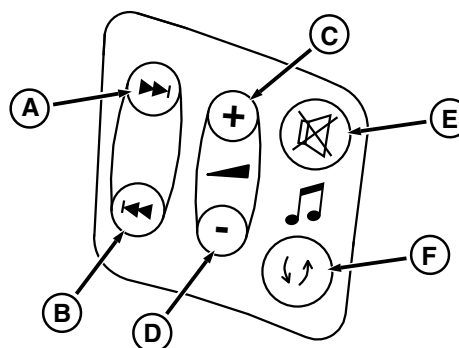
- Bass
- Middle
- Treble
- Fade
- Balance
- Eq—Manual
- Enable Volume Compensation

Pressing Next (J) scrolls through each of the above settings. Pressing Increase (K) or Decrease (L) adjusts the above listed settings.

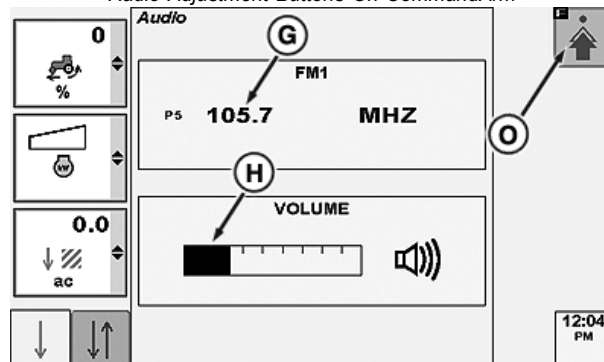
Pressing Return (M) returns to previous page.

Pressing Volume Compensation highlights Volume Compensator check box (I) Placing check in box activates Volume Compensator with engine rpm increase or decrease.

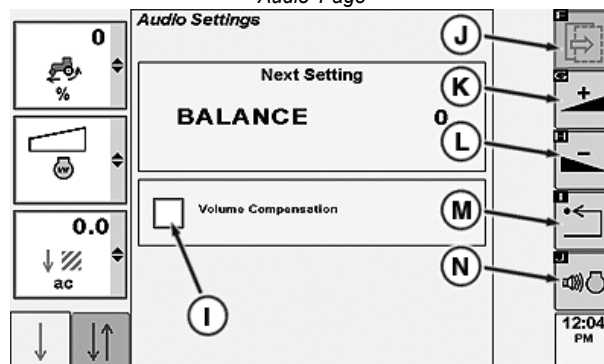
- | | |
|------------------------------|-----------------------------|
| A—Scan Preset Stations + | I— Volume Compensation |
| B—Scan Preset Stations - | Check Box |
| C—Volume Button UP | J— Next Soft Key |
| D—Volume Button Down | K—Increase Soft Key |
| E—Mute Button | L—Decrease Soft Key |
| F—Mode Selection | M—Return Soft Key |
| (AM/FM/WB/CD/Aux) | N—Volume Compensation Soft |
| G—Frequency Input Box | Key |
| H—Volume Bar Graph Highlight | O—Advance Settings Soft Key |



Radio Adjustment Buttons On CommandArm



Audio Page



Audio Settings Page

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OURX935,0000B14 -19-10SEP09-1/1

RXA0097745 —UN—21APR08

RXA0100796 —UN—25FEB09

RXA0100798 —UN—25FEB09

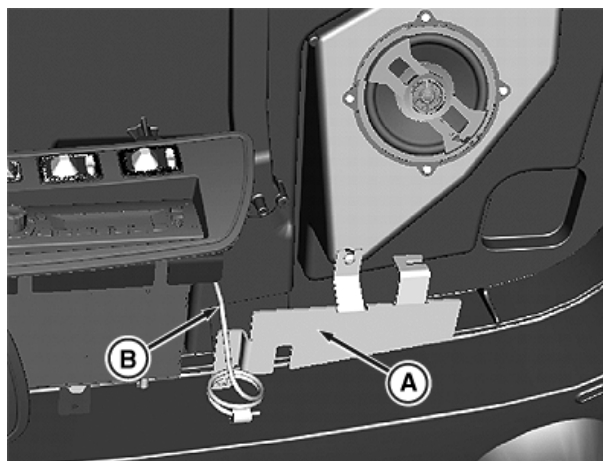
Installing Business Band Radio and Antenna

CAUTION: Under no circumstances should business band radio antenna be mounted to rear of cab or antenna cable be routed near harness for electrical system controllers or operator controls. Failure to follow these precautions could expose operator to radio frequency energy levels higher than recommended by American National Standards Institute (ANSI) and/or could cause undesirable performance of electronically controlled systems.

CAUTION: Prevent possible personal injury. Disconnect battery ground cable before any electrical repair.

NOTE: Only tractors equipped with Business Band Radio Mounting and Wiring Option from factory have mounting plate and antenna cable included behind the headliner. See John Deere™ dealer for Business Band Radio and Antenna Installation Instructions.

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Business Band Radio Bracket With Antenna Cable Shown — Headliner Removed To Show Location

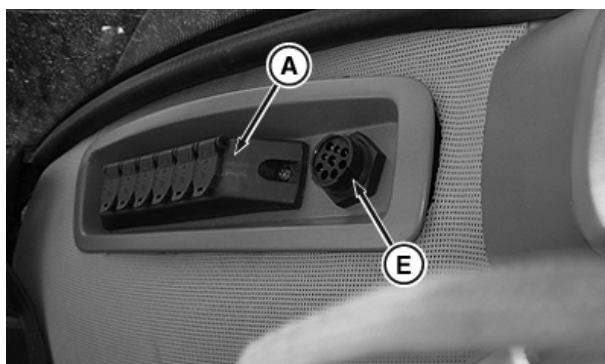
A—Bracket

B—Antenna Coaxial Cable

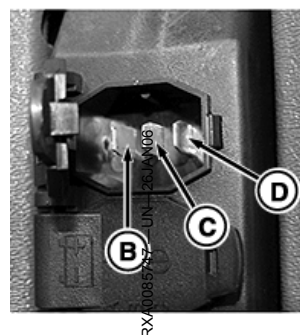
RXA009991 —UN—12DEC08

OURX935,0000D02 -19-16DEC09-1/1

Using Auxiliary Power Strip And Electrical Outlets (If Equipped)



Auxiliary Power Strip



Auxiliary Power Strip Convenience Outlet

IMPORTANT: Power strip is not a surge suppressor. Electrical equipment with program memory requires protection from damage of electrical surges and spikes.

The power strip (A) provides six outlets of 12-volt power with grounds for use when connecting auxiliary equipment. This power is 30 amp switched and 30 amp unswitched.

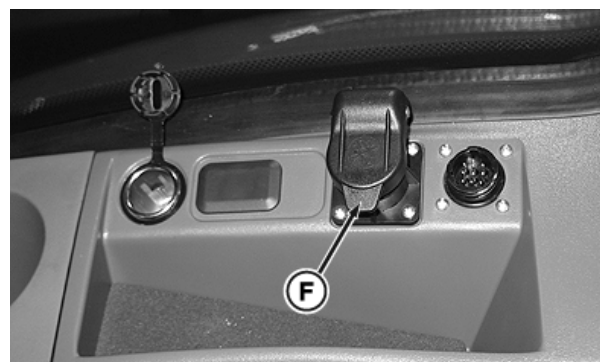
Adapters plug directly into power strip. To change to switched power on adapter remove small tab at end of slot on plug and rotate plug 180°.

Adapters are available from your John Deere™ dealer for the following: cigarette lighter adapters, three-way convenience adapters, and standard adapters.

NOTE: Outlets are protected by a 30-amp fuse.

12-volt accessory outlets (F) are located on right-hand console or outlet (G) in the storage box are used when connecting auxiliary equipment.

Pin (H) provides battery power (hot), pin (I) provides ground, and pin (J) provides (key) switched power. For additional information on connections, see appropriate auxiliary equipment installation instructions or your John Deere dealer.

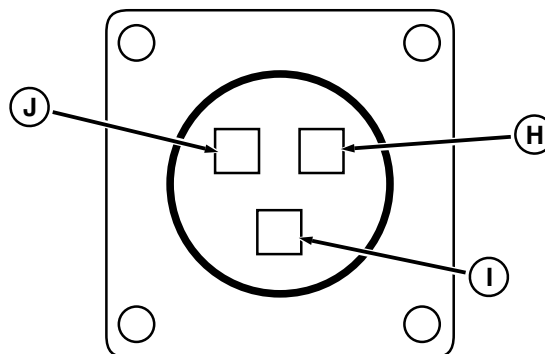


Accessory Electrical Outlet On Right-Hand Console



Accessory Electrical Outlet In Storage Box

- | | |
|--|---|
| A—Auxiliary Power Strip | F—Accessory Outlet (Right-Hand Console) |
| B—Battery (Unswitched) | G—Accessory Outlet (In Storage Box) |
| C—Ground | H—Battery (Unswitched) |
| D—Switched | I—Ground |
| E—Diagnostic Connector (DEALER USE ONLY) | J—Switched Circuit |



Accessory Electrical Outlet Pins

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OURX935,0000B73 -19-14SEP09-1/1

Connecting Compatible Electronic Equipment

All 8R and 8RT Series Tractors are ISOBUS ready and offer connections for implements conforming to both ISO 11786 and 11783 standards. The ISO 11786 connector shown on the right, provides a radar or GPS speed signal. See Configuring Tractor For GPS/Radar in this section.

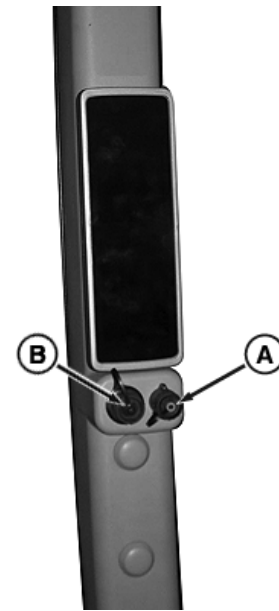
GreenStar™ corner post connector (B) allows any GreenStar display connection. See your John Deere™ dealer for compatible adapter harnesses.

IMPORTANT: ISOBUS 11783 Socket (F) on the right-hand console, is only to be used with ISO11783 compliant components. Other uses could damage tractor electronic components.

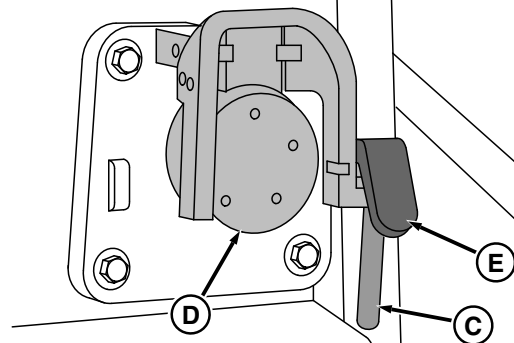
The ISOBUS ready preparation includes the ISO 11783 standardized connector on the right-hand console and implement connector on the tractor rear facilitating tractor/implement communications.

A—ISO11786 Standard Connector (Corner Post Right)
B—GreenStar Connector (Corner Post Left)
C—Handle

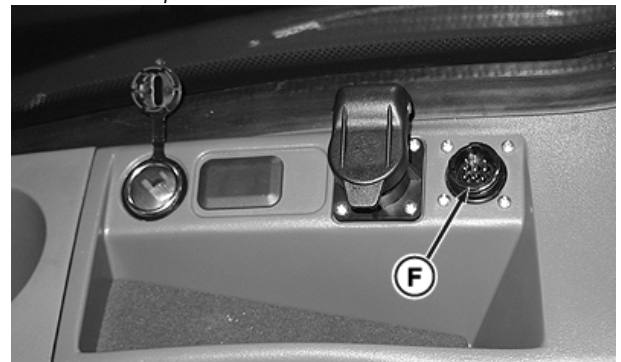
D—Implement Connector (Tractor Rear)
E—Release
F—ISO11783 Standard Connector (Right-Hand Console)



Front Right Corner Post



Implement connector on Tractor Rear



Right-Hand Console ISO 11783 Connector

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OURX935,0000B74 -19-14SEP09-1/1

RXA0104285 —UN—11AUG09

RXA009727 —UN—06NOV08

RXA0104659 —UN—10SEP09

Configuring Tractor For GPS/Radar

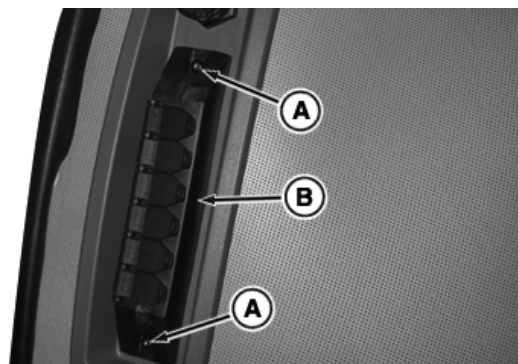
Tractors equipped with radar must be re-configured if switching to GPS radio as the true ground speed input signal. To configure tractor:

1. Remove screws (A) and power strip (B), if equipped or cover plate.
2. Inside right-hand console locate one wire lead marked "GPS" and one marked "Radar".
3. Remove radar plug (C) from wiring connector (E).
4. Remove GPS plug (D) from dust cap (F).
5. Install GPS plug into connector and radar plug into dust cap.
6. Install power strip.

Tractors not equipped with radar, but wanting to add a GPS signal require two controller addresses to be changed. Contact your John Deere™ dealer for assistance.

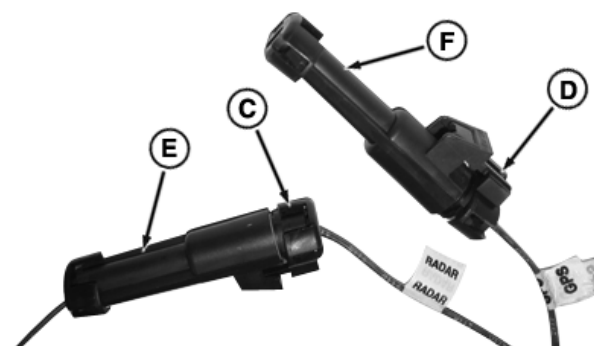
A—Screws
B—Power Strip
C—Radar Plug

D—GPS Plug
E—Tractor Connector
F—Dust Cap



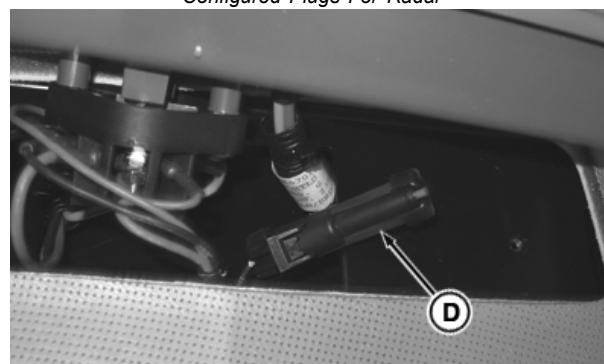
Remove Screw And Optional Power Strip

RXA0100215 —UN—23JAN09



Configured Plugs For Radar

RXA0100213 —UN—23JAN09



Remove Plug

RXA0100217 —UN—23JAN09

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OURX935,0000521 -19-02SEP09-1/1

Mounting StarFire™ Receiver

! CAUTION:

Handle global positioning receivers and brackets safely. Falling while installing or removing a global positioning receiver can cause serious injury. Use a ladder or platform to easily reach a mounting location.

Use sturdy and secure footholds and hand holds. Do not install or remove the receiver in wet or icy conditions.

STARFIRE receiver brackets are installed in a stacked configuration on top of tractor roof. Bracket (A) is installed below bracket (B) with four cap screws (C).

Bracket (A) is compatible with STARFIRE receivers equipped with rear attaching shrouds (D).

NOTE: Bracket (A) and bracket (B) may remain in stacked configuration.

Bracket (B) is only compatible with STARFIRE receivers equipped with bottom attaching shrouds (E).

NOTE: Bracket (A) must be removed when using bottom attaching shrouds (E).

Remove four cap screws (C), remove both brackets, then re-install bracket (B) using original four cap screws.

NOTE: Refer to your John Deere™ dealer or to STARFIRE receiver installation instructions for further compatibility.

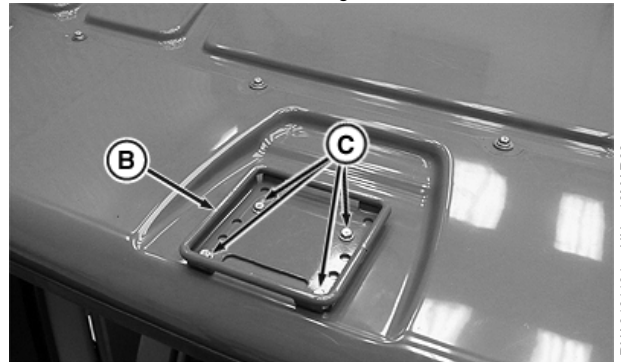
See your John Deere dealer for compatible adapter harnesses.

A—STARFIRE Receiver Bracket (Rear Attaching Shroud)
B—STARFIRE Receiver Bracket (Bottom Attaching Shroud)
C—Cap Screws

D—STARFIRE Receiver With Rear Attaching Shroud
E—STARFIRE Receiver With Bottom Attaching Shroud



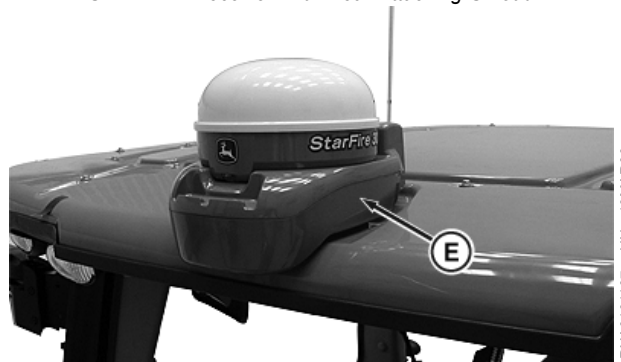
Stacked Configuration



Cap Screws And STARFIRE Receiver Bottom Attaching Shroud Bracket



STARFIRE Receiver With Rear Attaching Shroud



STARFIRE Receiver With Bottom Attaching Shroud Installed

StarFire is a trademark of Deere & Company
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OURX935,0000986 -19-12SEP09-1/1

Installing GreenStar™ System Components

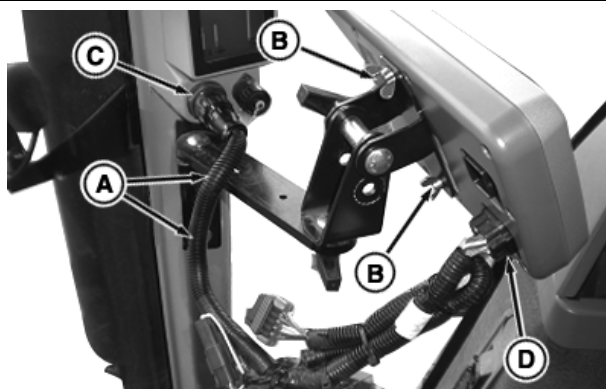
IMPORTANT: This vehicle employs one or more CAN bus networks. Connecting unapproved devices to vehicle network (s) may cause machine to degrade in performance or fail to perform properly. Further, unapproved devices should not be connected to implement network (ISOBUS) that attempt control of tractor functions.

1. Attach bracket to corner post mounts (A).
2. Attach display to bracket using wing nuts (B) (provided with display).
3. Attach harness to corner post connector (C) and lower GreenStar display connector (D) on back of the display.
4. Position display so that it is comfortable to reach and does not obstruct your view.
5. Connect StarFire™ connector (B) to Starfire receiver (A).

NOTE: See your John Deere™ dealer for compatible adapter harnesses.

A—Corner Post Mounts
B—Wing Nuts (2 Used)
C—GreenStar Corner Post Connector
D—GreenStar Display Connector

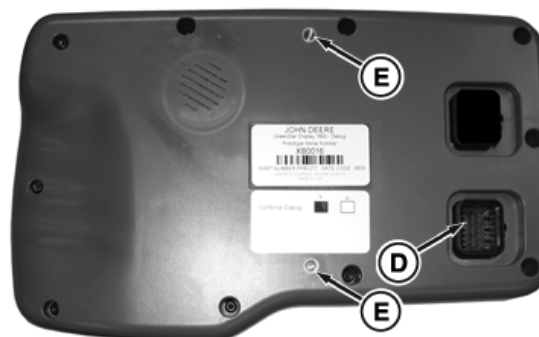
E—Bracket Mounting Points (2 M6 Cap Screws Used)
F—StarFire™ Receiver Connector
G—StarFire Connector



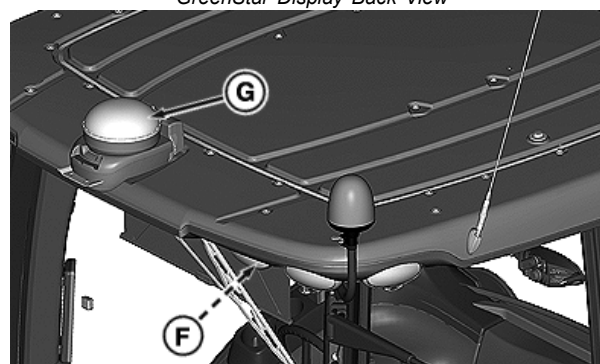
Attach Bracket To Corner Post Mount



GreenStar Display Front View



GreenStar Display Back View

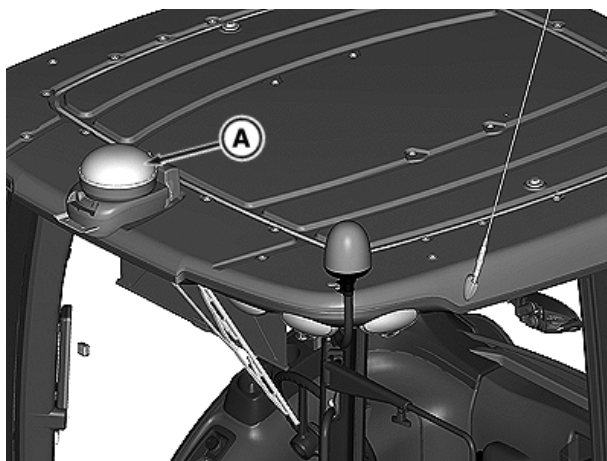


Connect StarFire Receiver

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John Deere is a trademark of Deere & Company
StarFire is a trademark of Deere & Company

OURX935,00005B7 -19-16SEP09-1/1

Connecting AutoTrac™ Assisted Steering System (If Equipped)



StarFire™ receiver



Original GreenStar Display With Mobile Processor



GreenStar Display 1800



GreenStar Display 2600

NOTE: Electro-hydraulic steering is required for AutoTrac to function.

Refer to AutoTrac Operator's Manual for detailed instructions.

- AutoTrac system utilizes Starfire position receiver (A) and GreenStar™ display (B), (C) or (D) to assist operator in steering tractor.
- Operator must turn vehicle at the end of each pass and to go around any field obstacles. Steering control is obtained by simply turning steering wheel.

NOTE: See your John Deere™ dealer for compatible adapter harnesses.

A—Position Receiver C—GreenStar Display 1800
B—Original GreenStar Display With Mobile Processor D—GreenStar Display 2600

AutoTrac is a trademark of Deere & Company
StarFire is a trademark of Deere & Company
GreenStar is a trademark of Deere & Company
John Deere is a trademark of Deere & Company

RXA0084304 —UN—26SEP05

RXA0100708 —UN—26FEB09

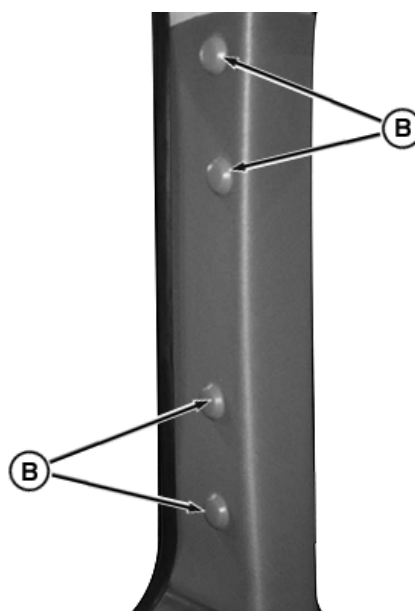
RXA0084306 —UN—26SEP05

OURX935,0000522 -19-12SEP09-1/1

Monitor Bracket Mounts



Front Corner Post Mounting Points



Rear Corner Post Mounting Points

A—Front Corner Post Mounting Points **B—Rear Corner Post Mounting Points**

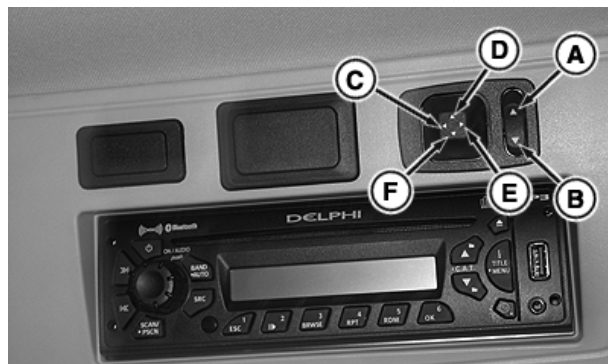
Front corner post mounting points (A) and rear corner post mounting points (B) are used to connect implement monitors to cab using M10 cap screws. See your John

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Deere™ dealer for brackets that utilize these mounting points.

OURX935,00004C5 -19-11MAR09-1/1

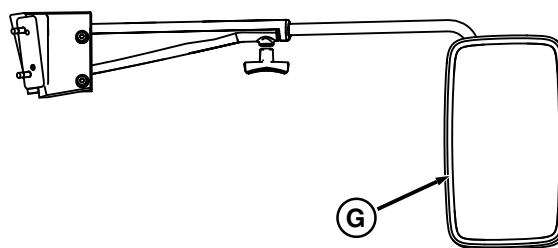
Using Electric Mirror (If Equipped)



Rear View Mirror Switch

A—Selection Switch—Right Mirror **C—Angle Left**
B—Selection Switch—Left Mirror **D—Tilt Up**

1. Push selection switch (A) for right mirror or switch (B) to control left mirror.
2. Push adjustment switch (C) to angle mirror left or switch (E) to angle mirror right.



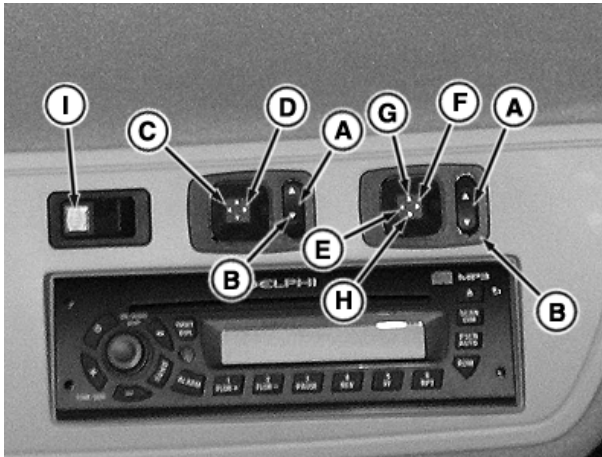
Electrical Rear View Mirror (Right-Hand Side Shown)

E—Angle Right **G—Standard Mirror**
F—Tilt Down

3. Push adjustment switch (D) to tilt up or switch (F) to tilt mirror down.

OURX935,00004C6 -19-11APR09-1/1

Using Telescoping Heated Electric Mirror (If Equipped)



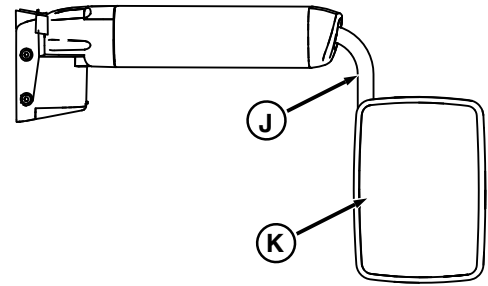
Rear View Mirror Switch

A—Selection Switch—Right Mirror
 B—Selection Switch—Left Mirror
 C—Extend
 D—Retract
 E—Angle Left
 F—Angle Right

G—Tilt— Up
 H—Tilt—Down
 I— Heating Switch

J— Telescoping Arm
 K—Mirror

1. Push selection switch (A) for left mirror or switch (B) to control right mirror.
2. Push adjustment switch (C) to extend mirrors or (D) to retract mirrors. Both mirrors can extend/retract depending on which way toggle switch is flipped (A or B).
3. Push switch (G) to tilt mirror up or switch (H) to tilt mirror down.
4. Push switch (E) to angle mirror left or switch (F) to angle mirror right.

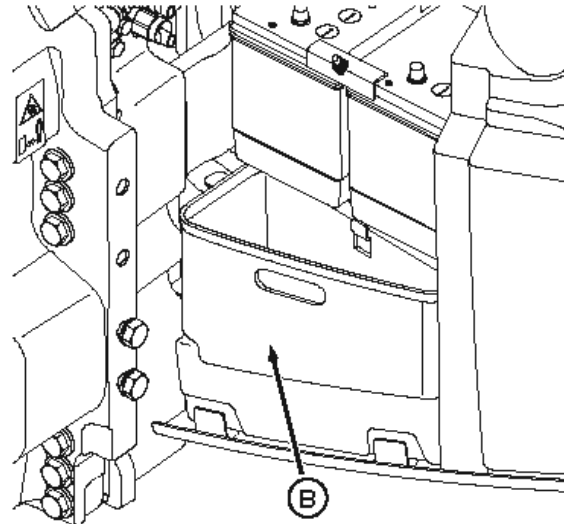
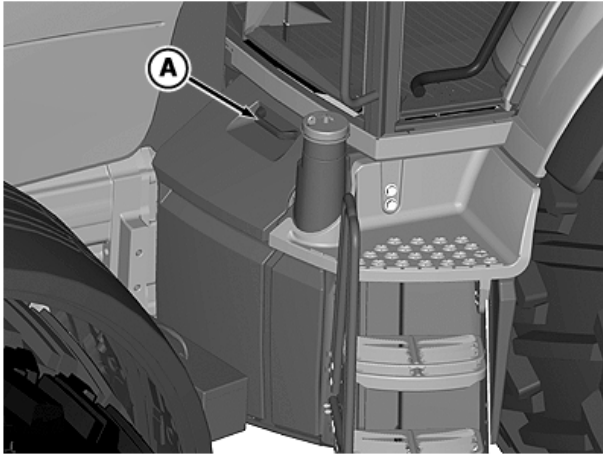


Telescoping Electrical Rear View Mirror (Right-Hand Side Shown)

RXA0098963 —UN—26FEB09

OURX935,00008B9 -19-01JUN09-1/1

Using Storage Compartment



Storage Compartment Cover

A—Handle

B—Storage Compartment

Pull handle (A) firmly to open magnetic cover latch.
Remove cover retainer to gain access to storage
compartment (B).

RXA0098888 —UN—14AUG08

OURX935,0000475 -19-14AUG08-1/1

Steps and Handrails

Steps

NOTE: Position steps using round holes in side panels (F) for correct individual step and handrail positioning.

Do not remove center bolt (E). Step assembly can pivot if steps need to be positioned.

Bolts (A) ensure proper angle of step assembly.

Bolts (C) installed in round holes ensure individual steps are at correct angle with step assembly angle.

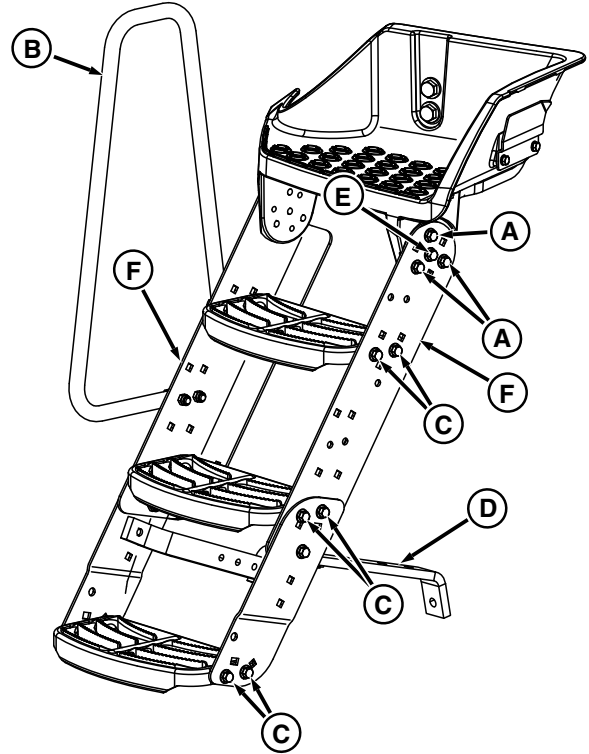
Handrail

Handrail (B) must be positioned in conjunction with the steps.

Strap

Strap (D) gives step assembly added support.

Position steps and tighten bolts to torque.



Steps and Hand Rails

- | | |
|--------------------------|---------------|
| A—Step Angle Bolts | D—Strap |
| B—Handrail | E—Center Bolt |
| C—Step Positioning Bolts | F—Side Panels |

Item	Measurement	Specification
Bolts	Torque	73 N·m (54 lb-ft)

OURX935,0000983 -19-14MAY09-1/1

RXA0080279 —UN—21APR05

Break-In Period

Break-In Checks

NOTE: The initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval is the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals for your engine. To confirm which engine your tractor is equipped with, see Section 145 Record Engine Serial Number in this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in section 90 of this Operator's Manual.

Tighten wheel and axle bolts after **3 HOURS, 10 HOURS** and daily for the first week of operation.

Operate engine at heavy loads without sustained maximum load.

Avoid idling engine longer than 5 minutes.

¹In extremely wet conditions

Daily or Every 10 Hours

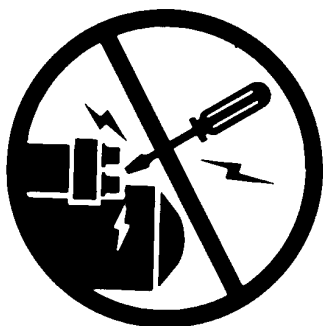
IMPORTANT: During the break-in period, John Deere Break-in Oil must be added if oil level is **BELOW ADD MARK** on dipstick. **DO NOT** fill above crosshatch pattern or **FULL** mark.

- Check engine oil level
- Check coolant level
- Check transmission-hydraulic oil level
- Lubricate front axle:¹
 - Non-driving front axle; Pivot pin, wheel bearings, steering spindles/cylinder ends and tie rod ends¹
 - MFWD; Axle pivot, king pins and tie rod¹
- Lubricate hitch components
- Inspect tires to make sure tires have no cuts or punctures.
- Drain moisture from the trailer brake air pressure tank (if equipped).

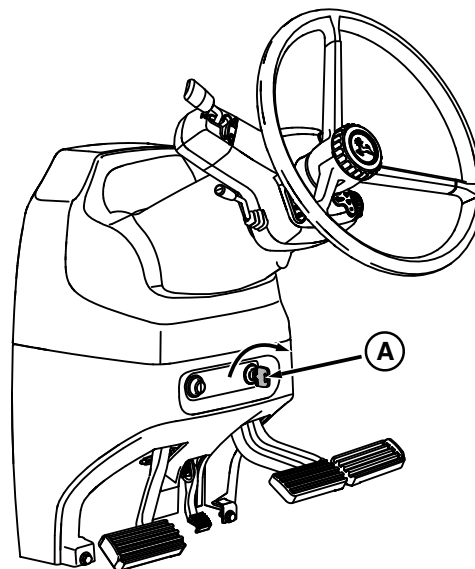
OURX935,000018C -19-01DEC10-1/1

Operating the Engine

Starting the Engine



TS177 —UN—11JAN89



RXA0098446 —UN—19MAR09

A—Ignition Key

CAUTION:

Avoid the possibility of personal injury or death. Engine starting with shift lever in gear indicates a malfunction of the starting circuit. Repairs should be made immediately by your John Deere dealer.

Do not start engine by shorting across starter terminals. Tractor will start in gear if normal circuitry is bypassed. Start engine **ONLY** from the operator seat.

Before Starting The Tractor

1. SCV levers are in NEUTRAL position.
2. PTO is disengaged.
3. Hand throttle is in slow idle position.
4. Transmission shift lever is in PARK position.
5. Be sure everyone is clear of tractor and attached equipment.
6. Depress clutch and brake pedals.
7. Sound the horn.

IMPORTANT: Avoid starter damage. Do not operate starter more than 30 seconds. Wait at least two minutes before trying again.

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Turn ignition key (A) to engage starter. Release key when engine starts.

If Engine Fails To Start:

Check Fuel (quality and quantity).

Check Electrical system.

In cold weather (at or below -6 °C (21 °F), follow steps listed in Cold Weather Starting—With Starting Aid or Cold Weather Starting—Without Optional Starting Aid.

If engine fails to start after three attempts, it may be necessary to consult a John Deere™ service technician.

NOTE: For tractors equipped with AutoPowr™, the engine speed will be limited to 1500 rpm if the transmission oil temperature is less than -5 °C (23 °F).

For tractors equipped with PST, the engine speed will be limited to 1500 rpm if the transmission oil temperature is less than -18 °C (0 °F).

OURX935,0000B7C -19-16SEP09-1/1

Stopping the Engine

IMPORTANT: Before stopping engine that has been operating at working load, idle engine at least 1 or 2 minutes at 1000—1200 rpm to cool hot engine parts.

1. Stop tractor and pull throttle back to slow idle position.
2. Depress clutch and brake pedals.
3. Put transmission in PARK position.

4. Lower all equipment to the ground.
5. Make sure SCV levers are in NEUTRAL position.
6. Make sure PTO switch is disengaged.

CAUTION: Remove ignition switch key to help prevent accidents.

7. Turn ignition key to **OFF** position and remove key.

OURX935,000078E -19-24DEC08-1/1

Engine Fuel System and Power Rating

Fuel System

IMPORTANT: Modification or alteration of the injection system or emission control devices will terminate the warranty to the purchaser.

Do not attempt to service injection system. Special training and special tools are required. See your John Deere Dealer.

Engine Certification/Power Rating

The kW (hp) rating on the **engine** emissions certification label specifies the gross engine kW (hp), which is flywheel power without fan.

OURX935,000078F -19-24DEC08-1/1

Cold Weather Starting—Without Optional Starting Aid

NOTE: Use of starter fluid is recommended when starting tractor at or below -6 °C (21 °F).

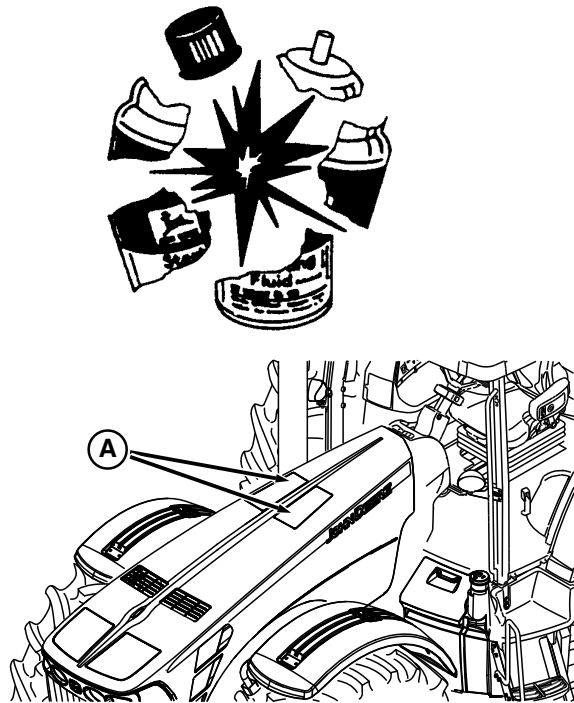
A cold weather starting kit is available from your John Deere dealer.

CAUTION: Starting fluid is extremely flammable. While using this product do not smoke and extinguish all flames. Turn off all pilot lights, stoves, heaters, electrical motors and other sources of ignition while using this product and/or vapors are still present. Avoid contact of aerosol with battery terminals, solenoid, or other electrical/electronic components. Do not overuse this product. Keep cap on container and store in cool location when not in use.

NOTE: Spray starting fluid through air intake screens (A) located in the center of the top of the hood.

1. Spray starting fluid into air intake once for two or three seconds.
2. Follow steps as outlined in Starting the Engine.

NOTE: If engine fails to start after three attempts, it may be necessary to consult a John Deere service technician.



A—Air Intake Screens

TS1356—UN—18MAR92

RXA0085772—UN—09JAN06

OURX935,0000790 -19-24DEC08-1/1

Using Engine Coolant Heater—If Equipped

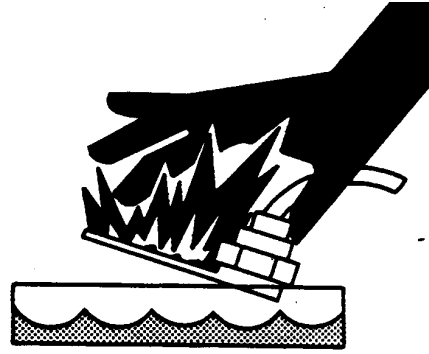
⚠ CAUTION: To avoid electrical shock or fire, use a three-wire, 14 AWG (14 gauge), heavy-duty electrical cord with 15-amp rating, suitable for outdoor use.

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

- Engine Block (1000 W)

The 1000-watt, 220-volt coolant heater is located on left-hand side of engine.

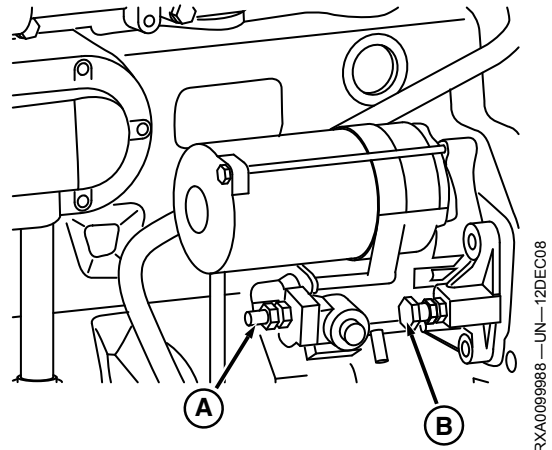
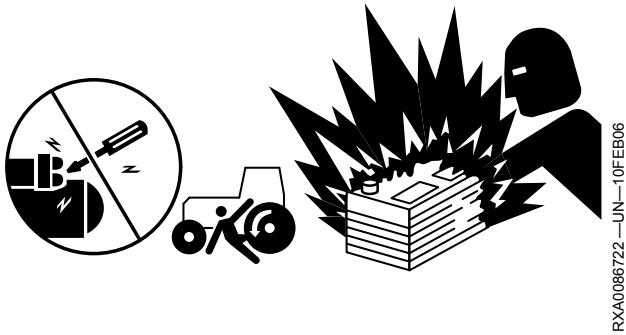
By warming engine coolant the heater reduces oil drag, eases starting and shortens warm up time.



TS210—UN—23AUG88

OURX935,000052C -19-22MAR06-1/1

Using a Battery Booster or Charger



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 a point away from booster batteries.

IMPORTANT: Be sure 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 booster batteries are producing a 12 volt charge.

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.

Booster Battery

1. Attach cable (red) to the remote positive terminal (A) of the starter and positive terminal of booster battery.
2. Attach (black) battery cable to negative terminal of booster battery. Attach other end to a ground (B) on tractor frame.
3. Remove ground cable first when disconnecting.

Battery Charger

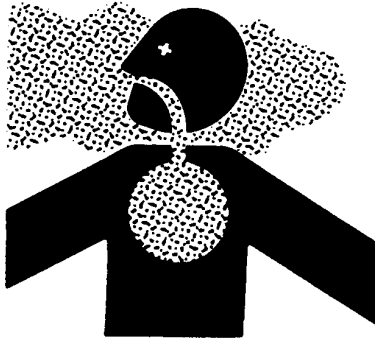
IMPORTANT: Set battery charger at the nominal 12 volt and no more than 16 volt maximum.

1. Attach positive charger lead to positive remote terminal with charger in OFF position. Attach negative charger lead to negative ground at tractor 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.

OURX935,0000794 -19-24DEC08-1/1

Operating the Tractor

Avoid Contact with Pesticides



TS220 —UN—23AUG88



TS272 —UN—23AUG88

CAUTION: This enclosed cab does not protect against inhaling harmful pesticides.

1. When operating in an environment where harmful pesticides are present, wear a long-sleeved shirt, long-legged pants, shoes, and socks.
2. If pesticide use instructions require respiratory protection, wear an appropriate respirator inside the cab.
3. Wear personal protective equipment as required by the pesticide use instructions when leaving the enclosed cab:
 - Into a treated area,

- To work with contaminated application equipment such as nozzles which must be cleaned, changed, or redirected.
 - To become involved with mixing and loading activities.
4. Before re-entering the cab, remove protective equipment and store either outside the cab in a closed box or some other type of sealable container or inside the cab in a pesticide resistant container, such as a plastic bag.
 5. Clean your shoes or boots to remove soil or other contaminated particles prior to entering the cab.

OURX935,0000795 -19-24DEC08-1/1

Clean Vehicle of Hazardous Pesticides

CAUTION: During application of hazardous pesticides, pesticide residue can build up on the inside or outside of the vehicle. Clean vehicle according to use instructions of hazardous pesticides.

When exposed to hazardous pesticides, clean exterior and interior of vehicle daily to keep free of the accumulation of visible dirt and contamination.

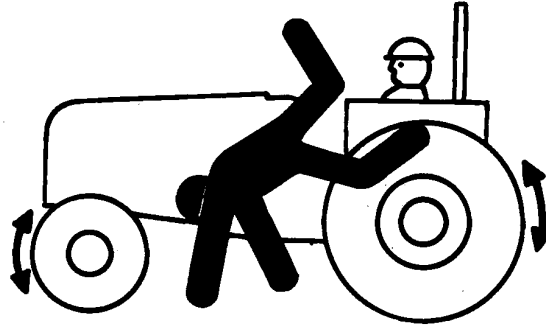
1. Sweep or vacuum the floor of cab.
2. Clean headliners and inside cowlings of cab.
3. Wash entire exterior of vehicle.
4. Dispose of any wash water with hazardous concentrations of active or non-active ingredients according to published regulations or directives.

OURX935,0000796 -19-24DEC08-1/1

Keep Riders Off Machine

Only allow the operator on the machine. Keep riders off.

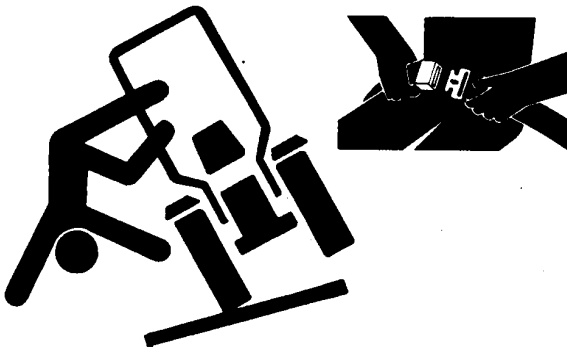
Riders on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Riders also obstruct the operator's view resulting in the machine being operated in an unsafe manner.



TS290 —UN—23AUG88

OURX935,0000797 -19-24DEC08-1/1

Using Seat Belts



TS205 —UN—23AUG88



RXA0099739 —UN—07NOV08

Optional Instructional Seat Shown

A—Seat Belts

CAUTION:

Minimize chance of possible injury from an accident. Use seat belts (A) when operating the tractor.

Instructional seat is provided only for training operators or diagnosing machine problems. Keep

all other riders off the tractor and equipment. Always wear your seat belt.

Inspect seat belts and mounting hardware annually. (See General Maintenance and Inspection section).

OURX935,0000798 -19-24DEC08-1/1

Using Emergency Exit

⚠ CAUTION: Use emergency exit only when cab door is blocked. In such an emergency, cover eyes, face and uncovered skin from jagged and broken glass, then using hammer break glass.

In case of an emergency only, use hammer (A) located over drivers left on cab post to break out rear window. Rear window provides a large exit path if cab door is blocked in an emergency situation, but other windows can be used if needed.

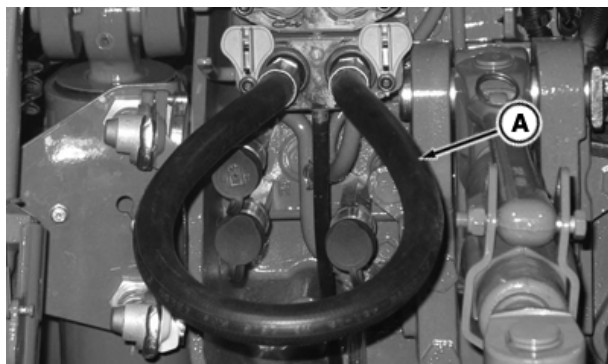
A—Hammer



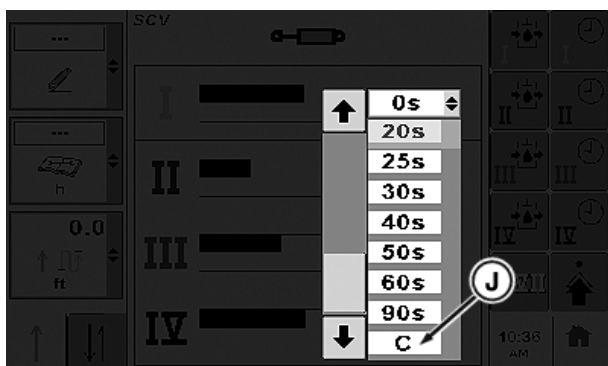
RXA009847 —UN—26NOV08

OURX935,00007F0 -19-01APR09-1/1

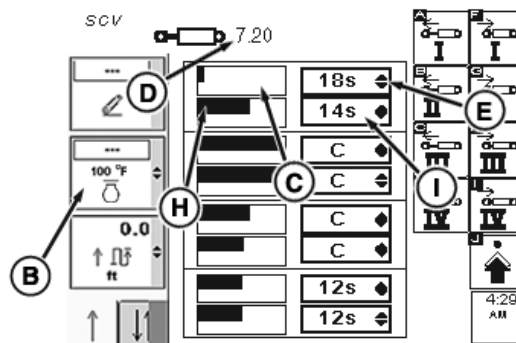
Transmission-Hydraulic System Warm-Up



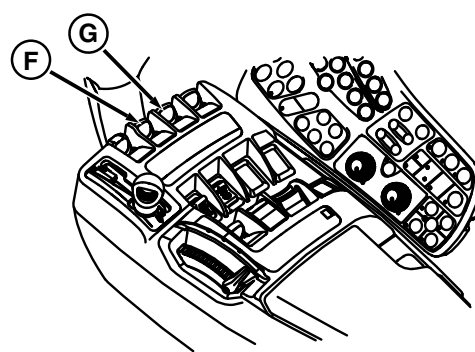
Install Jumper Hose into SCV Coupler



Drop Down Menu



Secondary Display



CommandARM

- | | | | |
|--------------------------------------|----------------------------|---------------------------------------|--------------|
| A—Jumper Hose | D—Displayed Detent Flow | G—SCV II Lever | J—Continuous |
| B—Hydraulic Temperature Screen | E—SCV I Extend Detent Time | H—SCV I Retract Detent Flow Bar Graph | |
| C—SCV I Extend Detent Flow Bar Graph | F—SCV I Lever | I—SCV I Retract Detent Time | |

Avoid operating tractor under load until transmission/hydraulic system has warmed up.

1. Install jumper hose (A) into SCV I coupler.
2. Select SCV button.
3. In the screen left region activate hydraulic temperature screen (B).
4. Select SCV I extend detent flow bar graph (C).
5. Rotate thumb wheel, forward to increase or rearward to decrease detent flow setting. Set SCV I detent flow at 7.2 (D).
6. Select arrows in SCV I extend time box (E).
7. At the pull down menu, scroll down to C, continuous (J), then press Confirm button.
8. Pull SCV I lever (F) to extend.
9. Select SCV I retract detent flow bar graph (H).
10. Rotate thumb wheel, forward to increase or rearward to decrease detent flow setting. Set SCV I retract detent flow at 7.2 .
11. Select arrows in SCV I retract time box (I).
12. At the drop down menu, scroll down to C, Continuous, then press Confirm button.
13. Follow above procedure to set SCV II as described above. At CommandCenter™ select SCV II extend and retract softkeys and pull SCV II lever (G) to perform system warm up.
14. Shift transmission to PARK position and operate engine at 1500 rpm.
15. Monitor left region hydraulic temperature screen until temperature reaches 38° C (100° F).
16. Return SCV I and SCV II lever to neutral position.
17. Disconnect jumper hose.

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OURX935,000014E -19-09NOV10-1/1

Operating Tractor with Independent Link Suspension

Start Up Mode

- Independent Link Suspension does not move until placed into either forward or reverse.
- Independent Link suspension flexes when transmission shift lever is placed in NEUTRAL or any forward or reverse gear.
- If tractor has settled, Independent Link Suspension may rise about 25 mm (1 in.) seeking to center.
- Leveling is completed when tractor wheel speed is above 0.5 km/h (0.3 mph).

Independent Link Suspension is Locked (in Restricted Mode) under Following Conditions:

- Operator activates hitch raise/lower switch
- Transmission shift lever placed in PARK
- Wheel speed less than 0.5 km/h (0.3 mph)
- While correcting for an out of level condition
- Operator applies both brake pedals

Rear Hitch:

- Controllers limit suspension response when hitch is raised or lowered with a load since front weight changes
- Depressing clutch and moving transmission shift lever into gear for four seconds and then back to NEUTRAL adjusts suspension toward the mid-point. This can be repeated until tractor levels when attaching and detaching implements.

Parking Tractor:

IMPORTANT: Prevent possible damage. Do not park tractor with equipment or items under the front end of tractor.

- Front end can settle when tractor is parked. Keep front end of tractor away from equipment or other items.

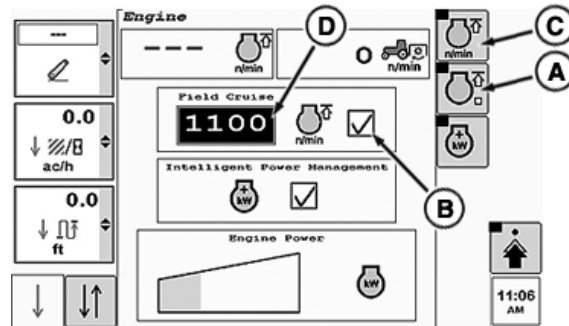
OURX935,00007A1 -19-02JAN08-1/1

Using FieldCruise™



Engine

RXA0099745 —UN—07NOV08



RXA0104035 —UN—24JUL09

Engine Page

A—FIELD CRUISE Settings Softkey

B—Check Box

C—FIELD CRUISE On/Off Softkey D—RPM Input Box

IMPORTANT: Engine must be running for FIELD CRUISE adjustment to operate.

Engine speed can be adjusted from 1100—2210 rpm. Changes to rpm setting take place immediately.

FIELD CRUISE utilizes a constant speed governor curve, providing instant response to varying loads.

Limiting engine speed in light load situations may improve fuel economy.

IVT : (Infinitely Variable Transmission)™ Selecting appropriate CommandCenter™ IVT setting is the preferred method of controlling engine rpm, but FIELD CRUISE can be considered for certain applications such as PTO operation when baling.

FIELD CRUISE must be on before settings may be changed. While operating, engine rpm will attempt to change to match speed shown in rpm input box (E).

To Activate FIELD CRUISE:

FieldCruise is a trademark of Deere & Company

IVT (Infinitely Variable Transmission) is a trademark of Deere & Company

CommandCenter is a trademark of Deere & Company

1. Select **Engine**.

NOTE: When FIELD CRUISE On/Off softkey (A) is selected, it toggles FIELD CRUISE on or off and displays check box (B) either checked for FIELD CRUISE ON or unchecked for FIELD CRUISE OFF.

2. When engine page appears, select FIELD CRUISE Settings softkey (C).

To Adjust Engine rpm:

NOTE: When FIELD CRUISE Settings softkey is selected, rpm speed (D) is high lighted.

3. Select **FIELD CRUISE Settings softkey**.
4. Rotate thumb wheel forward to increase engine rpm or rearward to decrease engine rpm.

OURX935,000014F -19-09NOV10-1/1

Intelligent Power Management (If Equipped)

Intelligent Power Management provides a controlled power boost of up to 26 kW (35 hp) to tractor under the following operating conditions:

- **Transport during acceleration;** power boost occurs in steps through the range from 23—28 km/h (14.3—17.4 mph).
- **Transport during deceleration;** power boost ramps down in equal steps in the range from 23—18 km/h (14.3—11.2 mph).
- **Tractor moving and PTO under load;** must be moving at least 0.5 km/h (0.3 mph) and PTO consuming moderate power before power boost engages.

Power increase is not provided under draft applications or non loaded rear PTO applications. Power increase is only provided when required.

1. Select **Engine**.

NOTE: When Intelligent Power Management is engaged, the Intelligent Power Management level (C) is identified by the solid portion displayed. Segments to the right of the solid portion indicate additional engine power above rated.

NOTE: Intelligent Power Management is available as a factory or field installed option.

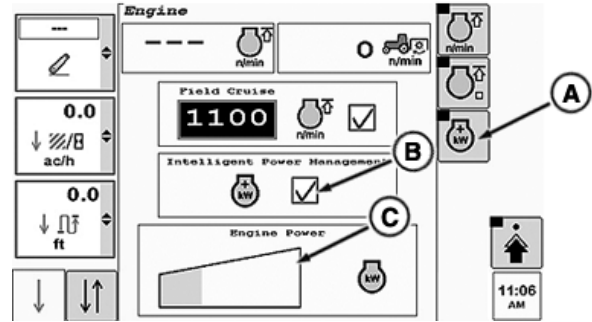
With tractor moving and rear PTO under load or in transport above 23 km/h (14.3 mph), power increase indicator (D) will appear on corner post display and Intelligent Power Management level is displayed on the COMMANDCENTER.

2. Select Intelligent Power Management softkey (A). Check appears in Intelligent Power Management check box (B).

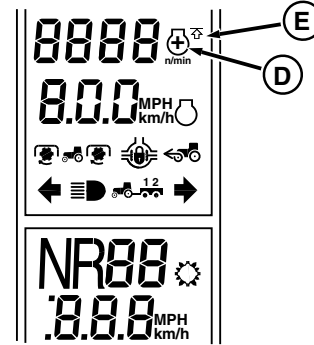
RXA0099745 —UN—07NOV08



CommandCenter™ Menu Engine Icon



Engine Page



Corner Post Display

- | | |
|--|----------------------------|
| A—Intelligent Power Management Softkey | D—Power Increase Indicator |
| B—Intelligent Power Management Check Box | E—FieldCruise™ Indicator |
| C—Intelligent Power Management Level | |

CommandCenter is a trademark of Deere & Company
FieldCruise is a trademark of Deere & Company

OURX935.0000150 -19-09NOV10-1/1

RXA0104036 —UN—22JUL09

RXA0104037 —UN—22JUL09

Using The Brakes

Use individual brakes (A or C) to assist in making sharp turns.

CAUTION: Avoid possible injury from losing control of tractor:

- Lock brake pedals together with arm (B) when operating on roads.
- Reduce speed if towed load weighs more than the tractor or when transporting loads under adverse conditions. Avoid hard braking applications. (See **TRANSPORTING TOWED EQUIPMENT**, in Transport Section and Implement Manual.)
- Tractor wheels may lock and skid on slippery downhill slopes. (For AutoPowr™ tractors, See **DOWNHILL OPERATION IN SLIPPERY CONDITIONS**, in the AutoPowr Transmission section.)

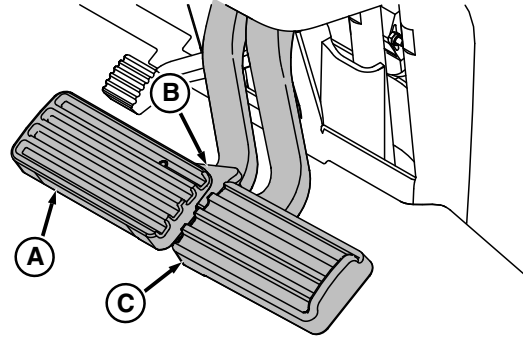
Test brakes with engine stopped to be sure manual brake system is functioning. (See General Maintenance and Inspection section).

Use individual brake pedals to assist in making sharp turns in non-transport situations.

IMPORTANT: Avoid unnecessary wear on brakes and increased fuel consumption. **DO NOT** rest feet on brake pedals during tractor operation.

For AutoPowr Tractors Only

AutoPowr is a trademark of Deere & Company



Lock Individual Brakes Together While Transporting

A—Brake Pedal
B—Arm

C—Brake Pedal

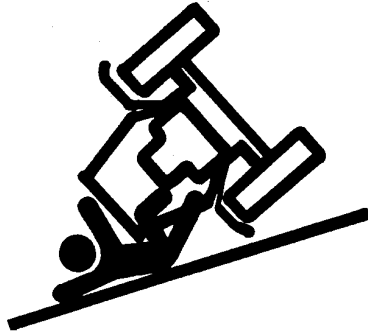
When operating at low idle, individual brake pedals will stop tractor without the use of clutch. To assist slow speed turning, depress either brake pedal while slowly increasing engine speed until desired turn is achieved. Returning engine speed to low idle while continuing to depress one brake pedal will slow tractor to a stop.

NOTE: *Depressing the clutch to stop tractor equipped with AutoPowr transmission is not necessary. (See **STOPPING AND PARKING TRACTOR** in Operating AutoPowr Transmission Section.)*

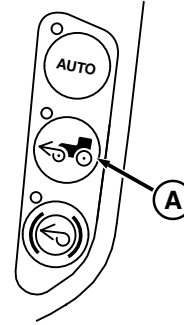
RXA0068386 —UN—27AUG03

OURX935,000079D -19-15SEP09-1/1

Using Mechanical Front-Wheel Drive



RW13093 —UN—07DEC88



RXA0099425 —UN—08OCT08

A—MFWD button

CAUTION: Avoid personal injury or death. Reduce speed when driving on icy, wet, or graveled surfaces.

Ballast tractor correctly to avoid skidding and loss of steering control. Engage front-wheel drive by using ON mode, rather than AUTO mode for four-wheel braking.

IMPORTANT: Use only **AUTO** or **BRAKE ASSIST** positions when transporting tractor. See Transport Section.

MFWD can be engaged and disengaged in all gears (forward and reverse) during operation and under full load. MFWD has three operating modes.

Center Button **ON** Mode—engages MFWD. MFWD on under all conditions. Indicator on display console will show engagement.

Top Button **AUTO** Mode. Indicator on display shows MFWD engagement.

MFWD Automatically Disengages;

- When pressing either brake pedal
- At speeds above 20.5 km/h (12.7 mph)

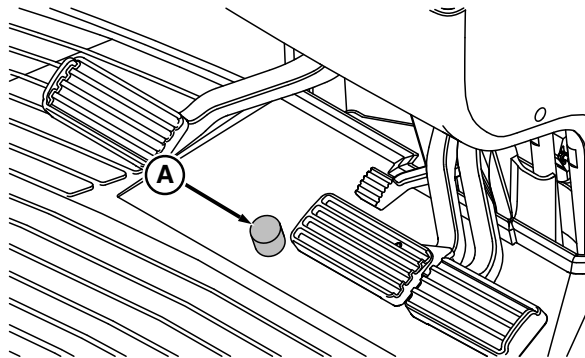
MFWD Automatically Engages;

- When BOTH brake pedals are depressed
- At **any** speed below 19.5 km/h (12 mph)

Bottom Button **BRAKE ASSIST** Mode—MFWD OFF **except** when BOTH brake pedals are depressed at speeds above 5 km/h (3 mph).

OURX935,0000580 -19-16SEP09-1/1

Using Differential Lock



A—Differential Lock Button

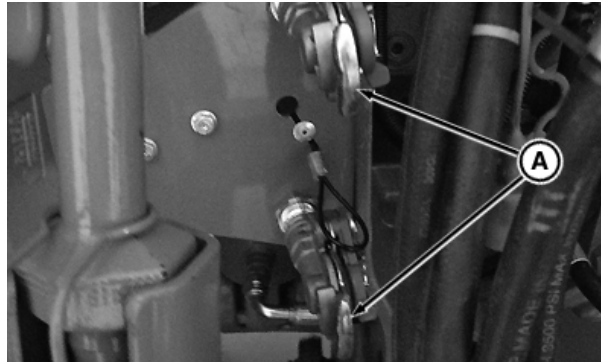
NOTE: On some tractors both front and rear axles have differential locks. When equipped with both, the front axle differential lock will engage when the rear differential lock engages.

When one wheel begins to slip, engage differential lock by pressing switch (A). Indicator light on display panel will light. Disengage differential lock by pressing either brake pedal.

RXA0089157 —UN—27AUG03

OURX935,0000581 -19-03DEC08-1/1

Using Trailer Air Brakes (If Equipped)



Brake Couplers

A—Couplers

CAUTION: Avoid possible injury from losing control of tractor equipped with AutoPowr™ transmission operating on downhill slopes. Tractor wheels may lock and skid on slippery downhill slopes. (See Downhill Operation In Slippery Conditions in Operating Tractor—AutoPowr Transmission section.)

IMPORTANT: Agricultural tractor trailer air brakes are designed only for use with agricultural implements and agricultural trailers. This system is not compatible with trailer air brake systems used by over-the-road vehicles and does not conform with the standards of over-the-road trailer air and electrical systems.

Air brakes are a dual-line system.

Clean connections before attaching air hoses. Lift cover from brake coupler and connect trailer hoses. Attach blue trailer hose, service hose, on to tractor blue coupler. Attach trailer red hose, park hose, to tractor red coupler.

NOTE: Trailer lighting plug may need to be rewired to work with tractor 7-pin connector. All trailer warning lights must be operational.

Attach trailer lighting plug to tractor 7-pin connector.

Start engine and allow air system to reach working pressure. While air pressure builds, Service Alert indicator

*AutoPowr is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company*

light comes on and air pressure warning appears on CommandCenter™. When operating pressure is reached, indicator light and warning display shut off automatically.

IMPORTANT: With trailer lines connected, do not drive tractor until operating pressure is reached and service alert light and warning display shut off.

Depress brake pedals to stop tractor-trailer while disengaging the clutch.

IMPORTANT: Reduce brake wear:

- Make sure the pressure hoses are connected.
- Select the same gear for both downhill and uphill driving.
- Check the air brake on the trailer regularly for correct functioning.

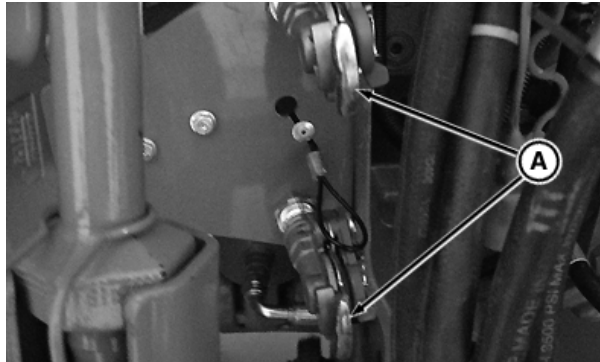
NOTE: Depressing the clutch to stop tractor equipped with AutoPowr transmission is not necessary. See *Stopping And Parking the Tractor in Operating Tractor—AutoPowr Transmission*.

Bring tractor-trailer to a complete stop, shift transmission to PARK before dismounting tractor or disconnecting lines from couplers. Seal connections with dust caps whenever hoses are disconnected.

RXA0097297 —UN—19FEB08

OURX935,0000B63 -19-09SEP09-1/1

Using Trailer Air Brakes (If Equipped)



Brake Couplers

A—Couplers

CAUTION: Avoid possible injury from losing control of tractor equipped with AutoPowr transmission operating on downhill slopes. Tractor wheels may lock and skid on slippery downhill slopes. (See Downhill Operation In Slippery Conditions in Operating Tractor—AutoPowr Transmission section.)

IMPORTANT: Agricultural tractor trailer air brakes are designed only for use with agricultural implements and agricultural trailers. This system is not compatible with trailer air brake systems used by over-the-road vehicles and does not conform with the standards of over-the-road trailer air and electrical systems.

Air brakes are a dual-line system.

Clean connections before attaching air hoses. Lift cover from brake coupler and connect trailer hoses. Attach blue trailer hose, service hose, on to tractor blue coupler. Attach trailer red hose, park hose, to tractor red coupler.

NOTE: Trailer lighting plug may need to be rewired to work with tractor 7-pin connector. All trailer warning lights must be operational.

Attach trailer lighting plug to tractor 7-pin connector.

Start engine and allow air system to reach working pressure. While air pressure builds, Service Alert indicator

light comes on and air pressure warning appears on CommandCenter display. When operating pressure is reached, indicator light and warning display shut off automatically.

IMPORTANT: With trailer lines connected, do not drive tractor until operating pressure is reached and service alert light and warning display shut off.

Depress brake pedals to stop tractor-trailer while disengaging the clutch.

IMPORTANT: Reduce brake wear:

- Make sure the pressure hoses are connected.
- Select the same gear for both downhill and uphill driving.
- Check the air brake on the trailer regularly for correct functioning.

NOTE: Depressing the clutch to stop tractor equipped with AutoPowr transmission is not necessary. See *Stopping And Parking the Tractor in Operating Tractor—AUTOPOWR Transmission*.

Bring tractor-trailer to a complete stop, shift transmission to PARK before dismounting tractor or disconnecting lines from couplers. Seal connections with dust caps whenever hoses are disconnected.

OURX935,00007A1 -19-12APR09-1/1

RXA0097297 —UN—19FEB08

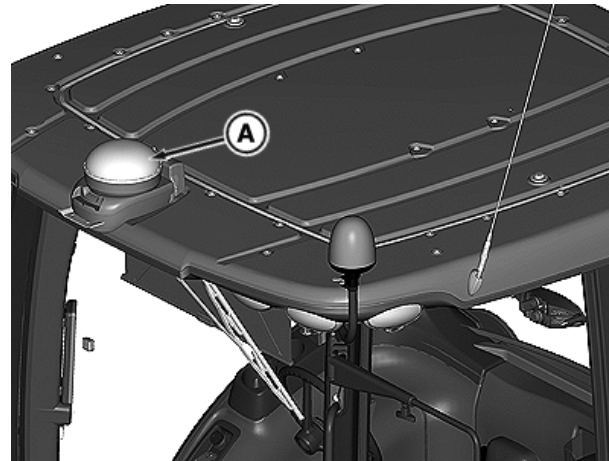
AutoTrac™ Assisted Steering System (If Equipped)

NOTE: Electro-hydraulic steering is required for AutoTrac to function. Refer to AutoTrac Operator's Manual for detailed instructions.

- AUTOTRAC system utilizes StarFire™ position receiver (A), GreenStar display and mobile processor (B) to assist operator in steering tractor. See Locating GreenStar System Connections in this Operator's Manual.
- Operator must enter implement width minus overlap desired in GreenStar display, and drive first field pass in a straight line, to enter starting and ending points of desired path.
- To activate AutoTrac initially, push Resume switch located on the CommandARM after Greenstar display has been enabled. For each field pass after that, the mark (C) on the display should stay in the middle of the tractor hood (D), when AutoTrac is being used.
- AutoTrac is a straight-line guidance system. Operator must turn vehicle at the end of each pass and to go around any field obstacles. Steering control is obtained by simply turning steering wheel.

A—Position Receiver
B—Mobile Processor

C—Mark
D—Tractor Hood



RXA0099413 —UN—25FEB09



RXA0072417 —UN—05DEC03

AutoTrac is a trademark of Deere & Company
StarFire is a trademark of Deere & Company

OURX935,00007A2 -19-24DEC08-1/1

Operating PowerShift Transmission

Operating the Transmission

CAUTION: Avoid personal injury or damage to tractor. If engine starts with the shift lever in gear, there is a malfunction of the starting circuit. Repair should be made immediately by your John Deere™ dealer.

IMPORTANT: Prevent transmission or clutch damage:

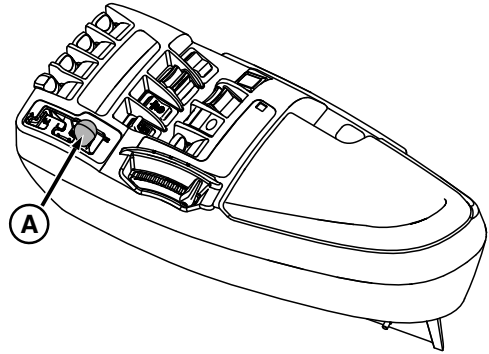
- Never depress clutch pedal while tractor is rolling downhill or coasting since serious transmission damage may result
- Never attempt to start tractor by towing or pushing
- Stop tractor completely before shifting to PARK position
- Avoid excessive ballast
- Avoid continuous operation under full throttle and full load conditions below 1800 rpm
- Clutch pedal must be fully depressed to completely disengage clutch

Transmission is shifted using lever (A).

Transmission can be shifted, without use of clutch pedal, either into a forward or reverse direction.

Clutch pedal allows operator maximum manual control for connecting implements, operating in confined areas, or rocking tractor.

John Deere is a trademark of Deere & Company



A—Transmission Shift Lever

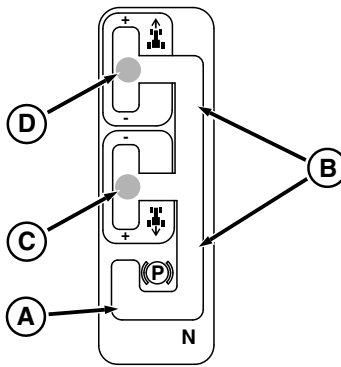
The corner post will display "N" for NEUTRAL, or "F" or "R" for forward and reverse directions plus selected gear.

NOTE: Operator presence switch is built into seat to prevent shifting into gear unless operator is in seat or clutch pedal is depressed.

RXA0098723 —UN—24JUL08

OURX935,0000A17 -19-03SEP09-1/1

Shifting the Transmission



A—Rear Slot

B—Right Slot

C—Center Slot

D—Front Slot

Shift Lever Positions

PARK — Rear slot (A)—Park brake applied when lever is fully forward in slot.

NEUTRAL — Right slot (B)—Park brake is released when lever is moved to the right slot.

Reverse — Center slot (C)—Tractor will begin moving rearward when lever enters this slot. Push lever forward for downshifts and pull rearward for upshifts.

Forward — Front slot (D)—Tractor will begin moving forward when lever enters this slot. Push lever forward for upshifts and pull rearward for downshifts.

Commanded Gears

NOTE: Use a higher gear and lower engine speed for light load operations to save fuel and reduce wear. Under full load conditions, use full throttle engine speed.

Transmission will start out in 7F and 2R after engine is started. These are the default gears.¹

Once in forward or reverse, commanded gear changes to the last gear of operation before shifting to NEUTRAL.

The initial commanded gear can also be changed prior to initiating motion to match the operation.

FORWARD gears (1 through 13) and REVERSE gears (1 through 3) may be preselected by depressing clutch pedal and pushing or pulling shift lever until desired gear is displayed.

Cold Weather Starting

Transmission will not shift into 15F and 16F speeds until normal operating temperature has been reached. Delayed shifting may also be noticeable.

Shifting From Reverse

The highest forward gear transmission will automatically shift to is 11F, when shifting from reverse. For example, if transmission is in 13F and is shifted to reverse, and then back to forward, transmission will automatically shift to 11F.

However, if transmission is in 13F or higher and tractor is stopped by using clutch or shifting to NEUTRAL and not shifted through reverse, transmission will be in 13F when shifted forward again.

Shifting—WITHOUT Using Clutch Pedal

Hold lever to shift up or down to selected gear. Transmission will shift one gear at a time until lever is released.

"Bump" lever to quickly shift up or down to selected gear. Transmission will skip gears, if lever is moved faster than transmission can shift.

Shifting—Using Clutch Pedal

Hold lever to shift up or down until desired gear is displayed. Transmission will go into commanded gear when clutch pedal is released.

"Bump" lever to quickly shift up or down until desired gear is displayed. Transmission will go into commanded gear when clutch pedal is released.

Rapid Shift

To reach transport speed quickly, depress clutch pedal and rapidly "bump" shift lever to 13F. Transmission will shift directly to 13F when clutch is released. Once tractor is underway in 13F, "bump" shift lever to 16F.

Shuttle Shifting (Direction Change)

Moving shift lever between FORWARD and REVERSE slots causes transmission to modulate directly to opposite direction of travel without clutching or braking.

Shuttle shift occurs between last commanded forward and reverse gears.

Commanded gear will be 2R, regardless of previous reverse gear, when shifting from 14F—16F to reverse.

Ground Speed Matching

CAUTION: Avoid possible accident and injury from loss of vehicle control. Never coast down hill.

Continued on next page

OURX935,0000A18 -19-24JUL09-1/2

RXA008687 —UN—09FEB06

Transmission will match ground speed as clutch is released after tractor slows when clutch pedal is depressed at speeds greater than 13F or 3R.

Transmission will not match ground speeds as clutch is released after tractor slows when clutch pedal is depressed at speeds below 13F or 3R. Transmission will remain in 13F or 3R even if tractor comes to complete stop.

Transmission will not shift up to match ground speed as clutch is released, if tractor speeds up while clutch pedal is depressed.

¹*Programmed forward gear can be changed from the default, 7F up to 13F; reverse gear can be changed from 2R to 1R. See Setting Startup Gear in this section.*

Load Starting—13F

Starting out in 13F with a heavy load may cause clutch to slip excessively. A flashing transmission symbol and a Service Alert warning light will display. Downshift to a lower gear.

Transmission will automatically shift from 13F to 11F if not downshifted and too much heat is detected.

OURX935,0000A18 -19-24JUL09-2/2

Setting Startup Gear And RPM Droop

RXA0104032 —UN—22JUL09

Selecting Forward Startup Gear

1. Select **Transmission**.
2. Select **Advanced Settings** soft key.
3. Using thumb wheel, scroll down to arrows in forward gear drop down box (A).
4. Using Confirm button select forward gear (B).

Selecting Reverse Startup Gear

1. Using thumb wheel, scroll down to reverse gear drop down box (C) and press Confirm button.
2. Using Confirm button select reverse gear (D).

Selecting rpm Droop

1. Using thumb wheel, scroll down to rpm Droop drop down box (E).

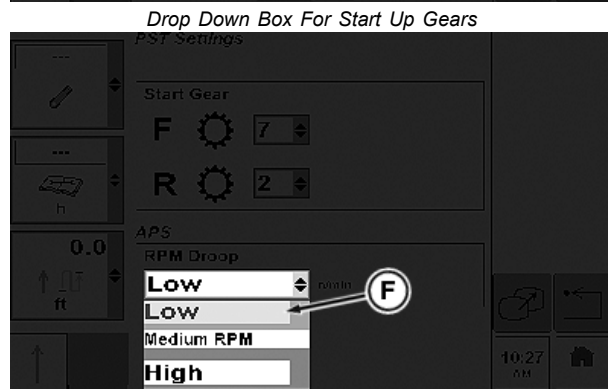
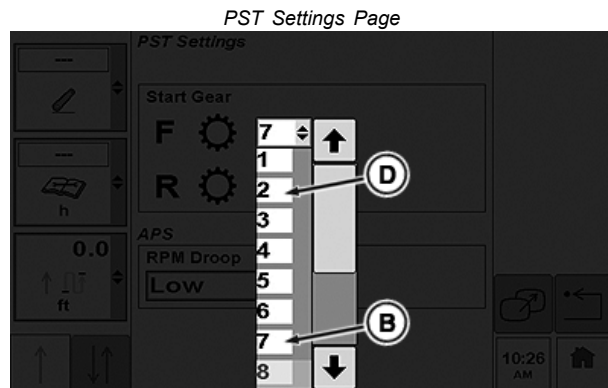
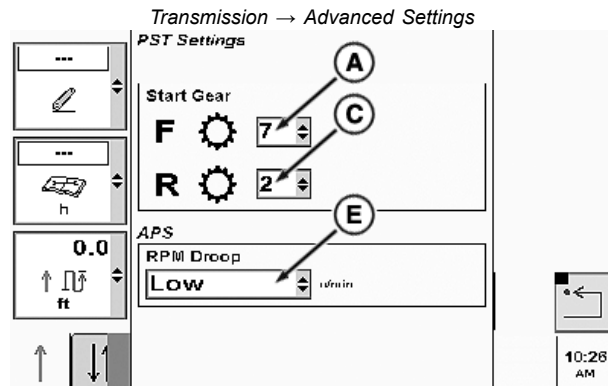
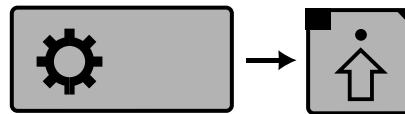
NOTE: When droop drop down box appears, scroll thumb wheel to appropriate selection where it will highlight automatically.

2. Press Confirm button to select required highlighted droop setting (F).

Autoshift sensitivity can be changed through transmission setting in CommandCenter. Medium setting set from factory should satisfy most field applications.

- 1. Low RPM** — Tightest engine speed control setting for APS load mode. Used in applications where tight engine speed control is desired. Automatically selected by the PTP control unit when PTO is ON. Low RPM text description implies that minimal engine speed droop is required to initiate automatic shifts.
- 2. Medium RPM** — Moderate engine speed control setting for APS load mode. Factory default and used for most field applications where a moderate level of change in load will be encountered and a balanced sensitivity to changing loads is desired.
- 3. High RPM** — Widest engine speed control setting for APS load mode and allows more load change before initiating any automatic shifts. Useful where highly variable load conditions are encountered.

Transmission will downshift as many gears as necessary under heavy load. Throttle position change allows a maximum downshift or upshift of three gears.



Drop Down For Droop Setting

- | | |
|------------------------------|-------------------------|
| A—Forward Gear Drop Down Box | D—Reverse Gear Selected |
| B—Forward Gear Selected | E—RPM Droop Box |
| C—Reverse Gear Drop Down Box | F—RPM Droop Selection |

OURX935,0000A19 -19-16SEP09-1/1

Operating Automatic PowerShift (APS)

Automatic PowerShift (APS) shifts transmission to maintain engine speed. APS will not shift above maximum gear selected. Control unit determines shift points based on throttle setting, engine speed, and engine load.

Setting APS

1. Select **Transmission**.
2. Place tractor in forward gear. Selected gear appears in current gear box (A).
3. As tractor travels forward in selected gear, select APS soft key (C) to activate APS. Current gear now appears in both current gear box and set gear box (B).
4. Transmission can now be shifted to any other gear.
5. Select Resume switch (D) transmission will default to set gear.
 - Set throttle to full engine rpm.
 - Select maximum forward gear.
 - Press the **SET** switch. APS indicator will light. APS will automatically downshift and upshift as engine rpm or load changes.
 - When using Automatic PowerShift.

Any manual shift cancels APS. Pressing Automatic PowerShift button restores control of shifting to APS.

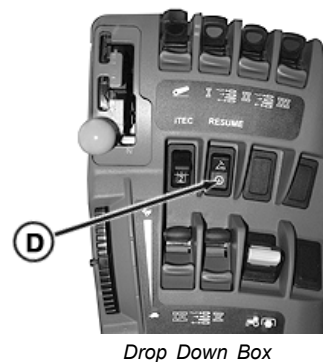
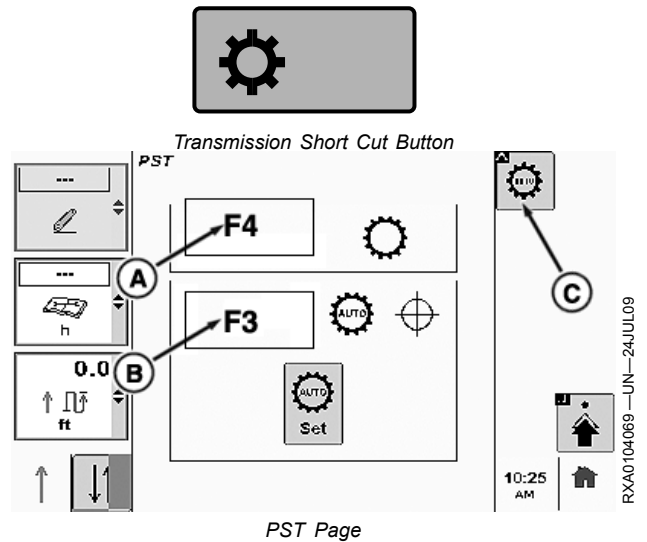
Depressing clutch pedal suspends APS but will not cancel APS function. APS will resume when clutch pedal is released.

NOTE: APS can be programmed into iTEC™

APS is cancelled when operator shifts transmission to another gear, neutral or reverse.

iTEC is a trademark of Deere & Company

RXA0103941 —UN—24JUL09



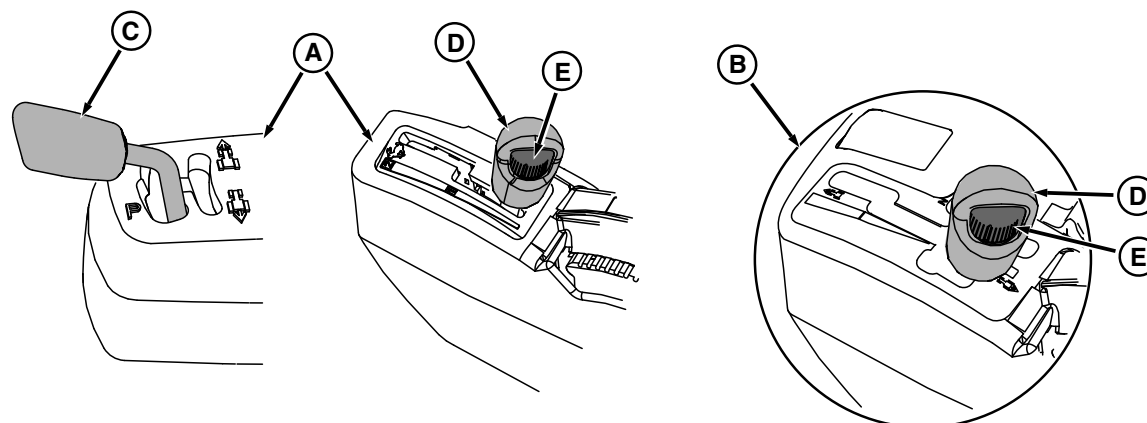
A—Current Gear Box
B—Set Gear Box

C—APS Soft Key
D—Resume Switch

OURX935,0000A1A -19-31JUL09-1/1

Operating IVT/AutoPowr Transmission

Controls Identification



IVT (Infinitely Variable Transmission)™ /AutoPowr™ Controls

A—Left Hand Reverser Controls
B—Right Hand Reverser

C—Left-Hand Reverser Lever
D—Speed Control Lever

E—Set Speed Adjuster

IVT/AutoPowr transmission provides infinite ground speeds in the forward mode from 50 meters per hour (164 feet per hour) to 40 km/h (25 mph). Reverse mode provides infinite ground speeds from 50 meters per hour (164 feet per hour) to 20 km/h (12 mph). (Maximum speeds may vary slightly due to tire size.)

IVT/AutoPowr tractors are equipped with either a left-hand reverser or right-hand reverser. A left-hand configuration requires two levers; the left-hand reverser lever (C) which controls tractor direction, park and neutral. The second lever, the speed control lever (D), located on the CommandARM™ that controls ground speed.

The right-hand option consists of a right-hand reverser lever (B) located in the COMMANDARM and controls tractor direction, park, neutral, and ground speed.

*IVT (Infinitely Variable Transmission) is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company*

There are two variable speed bands in the forward direction on all tractors. Tractors equipped with a left-hand reverser also have two speed bands in reverse. Tractors equipped with right-hand reverser will have only a single reverse band.

Set speeds are the maximum ground speeds in each speed band. The speed control lever must be pushed to the end of the slot and be at full throttle. To achieve set speeds, rotate set speed adjuster (E). Clockwise increases speed. Counterclockwise decreases set speed.

RXA0101118 —UN—20MAR09

OURX935,000013D -19-08NOV10-1/1

Left-Hand and Right-Hand Reverser Shift Patterns

Park (A): Engages park brake to hold tractor stationary, preventing tractor from rolling; "P" will appear on corner post display.

Neutral (B): Disengages park brake allowing it to roll, but does not transmit power to the wheels; "N" will appear on the corner post display.

Reverse (C): Transmits power to wheels for rearward travel; "R" will appear on corner post display.

Power Zero (D): Hand-held position is used to temporarily hold tractor stationary on a relatively flat surface.

Scroll Position (E): Scrolls set speeds on corner post display.

Forward Speed Band 1 (F): Transmits power to wheels for forward travel; "F1" will appear on corner post display.

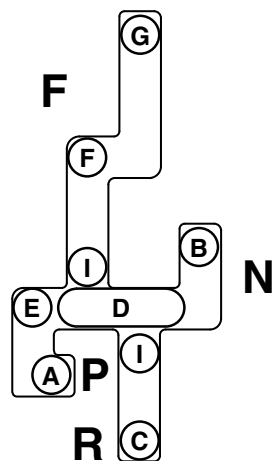
Forward Speed Band 2 (G): Transmits power to wheels for forward travel; "F2" will appear on corner post display.

Forward (H): Transmits power to wheels for forward travel; "F" will appear on corner post display.

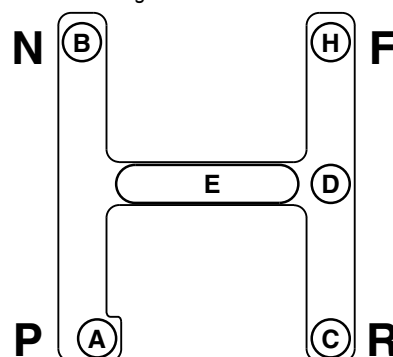
Minimum Speed (I): Transmits power to wheels in direction selected.

A—Park
B—Neutral
C—Reverse
D—Power Zero
E—Scroll Position

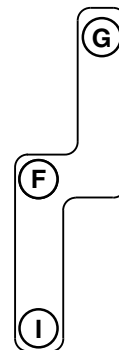
F—Forward Speed Band 1
G—Forward Speed Band 2
H—Forward
I— Minimum Speed



Right-Hand Reverser



Left-Hand Reverser



Left-Hand Reverser Speed Lever

RXA0077572 —UN—14MAY08

RXA0100319 —UN—26JAN09

RXA0077571 —UN—10JUN05

OURX935,00009BF -19-02JUN09-1/1

Operating The Transmission

CAUTION: Avoid personal injury or damage to tractor. If engine starts in gear, there is a malfunction in the starting circuit. Repairs should be made immediately by your John Deere™ dealer.

IMPORTANT: Prevent transmission or clutch damage:

- Never depress clutch pedal while tractor is rolling downhill or coasting, as serious transmission damage may result
- Never attempt to start tractor by towing or pushing
- Stop tractor completely before shifting to PARK position
- Avoid excessive ballast
- Clutch pedal must be fully depressed to completely disengage clutch. Never rest foot on clutch pedal while tractor is moving

NOTE: On tractors equipped with IVT/AutoPowr transmission an automatic calibration update is triggered after all the following conditions are true for a continuous 20 seconds:

- Engine operating at less than 1300 rpm
- Transmission is in PARK
- Transmission oil temperature is greater than 25 °C (77°F)
- PTO OFF

Calibration is attempted only once per engine start and will be aborted if shift lever is moved during the calibration process. If calibration process is interrupted, tractor reacts normally to operator commands. This does not affect the tractor and calibration is not attempted again during that

engine start up. The calibration process takes approximately 45 seconds, but the noticeable portion of the calibration process takes only 30 seconds. During the process, the software is updating values for the control valves. The operator will hear a slight gear whine as various speeds and shifts are performed.

Starting Engine

IMPORTANT: Tractor with left-hand reverser can start in neutral.

Tractors with right-hand reverser cannot start in neutral. If tractor does start in neutral, contact your John Deere dealer for repair.

Ensure transmission is in PARK position; corner post monitor will display "P" for park. Start engine.

Stopping Engine

For tractors with left-hand reverser, reduce engine speed to low rpm, pull speed control lever back to slowest setting and depress brake pedals until travel stops. Move left-hand reverser lever to PARK position. Slowly release brakes and stop engine.

For tractors with right-hand reverser, reduce engine speed to low rpm, pull right-hand reverser lever back to slowest setting and depress brake pedals until travel stops. Move right-hand reverser lever to PARK position. Slowly release brakes and stop engine.

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

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OURX935,000013E -19-08NOV10-1/1

Adjusting Set Speeds

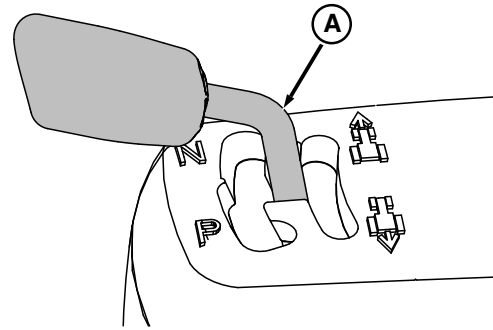
CAUTION: Avoid unexpected rapid acceleration. Check and adjust set speeds before putting tractor in motion.

Turn key switch to "RUN" position. (For tractors with right-hand reverser, engine must be running.)

Move lever (A) to Scroll position. Forward and reverse set speeds will scroll on corner post display pausing at each speed for two seconds. Bar graph indicates approximate set speeds for each forward and reverse speed band.

Adjust each speed when it displays by rotating set speed adjuster on speed control lever forward to increase the set speed value or rearward to decrease it.

NOTE: Set speed adjustments may affect the corresponding set speed of the opposite direction. (See *ADJUSTING REVERSE-FORWARD SET SPEED RATIO* in this section.)



Left-Hand Reverser Shown

A—Left-Hand Reverser

RXA0068281 —UN—27AUG03

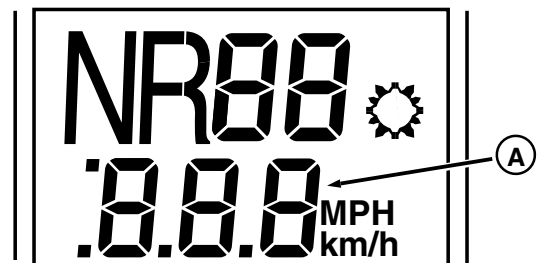
OURX935,00009C1 -19-02JUN09-1/2

Set speed of a selected speed band and the ground speed of the tractor can be adjusted while the tractor is moving by rotating set speed adjuster (B). Increasing set speed value will increase ground speed. Decreasing set speed value will decrease ground speed. New set speed will indicate on display (A).

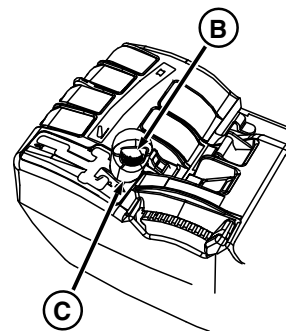
Maximum ground speed of a selected speed band is attained at full throttle when speed control lever (C) is pushed all the way forward to end of slot of the respective speed band.

A—Display
B—Set Speed Adjuster

C—Speed Control Lever



Corner Post Display



Right-Hand Reverser Shown

RXA0098901 —UN—20AUG08

RXA0101043 —UN—19MAR09

OURX935,00009C1 -19-02JUN09-2/2

Set Speeds—Guidelines And Examples

The value of Set Speed 1 will always be at least 10% less than the value of Set Speed 2. This ensures a smooth transition between speed bands and is illustrated in the following examples.

NOTE: F1 refers to Forward mode, Set Speed 1 in speed band 1. F2 refers to Forward mode, Set Speed 2 in speed band 2.

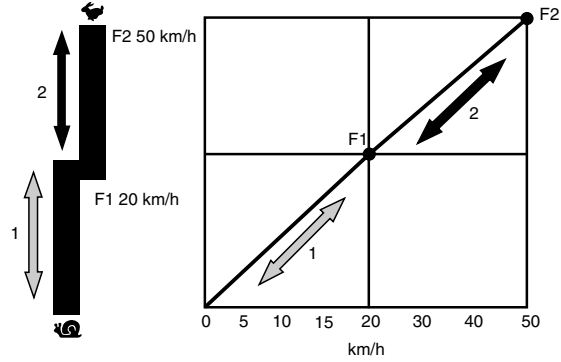
Example 1: Maximum Forward Set Speeds are selected for each speed band.

Example 2: Value of Set Speed 1 has been reduced to 10 km/h (6 mph). Set Speed 2 value has not been changed, but the lower portion of speed band 2 has automatically decreased to meet the top end of speed band 1.

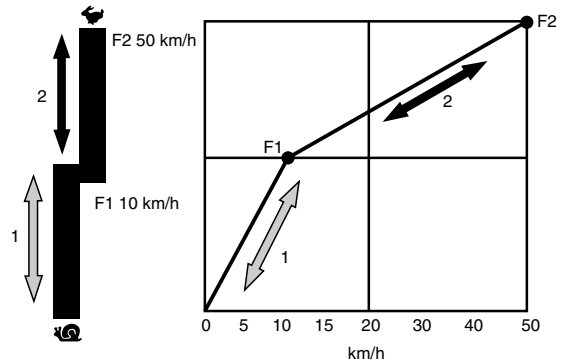
NOTE: Actual set speed increase or decrease will be at least 10% of the adjusted speed band, and can range up to 12.5%. Ten percent is used in illustrations of Examples 3 and 4, and can actually differ by as much as 2.5% of the speeds shown.

Example 3: Set Speed 2 has been reduced to 5 km/h (3 mph). Set Speed 1 automatically decreases to 4.5—4.3 km/h (2.8—2.7 mph), 10—12.5% below the new value of Set Speed 2.

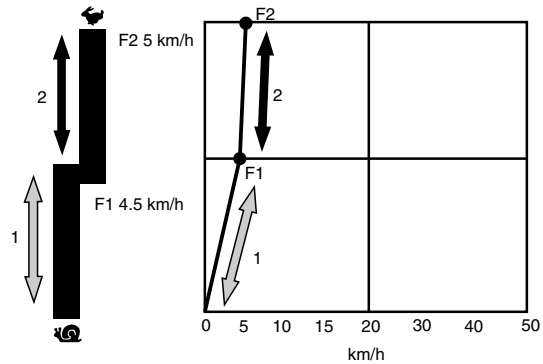
Example 4: Set Speed 1 has been increased to 20 km/h (12.4 mph), which is higher than the value of Set Speed 2. Set Speed 2 will automatically increase to 22—22.5 km/h (13.7—14.0 mph), 10—12.5% above the new value of Set Speed 1.



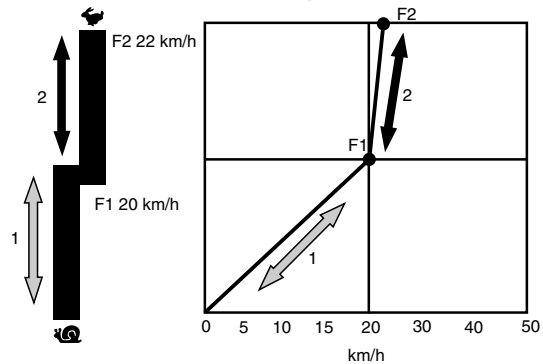
Example 1



Example 2



Example 3



Example 4

Adjusting Set Speeds To Match Varying Load Conditions

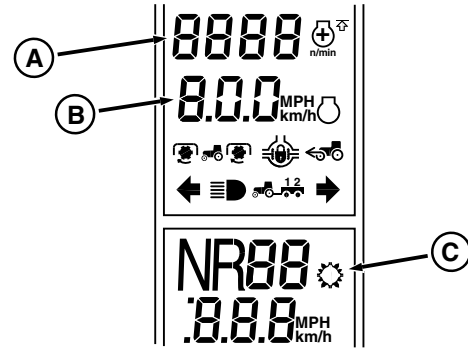
All Tractors:

Set speeds are obtained from measuring tractor axle speed combined with tire size details. Select a set speed that is approximately 3 km/h (2 mph) higher than the desired working speed in order to obtain maximum productivity in applications where a precise forward speed is **not** critical, such as plowing. The tractor will reach the higher set speed value during a no load or light load condition.

Symbol (C) indicates engine is at full load and transmission is shifting to maintain peak tractor performance. Commanded speed may not match actual speed.

Tractors Equipped with Radar:

The ground speed (A) indicated on the display will always be lower than the set speed (B) **if there is a measurable wheel slip**.



A—Ground Speed
B—Set Speed

C—Full Load Symbol

RXA0098902 —UN—26JAN09

OURX935,00009C3 -19-02JUN09-1/1

Adjusting Reverse-Forward Set Speed Ratio

The ratio of a Reverse Set Speed to its corresponding Forward Set Speed can be adjusted.

1. Select **Transmission**.
2. Select **Advanced soft key**.
3. Select drop down box (A) which will display available options.
4. Using Confirm button, select speed ratio (B) from drop down box.
5. Selected speed ratio displayed (C).

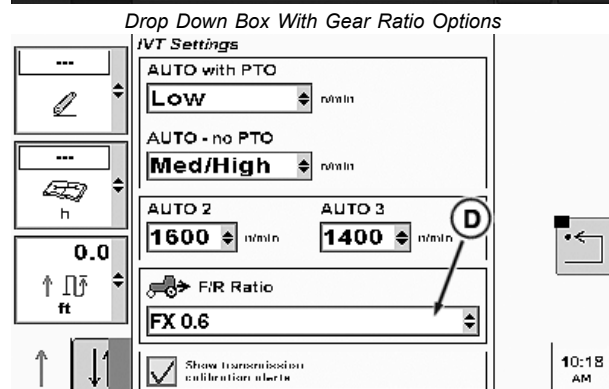
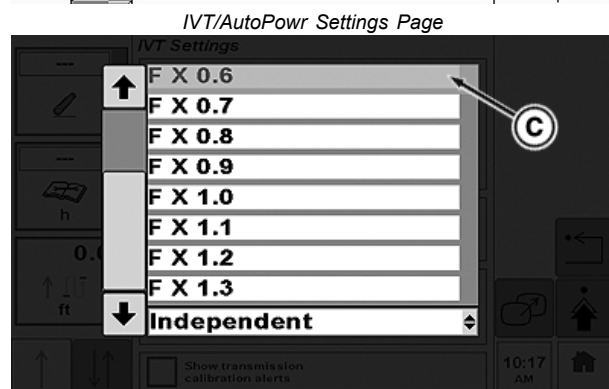
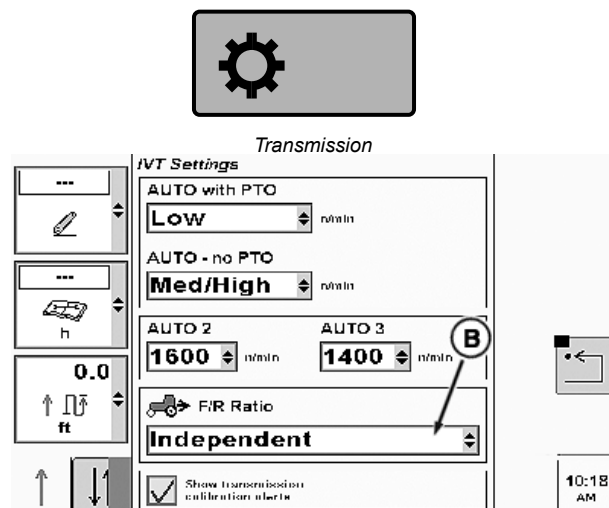
Reverse/Forward Ratio can be set to operate independent of each other or from 0.3-to-1.3 times as fast (in 0.1 increments). Forward and Reverse Set Speeds are the same at 1.0 setting (1 to 1 ratio).

Forward Set Speed is 4 km/h (2.5 mph) and Ratio is:	Reverse Set Speed km/h (mph) is:
0.3	1.2 (0.4)
0.4	1.6 (0.8)
0.5	2.0 (1.2)
0.6	2.4 (1.5)
0.7	2.8 (1.75)
0.8	3.2 (2.)
0.9	3.6 (2.2)
1.0	4.0 (2.5)
1.1	4.4 (2.7)
1.2	4.8 (3.)
1.3	5.2 (3.2)
Independent	No ratio because reverse and forward gears function independent of each other. Reverse Set Speed is limited to be no more than 5 km/h (3 mph) faster than Forward Set Speed.

Maximum reverse speed is to 20 km/h (12 mph) regardless of ratio.

NOTE: Only tractors equipped with a left-hand reverser have a Reverse Set Speed 2 (RSS2) band.

RXA0103941 —UN—24JUL09



IVT/AutoPowr Settings Page With Ratio Option Change

OURX935,000013F -19-08NOV10-1/1

Putting Tractor In Motion

CAUTION: Avoid possible injury due to sudden or unexpected acceleration. Be aware of set speeds and throttle position before putting tractor in motion.

NOTE: Tractor cannot be put in gear unless operator is seated. Information indicator will light and a corresponding message appears on the CommandCenter display when Forward, Reverse, or NEUTRAL positions are selected and operator is **not** in the seat.

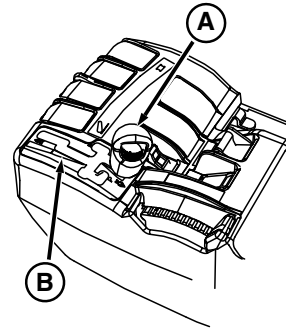
To initiate motion, move lever from PARK position to either Forward or Reverse position with operator seated.

NOTE: Cold conditions may affect IVT (Infinitely Variable Transmission)[™]/AutoPowr[™] tractor performance:

- Engine speed will be limited to 1500 rpm if transmission oil temperature is less than -5°C (23 °F).
- Wheel speed is limited to 5 km/h (3 mph) if transmission oil temperature is less than -15°C (5 °F).

Using the clutch to put tractor in motion is not necessary.

IVT (Infinitely Variable Transmission) is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company



Right-Hand Reverser Shown

A—Speed Control Lever

B—Speed Band

NOTE: In the event of a seat switch failure, tractor can still be put into motion by cycling (depress/release) the clutch or brake pedals.

Move reverser lever into Forward or Reverse position.

Use throttle and speed control lever to obtain desired speed.

RXA0079023 —UN—28FEB05

OURX935,0000140 -19-08NOV10-1/1

Tractor Speed Displays On Corner Post Display And CommandCenter™

A set speed (A) is the maximum ground speed of selected speed band.

Ground Speed

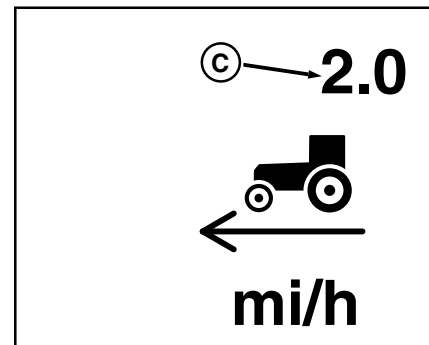
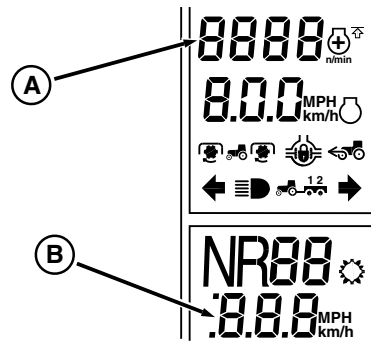
The ground speed (B) value on tractors equipped with radar will always show a lower value than the set speed selected if there is measurable wheel slip.

Commanded Speed (CommandCenter)

Commanded speed (C) is determined by any given position of the speed control lever at full engine speed. If the lever is pushed all the way forward to the end of the speed band slot, commanded speed will equal set speed.

A—Set Speed
B—Ground Speed

C—Commanded Speed



RXA0098903 —UN—19MAR09

RXA0098900 —UN—20AUG08

CommandCenter is a trademark of Deere & Company

OURX935,00009C6 -19-02JUN09-1/1

Using Creeper Mode

Creeper mode is entered automatically when a set speed of less than 2 km/h (1 mph) is selected in speed band 1.

The default ratio between speed bands 1 and 2 is 2.5 in creeper mode. This is done to eliminate rapid acceleration when lever is moved into speed band 2. For example, if speed band 1 is set at 100 m/h (328.1 ft/h), the corresponding maximum speed in band 2 is 250 m/h (820.2 ft/h). The default ratio may be temporarily overridden (such as when making headland turns) by increasing speed band 2 to a maximum of 10 km/h (6 mph). Moving the lever back to band 1 restores the previous working speeds.

Creeper mode is exited when Set Speed 1 is adjusted above 2 km/h (1 mph) or Set Speed 2 is adjusted above 10 km/h (6 mph).

In creeper mode, reverse set speed can be set to no more than forward set speed. The reverse set speed limit can be temporarily overridden by moving the Right Hand Reverser Lever into Reverse Speed Band and increasing the reverse set speed. Moving the Right Hand Reverse Lever from Reverse Speed Band to Forward Speed Band 1 and not changing Forward Set Speed 1 will reset Reverse Set Speed to no more than Forward Set Speed.

OURX935,00009C7 -19-02JUN09-1/1

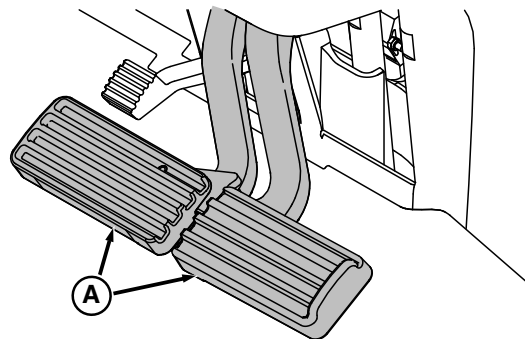
Using Individual Brake Pedals

Individual brake pedals (A) can be used to assist with slow speed off-road turning, such as hooking up to an implement. At low idle, the AutoClutch feature will stop the tractor if operator depresses only one brake pedal. IT IS NOT NECESSARY TO DEPRESS THE CLUTCH.

To assist in hooking up an implement, depress either brake pedal while slowly increasing engine speed until desired turn is achieved. Returning engine speed to low idle while continuing to depress one brake pedal will slow tractor to a stop.

⚠ CAUTION: Avoid possible injury. Braking the tractor while commanding a high engine speed will require higher brake pedal force.

Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, the tractor will automatically accelerate to the speed currently commanded by the throttle and speed control lever.



A—Individual Brake Pedals

RXA0068273 —UN—27AUG03

OURX935,00009C8 -19-02JUN09-1/1

Stopping And Parking The Tractor

CAUTION: Avoid possible injury due to losing control of tractor. Couple brake pedals (A) together when driving on roads.

1. Reduce throttle to low engine rpm.
2. Depress both brake pedals. **It is not necessary to depress clutch.** The brakes will activate AutoClutch (automatic clutch function within transmission) to stop tractor.
3. Move speed control lever to slowest position.
4. Shift reverser to PARK position.
5. Lower implements and shut off PTO.
6. Shut engine off and remove key.

Stopping The Tractor using the AutoClutch

Depress both brake pedals. **It is not necessary to depress clutch, reduce throttle, or move speed control lever.** Brakes will activate AutoClutch. When brakes are released, tractor accelerates to currently commanded speed.

CAUTION: Avoid possible injury. Braking tractor while commanding a high engine speed will require higher brake pedal force.

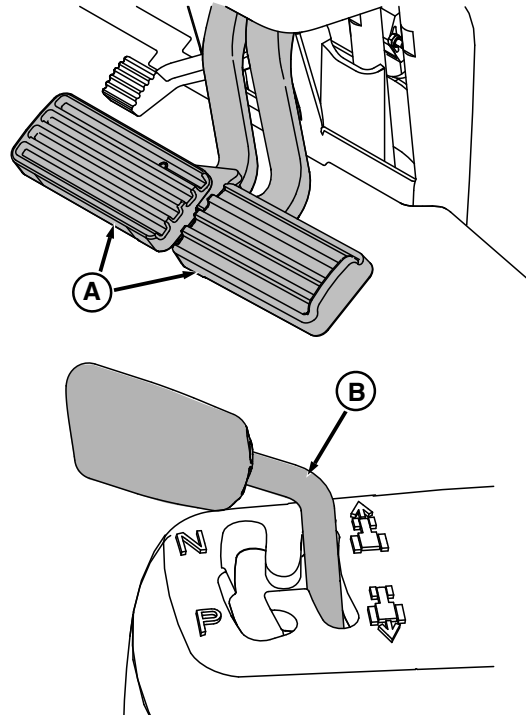
Avoid possible injury due to sudden or unexpected acceleration. When brake pedals are released, tractor will automatically accelerate to speed currently commanded by throttle and speed control lever.

Using PowerZero Position

Hold reverser lever in Power Zero position (B) to temporarily hold tractor stationary.

NOTE: Depending on speed and load, Power Zero may not bring tractor to a stop if already in motion.

Using NEUTRAL Position



Left Hand Reverser Shown In Power Zero

A—Brake Pedals

B—Power Zero Position

Transmission NEUTRAL position is obtained (with engine running) by shifting reverser to NEUTRAL position. Tractor will roll freely in NEUTRAL position.

Using PARK Position

CAUTION: Always place reverser lever in PARK position before dismounting tractor.

Transmission PARK position holds tractor stationary.

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OURX935,00009C9 -19-02JUN09-1/1

IVT™/AutoPowr™ Selector Guidelines and Examples

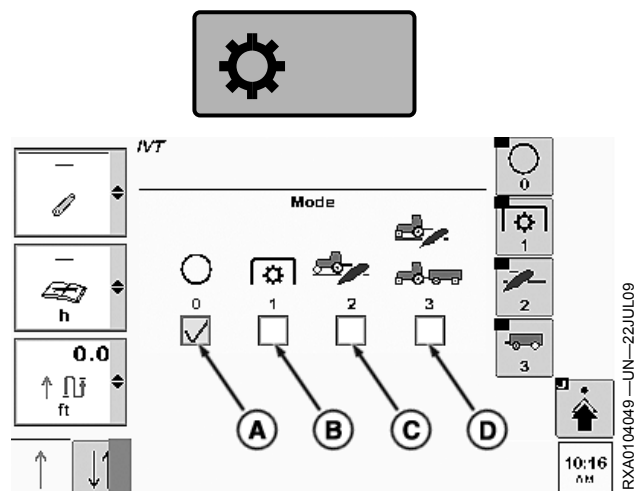
NOTE: For most applications, maximum productivity and fuel economy is realized when modes 1, 2 or 3 are selected.

Minimum engine speed values of modes 1, 2, or 3 are adjustable. See Setting IVT/AutoPowr Options in this section.

IVT (Infinitely Variable Transmission)™/AutoPowr™ has four modes providing two automated productivity functions:

- **Load control** provides automatic transmission ground speed adjustment under load to maintain constant peak power levels and maximum productivity.
- **Fuel economy** function provides constant vehicle speed at reduced engine speed in light load or no-load conditions.

RXA0103941 —UN—24JUL09



A—OFF
B—PTO Mode

C—Auto Mode 2—Heavy Tillage
D—Auto Mode 3—Transport or Light Tillage

IVT/AutoPowr Modes		
A-OFF	Transmission will not shift automatically to maintain engine rpm with varying loads	<ul style="list-style-type: none"> • Use OFF position if application is causing undesired automatic shifting. • Use OFF position when operating on steep and/or slippery downhill slopes. (See Downhill Operation in Slippery Conditions in this section.) • Load control function OFF • Fuel economy function OFF
B-Auto Mode 1	Most PTO and High Hydraulic flow Applications	<ul style="list-style-type: none"> • Load control function ON * • Fuel economy function OFF • Using correct engine speed is very important for PTO operations. • Field Cruise may be used to limit engine speed. • Refer to implement Operator's Manual for specific implement speeds • Approximately 1800 engine rpm equals 540 PTO rpm • Approximately 2000 engine rpm equals 1000 PTO rpm
C-Auto Mode 2	Plowing and Tillage	<ul style="list-style-type: none"> • Use full throttle position • Adjust Auto 2 set speed to match application • Load control function ON * • Fuel economy function ON **
D-Auto Mode 3	Transport and Light Tillage	<ul style="list-style-type: none"> • Use full throttle position • Adjust Auto 3 set speed to match application • Load control function ON * • Fuel economy function ON **
<p>* See Engine Speeds - IVT/AutoPowr Options Auto With and Without PTO. ** See Auto Mode 2 and Auto Mode 3 fuel economy settings.</p>		

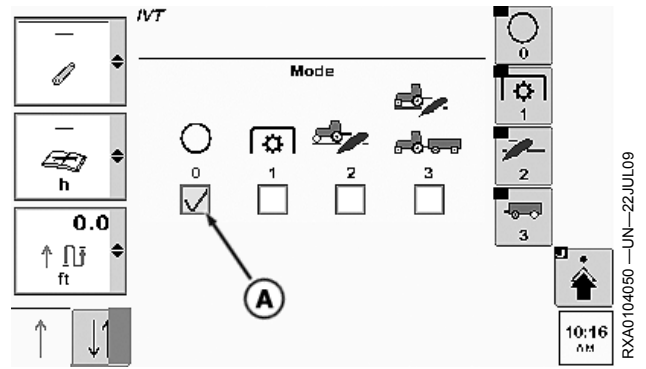
IVT (Infinitely Variable Transmission) is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company

OURX935,0000141 -19-08NOV10-1/1

Downhill Operation In Slippery Conditions

CAUTION: Avoid possible injury from losing control of tractor while operating on a downhill slope. Tractor wheels may lock and skid on slippery downhill slopes. Observe the following precautions:

- Adjust set speed value to a safe downhill operating speed.
- Place IVT (Infinitely Variable Transmission)TM/AutoPowrTM selector in OFF position (A). (The higher brake pedal force required in the OFF position will help prevent wheel lock and skidding.)
- Do not make major speed reductions with the speed control lever.



A—OFF Position

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Setting IVT™/AutoPowr™ Options

A Load Anticipation feature allows IVT (Infinitely Variable Transmission)™/AutoPowr™ to predict how much “hydraulic load” engine expects from activation of hitch or a particular SCV function. For this to be activated, SCV or hitch lever is placed in **detented position** when “hydraulic load” is decreasing. IVT/AutoPowr remembers that load change. When it detects the **same lever starting movement in the opposite direction**, it responds with a short engine rpm boost thus providing more power to better handle on-coming load increase.

For engine rpm see Load Control Function—Engine RPM Droop IVT/AutoPowr Options (Modes 1, 2, and 3) Auto With and Without PTO.

Load Control Function Settings

1. Select **Transmission**.
2. Select **Advanced Setting** soft key.
3. When IVT/AutoPowr Settings page appears, select drop down box (A) to change AUTO with PTO setting.

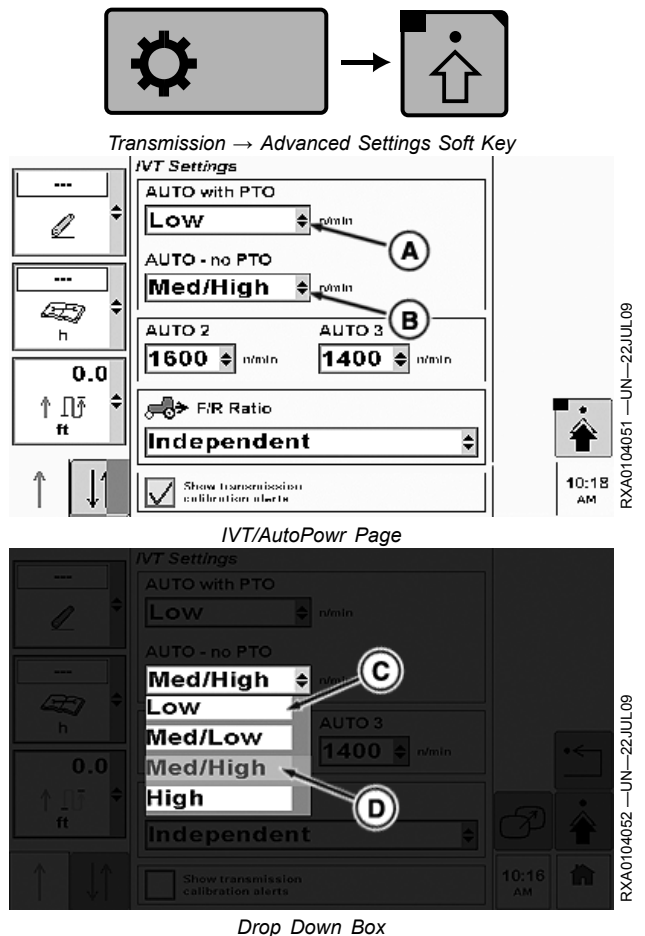
NOTE: When selection is made in pull down menu, display in IVT/AutoPowr Settings Page will update automatically.

4. Make selection of options displayed. For this example; select LOW (C).
5. Using drop down box (B), follow above procedure to select setting AUTO—no PTO.
6. Drop down box will offer same options described above and for this example; select MED/HIGH (D).

A—Drop Down Box—AUTO with PTO
 B—Drop Down Box—AUTO no PTO
 C—Selection—Low
 D—Selection—Med/High

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OURX935,0000142 -19-08NOV10-1/2

Fuel Economy Function Settings

Both AUTO mode 2 and AUTO mode 3 are fuel economy settings. Auto mode 2 is used to adjust minimum engine speed when operating with a light load. See **Auto Mode 2 Options** table for a list of selections to choose from. The default engine rpm setting in AUTO mode 2 is 1500 rpm.

IVT/AutoPowr Options	Auto Mode 2	1500 rpm
		1600 rpm
		1700 rpm
		1800 rpm

Auto mode 2 Options

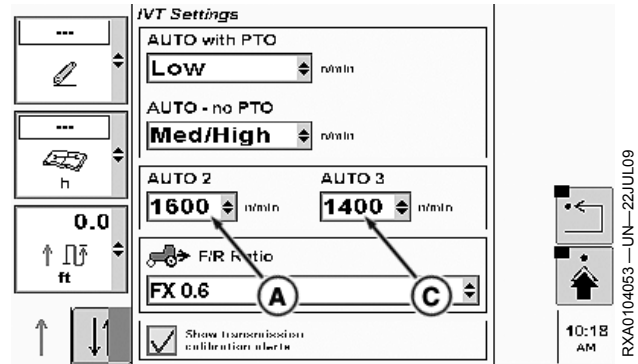
AUTO Mode 3 is much the same as Auto Mode 2, See **Auto Mode 3 Options** table for a list of selections to choose from. The default engine rpm setting in AUTO Mode 3 is 1200 rpm.

IVT/AutoPowr Options	Auto 3	1200 rpm
		1300 rpm
		1400 rpm
		1500 rpm

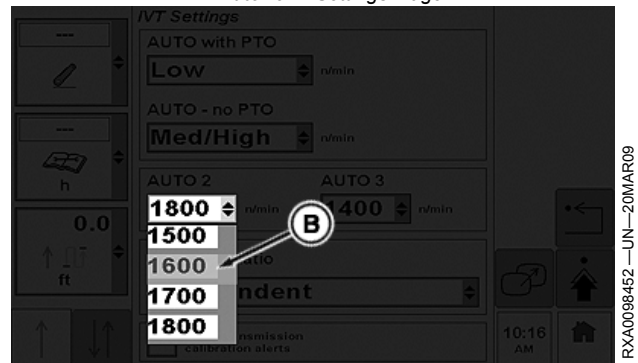
Auto Mode 3 Options

1. Select Auto Mode 2 engine rpm setting (A)
2. When drop down box appears, select desired setting. For this example, select 1600 (B) which will display in IVT/AutoPowr Settings screen for Auto Mode 2 rpm rate.
3. Select Auto Mode 3 engine rpm settings (C).
4. When drop down box appears, select desired setting. For this example, select 1400 (B) which will display in IVT/AutoPowr Settings screen for AUTO Mode 3 rpm rate.

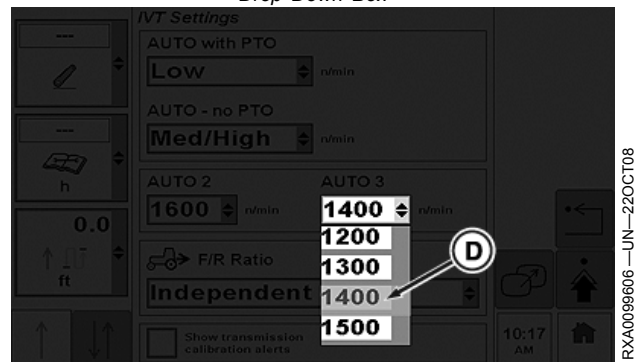
A—Auto Mode 2
B—Selection for Auto Mode 2
C—AUTO Mode 3
D—Selection for AUTO Mode 3



IVT/AutoPowr Settings Page



Drop Down Box



Drop Down Box

OURX935,0000142 -19-08NOV10-2/2

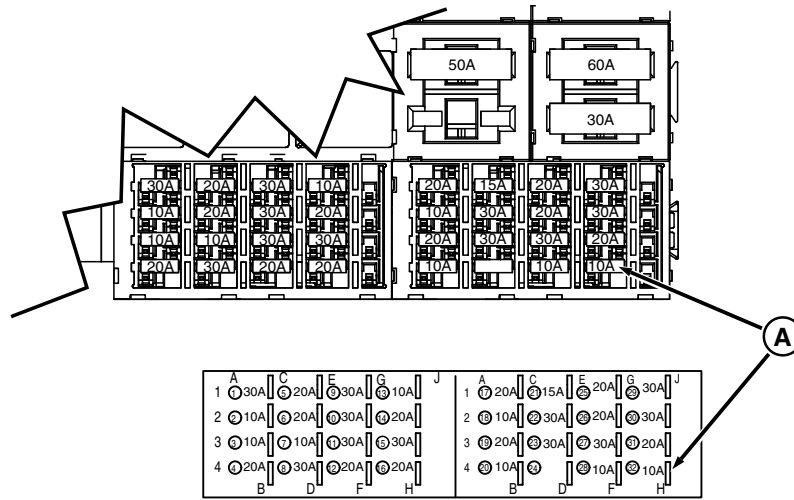
Load Control Function—Engine RPM Droop— IVT™/AutoPowr™ Options (Modes 1, 2, and 3) Auto With or Without PTO

Engine Speeds (rpm)- IVT (Infinitely Variable Transmission)™/AutoPowr™ Modes 1, 2, and 3 With or Without PTO						
Engine Speeds (rpm)- IVT/AutoPowr Modes 1, 2, and 3 With or Without PTO—8225R, 8245R, 8270R and 8295R Tractors						
	Auto- No PTO			Auto with PTO		
	Light Engine Load	Heavy Engine Load		Light Engine Load	Heavy Engine Load	
Selection		<30KPH	>30KPH		Light Load PTO	Heavy Load PTO
Low rpm	2000	1900	1900	2050	1950	1950
Medium / Low (Default)	2000	1800	1800	2100	1900	1900
Medium / High	2000	1650	1650	2100	1800	1800
High rpm	2150	1650	1650	2150	1650	1650
Engine Speeds (rpm)- IVT/AutoPowr Modes 1, 2, and 3 With or Without PTO— 8320R Tractor						
	Auto- No PTO			Auto with PTO		
	Light Engine Load	Heavy Engine Load		Light Engine Load	Heavy Engine Load	
Selection		<30KPH	>30KPH		Light Load PTO	Heavy Load PTO
Low rpm	2000	1900	1900	2050	1950	1950
Medium / Low (Default)	2000	1800	1800	2100	1900	1900
Medium / High	2000	1700	1700	2100	1800	1800
High rpm	2150	1700	1700	2150	1700	1650
Engine Speeds (rpm)- IVT/AutoPowr Modes 1, 2, and 3 With or Without PTO— 8345R Tractor						
	Auto- No PTO			Auto with PTO		
	Light Engine Load	Heavy Engine Load		Light Engine Load	Heavy Engine Load	
Selection		<30KPH	>30KPH		Light Load PTO	Heavy Load PTO
Low rpm	2000	1950	1900	2050	1950	1950
Medium / Low (Default)	2050	1950	1800	2100	1900	1900
Medium / High	2100	1950	1700	2100	1900	1800
High rpm	2150	1950	1700	2150	1900	1650

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Using Enabling Mode (Come Home)



Come Home Mode

A—Fuse # 32

Enabling mode allows tractor to be operated at a maximum of 8 km/h (5 mph) in forward position and 3 km/h (1.8 mph) in reverse at full throttle if certain transmission malfunctions occur.

NOTE: *AutoClutch and AutoPowr™ selector features will not operate when transmission is in Enabling Mode.*

AutoPowr is a trademark of Deere & Company

1. Remove fuse # 32 (A) and retain.
2. Start tractor.
3. Depress clutch pedal.
4. Select Forward or Reverse direction.
5. Release clutch pedal to put tractor in motion.

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OURX935,0000163 -19-15NOV10-1/1

Intelligent Total Equipment Control (ITEC)

Description And Display

Intelligent Total Equipment Control, iTEC™ allows multiple tasks to be performed with the touch of one switch.

RXA0103927 —UN—24JUL09

iTEC has two sequences in which learned functions are stored. A sequence is defined as the start of the first recorded function to completion of last recorded function.

NOTE: Tractor must be moving at a speed of at least 0.5 km/h (0.31 mph) to execute a sequence. Learned sequences will remain stored after engine stops.

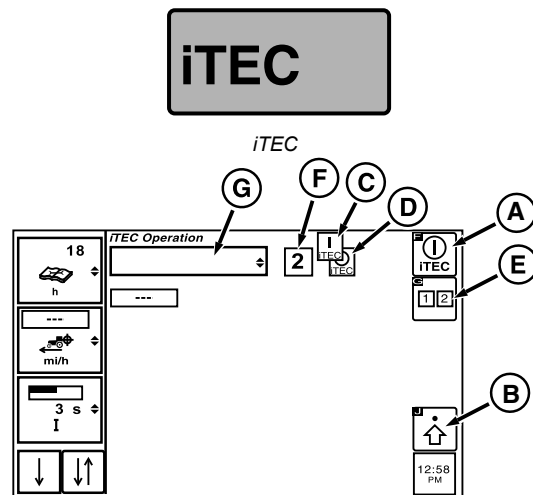
A sequence is executed according to **distance** required to perform a series of functions when system is in LEARN mode. A maximum of 20 functions can be learned for each sequence. Learn Mode has a 60 second time limit and will stop recording events when time limit is reached.

1. Select iTEC.
2. Select iTEC ON/OFF softkey (A) to turn iTEC functions ON (C) or OFF (D).

NOTE: When iTEC is activated, observe box (F) to verify sequence activated and box (G) for implement currently in use.

3. Select Sequence softkey (E) when selected toggles between sequence 1 and sequence 2.
4. Select Advanced Settings softkey (B) to go to iTEC Edit Page.

iTEC is a trademark of Deere & Company



iTEC Operations Page

- | | |
|-----------------------------|-------------------------------------|
| A—iTEC ON/OFF Softkey | E—Sequence Softkey |
| B—Advanced Settings Softkey | F—Sequence In Process Indicator Box |
| C—iTEC —ON Indicator Box | G—Implement |
| D—iTEC—OFF Indicator Box | |

RXA0104054 —UN—22JUL09

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OURX935,0000153 -19-09NOV10-1/5

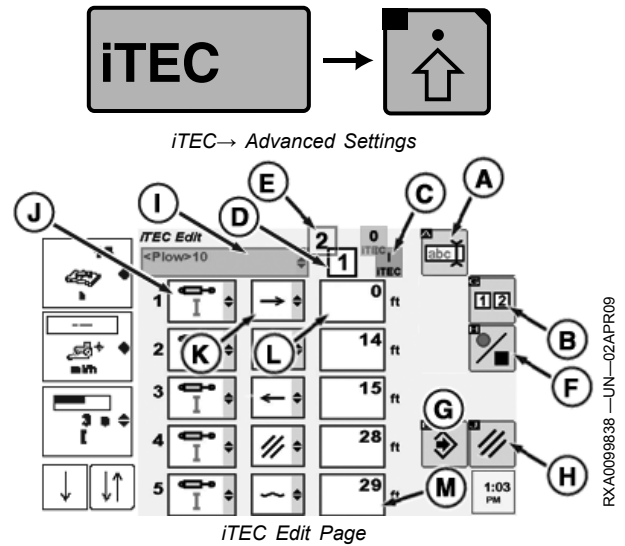
RXA0104055 —UN—22JUL09

At the iTEC Edit page:

- Softkey (A) navigates to edit implement name
- Softkey (B) toggles between sequence 1 and 2
- Box (C) visual notification that iTEC is ON
- Box (D) displays sequence 1 is active
- Box (E) displays sequence 2 is active
- Softkey (F) Start/Stop Record Sequence
- Softkey (G) Save Sequence
- Softkey (H) cancels operation and returns operator to operation page
- Drop Down Box (I) displays implement name currently selected
- Drop Down Box (J) is an example of a function.
- Drop Down Box (K) is an example of an operation.
- Box (L) is an example of the distance before function listed in left column will begin.

A—Edit Implement Name Softkey
B—Sequence Softkey
C—iTEC— ON
D—Sequence 1
E—Sequence 2
F—Start/Stop Record Sequence Softkey

G—Save Softkey
H—Cancel Softkey
I— Implement Identification Box
J— Edit Function Drop Down Box
K—Edit Operation Drop Down Box
L—Edit Distance Drop Down Box



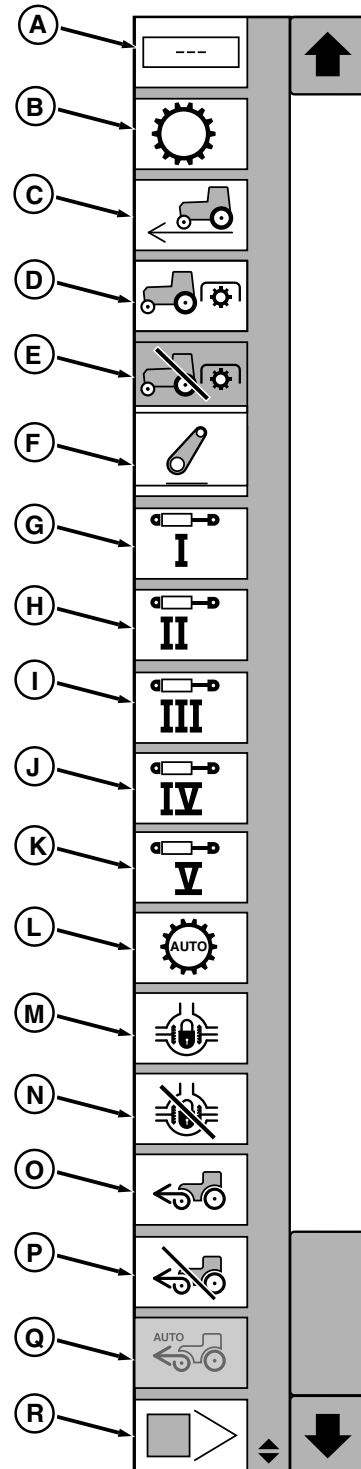
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OURX935,0000153 -19-09NOV10-2/5

NOTE: If engine is not running, MFWD and the Differential Lock icons do not show up in function options list.

ITEC Edit page function options are listed at right.

- | | |
|-------------------|--|
| A—Delete | J—SCV IV |
| B—Transmission | K—SCV V |
| C—Travel/Distance | L—PST Auto |
| D—PTO (ON) | M—Differential Lock ON (Wheel Tractors Only) |
| E—PTO (OFF) | N—Differential Lock OFF (Wheel Tractors Only) |
| F—Hitch | O—MFWD (Wheel Tractors Only) |
| G—SCV 1 | P—Brake Assist (Wheel Tractors Only) |
| H—SCV II | Q—MFWD Auto (Wheel Tractors Only) |
| I—SCV III | R—Insert (Used to shift sequences down while in edit mode) |



Functions

Continued on next page

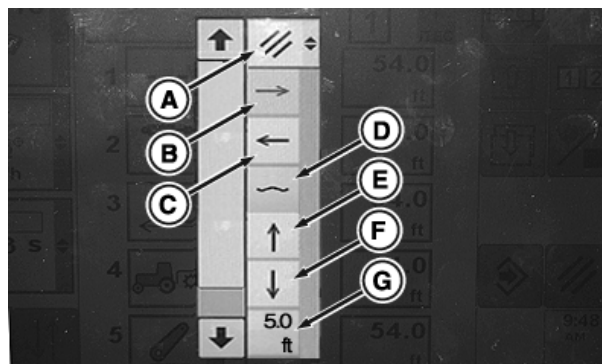
OURX935,0000153 -19-09NOV10-3/5

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ITEC Edit page operations options are listed to the right.

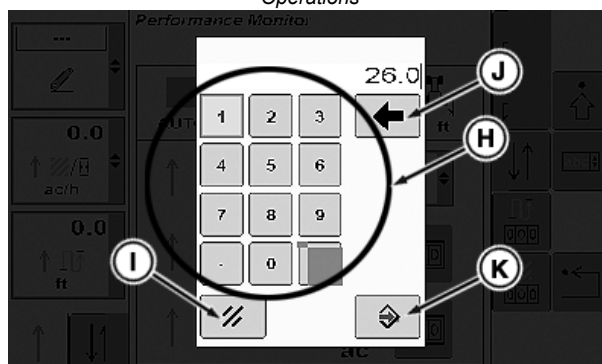
Distance options are limited to selecting desired distance by pressing the individual keys, then pressing the Save/Enter key.

- | | |
|----------------------------|------------------------|
| A—Cancel (Operation Field) | G—Distance |
| B—Extend (SCV Cylinders) | H—Key Pad |
| C—Retract (SCV Cylinders) | I—Cancel (Key Pad) |
| D—Float (SCV or Hitch) | J—Back Space (Key Pad) |
| E—Raise (Hitch) | K—Save/Enter (Key Pad) |
| F—Lower (Hitch) | |



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Operations



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Key Pad

OURX935,0000153 -19-09NOV10-4/5

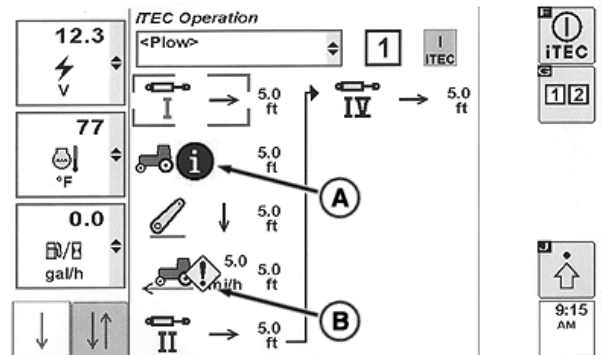
NOTE: A - Function Limited - Function not in correct state to be executed (Ex: PTO Switch Off).

B - Function Limited - Function will not execute and some conditions may be related to a Service Alert for that function. (Ex: PTO Switch Fault).

"Error/Service Alert icon" will always be the icon shown if the function will not execute while in execution mode - regardless of the reason.

A—Function Limited

B—Function Limited



Function Limited Alerts

RXA0103097—UN—27JUL09

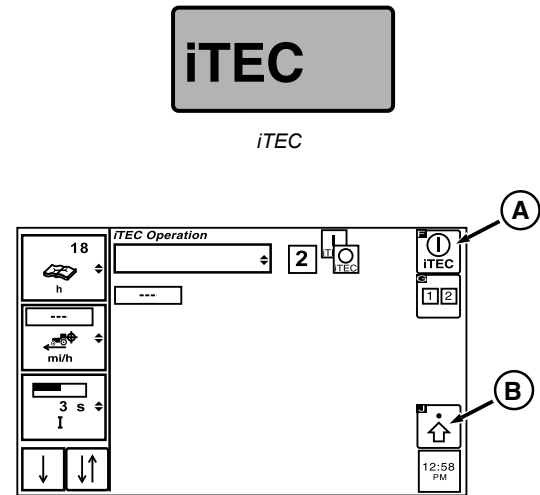
OURX935,0000153 -19-09NOV10-5/5

Entering Equipment On iTEC™ Editing Page

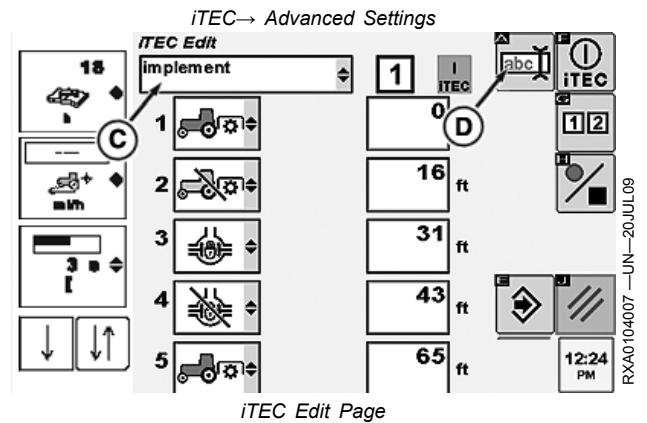
RXA0103927 —UN—24JUL09

1. Select iTEC
2. Select iTEC ON/OFF softkey (A).
3. Select Advanced Settings softkey (B).
4. If desired implement is not loaded, displayed in Implement Name drop down box (C) which displays loaded implements, proceed with step 5.
5. Select Edit Implement Name softkey (D) to display editing page with key pad.

A—iTEC ON/OFF Softkey
B—Advanced Settings Softkey
C—Implement Name Drop Down Box
D—Edit Implement Name Softkey



RXA0101338 —UN—02APR09



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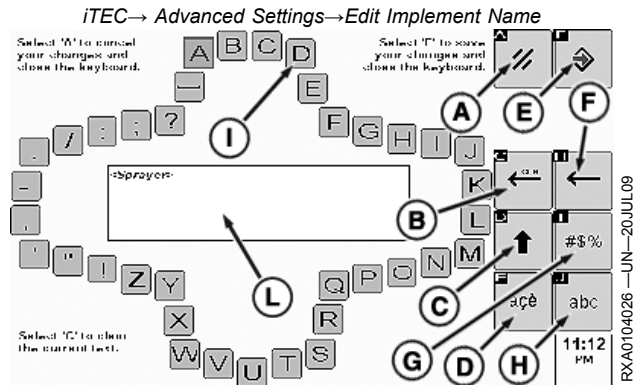
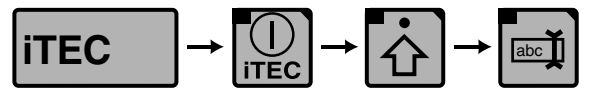
6. At the editing page:

- C—Toggles between upper and lower case editing keys.
- Editing Keys are the 37 keys outlining the editing box. Normally these 37 keys are in alphabetic sequence (I) but could be special characters (J) or symbols (K).
- Editing is performed by moving cursor to specific key and pressing Confirm button. Letters are typed in editing box (L).
- Clear Editing Box softkey (B) clears editing box.
- Special Character softkey (D) changes alphabet key pad into special characters key pad option.
- numbers/Symbols softkey (G) key pad into 37 symbols to edit name of selected piece of equipment.
- Select Save/Enter softkey (E) after entry is made in editing box to enter data to operating page.
- Back Space softkey (F) moves editing box cursor back one space.
- Upper/Lower Case softkey (H) is selected before selecting first letter and all will be typed in lower case also.

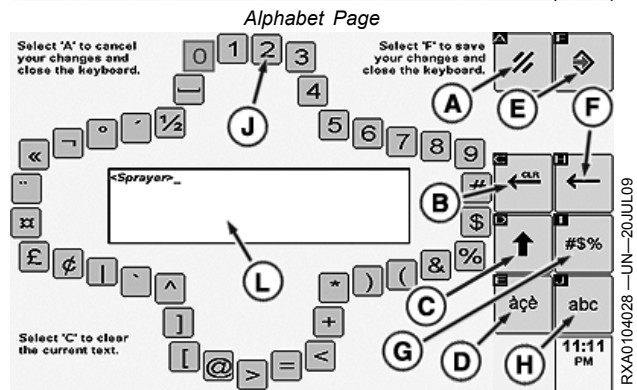
A—Cancel Softkey
B—Clear Edit Box Softkey
C—Upper/Lower Case Softkey
D—Special Character Softkey
E—Save/Enter Softkey
F—Back Space Softkey

G—Numbers/Symbols Softkey
H—Standard Alphabet Softkey
I—Standard Alphabet Key Pad
J—Numbers/Symbols Key Pad
K—Special Character Key Pad
L—Editing Box

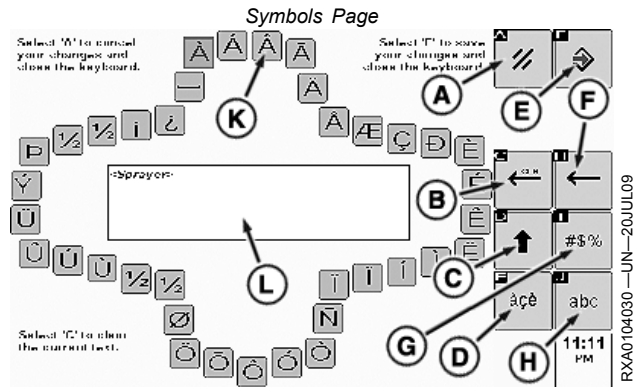
RXA0104067 —UN—29JUL10



RXA0104026 —UN—20JUL09



RXA0104028 —UN—20JUL09



RXA0104030 —UN—20JUL09

Special Characters Page

OURX935,0000154 -19-09NOV10-2/2

Operating Intelligent Total Equipment Control (iTEC™) While Stationary

RXA0103927 —UN—24JUL09

NOTE: The tractor can **not** be in park while learning or executing a sequence. Tractor drive lever must be in a forward position to begin learning or executing set speeds, gears, or Automatic Power Shift (APS).

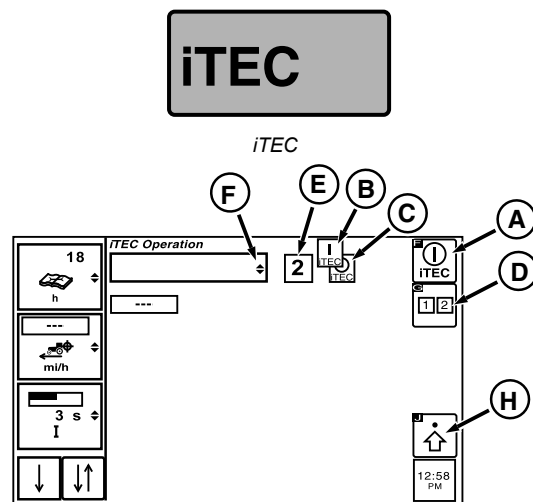
1. Select **iTEC**.
2. Select **iTEC softkey (A)**.

NOTE: iTEC icon is either **ON (B)** or **OFF (C)**. When iTEC system is on, icon is highlighted. If iTEC is on and recording, iTEC icon is highlighted and flashing.

3. Check to ensure iTEC ON indicator (B) is displayed.

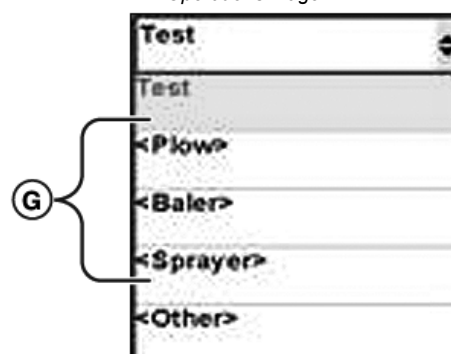
NOTE: When sequence is selected, that sequence number (E) is displayed on page.

4. Select Sequence softkey (D) for sequence 1 or 2.
5. Scroll thumb wheel to Implement Name drop down box (F) and press Confirm button for list of loaded implement names (G).
- NOTE:** If implement name has not been loaded, refer to *Entering Equipment On iTEC Editing Page in this section of the Operator's Manual*.
6. Scroll thumb wheel to selected implement name in drop down box.
7. Select Confirm button.
8. To load program for sequence, 1 or 2, select advanced settings softkey (H).



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Operations Page



RXA0104305 —UN—25AUG09

Implement Name Drop Down Box Options

- | | |
|----------------------|--------------------------------|
| A—iTEC Softkey | E—Sequence |
| B—iTEC ON Indicator | F—Implement Name Drop Down Box |
| C—iTEC OFF Indicator | G—Loaded Implement Names |
| D—Sequence Softkey | H—Advanced Settings Softkey |

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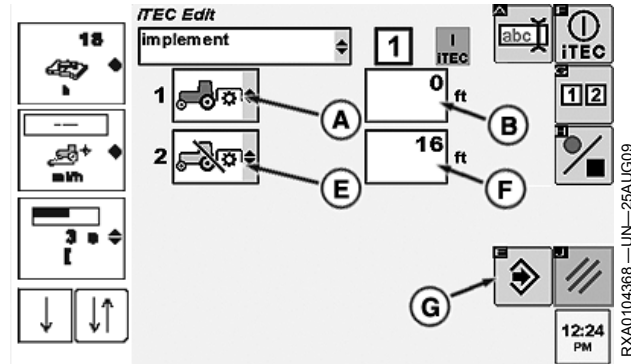
NOTE: For a complete list of functions available, see *Description And Display* in this section of *Operators Manual*.

9. Rotate thumb wheel to the first Function drop down box (A).
10. Select function, PTO On for example.
11. Because PTO On does not have an operation available, rotate thumb wheel to edit distance drop down box (B) and select Confirm button.
12. When key pad displays, using key pad keys (C) select distance before function begins.
13. Press Save/Enter key (D).
14. Rotate thumb wheel to the second Edit Function drop down box (E) and select function, PTO Off for example.
15. Rotate thumb wheel to Edit Distance drop down box (F) and select Confirm button.
16. When key pad displays, using key pad keys select distance before function begins.
17. Press Save/Enter key.
18. Continue to load functions, operations and distances, up to 20 functions.
19. When sequence is complete, select Save/Enter softkey (G) to load program.

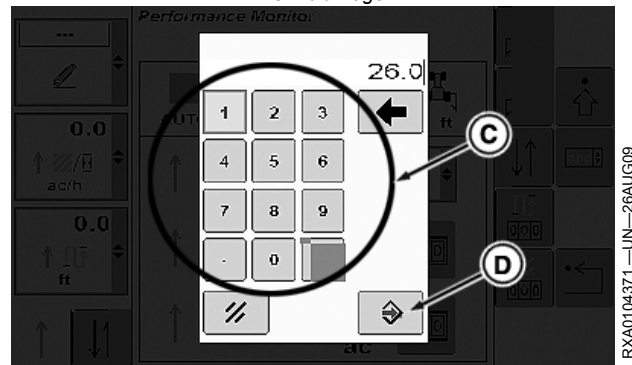
NOTE: Execution of a sequence cannot start below 0.5 km/h (0.3 mph). If during execution a sequence speed drops below 0.5 kph (0.3 mph), no further function execution via ITEC will occur until speed is greater than 0.5 kph (0.3 mph).

20. Place tractor in motion and press sequence switch (H) forward for sequence #1 or rearward for sequence #2. The sequence will play just like it has been recorded.

- | | |
|--------------------------------|---------------------------------|
| A—First Function Drop Down Box | E—Second Function Drop Down Box |
| B—First Distance Drop Down Box | F—Second Distance Drop Down Box |
| C—Key Pad | G—Save/Enter Softkey |
| D—Enter Button | H—Sequence Switch |



ITEC Edit Page



Key Pad



Sequence Switch

Operating Intelligent Total Equipment Control (iTEC™) While Moving

NOTE: The tractor can **not** be in park while learning or executing a sequence. Tractor drive lever must be in a forward position to begin learning or executing set speeds, gears, or Automatic Power Shift (APS).

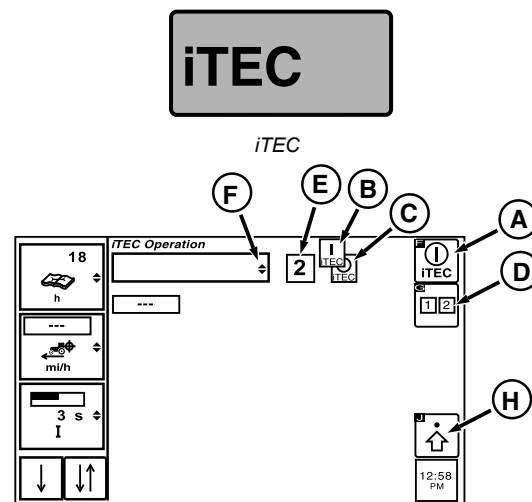
1. Select **iTEC**.
2. Select **iTEC softkey (A)**.

NOTE: iTEC icon is either **ON (B)** or **OFF (C)**. When iTEC system is on, icon is highlighted. If iTEC is on and recording, iTEC icon is highlighted and flashing.

3. Check to ensure iTEC ON indicator (B) is displayed.

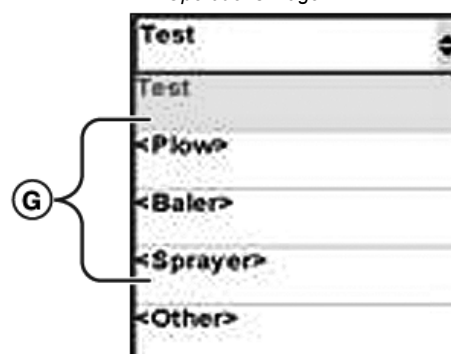
NOTE: When sequence is selected, that sequence number (E) is displayed on page.

4. Select Sequence softkey (D) for sequence 1 or 2.
5. Scroll thumb wheel to Implement Name drop down box (F) and press Confirm button for list of loaded implement names (G).
- NOTE:** If implement name has not been loaded, refer to *Entering Equipment On iTEC Editing Page in this section of the Operator's Manual*.
6. Scroll thumb wheel to selected implement name in drop down box.
7. Select Confirm button.
8. To load program for sequence, 1 or 2, select advanced settings softkey (H).



RXA0104369 —UN—25AUG09

Operations Page



RXA0104305 —UN—25AUG09

Implement Name Drop Down Box Options

- | | |
|----------------------|--------------------------------|
| A—iTEC Softkey | E—PTO On Icon |
| B—iTEC ON Indicator | F—Implement Name Drop Down Box |
| C—iTEC OFF Indicator | G—Loaded Implement Names |
| D—Sequence Softkey | H—Advanced Settings Softkey |

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Continued on next page

OURX935,0000156 -19-09NOV10-1/2

9. Place tractor in motion.
10. Select Sequence softkey (A) for selected sequence.
11. Make sure sequence is displayed by indicator box (B)

NOTE: If implement is not loaded in Implement Name drop down box (C), see *Entering Equipment on iTEC editing page* in this section.

12. Make sure implement name is correct and if not, rotate thumb wheel to implement drop down box to select required implement name.

NOTE: When Record On/Off softkey is selected, corner post display iTec (E) light is on and sequence number (F) begins flashing. iTEC indicator (G) begins flashing.

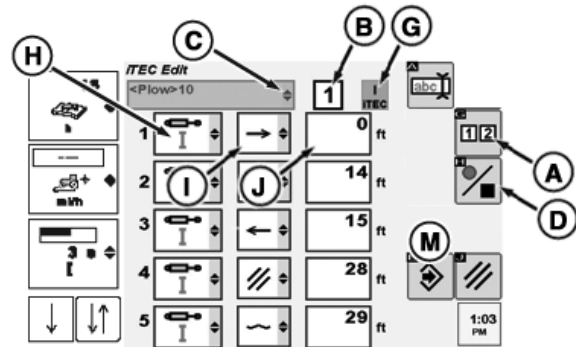
13. Select Record ON/Off softkey (D).

NOTE: For a complete list of functions available, see *Description And Display* in this section of Operators Manual.

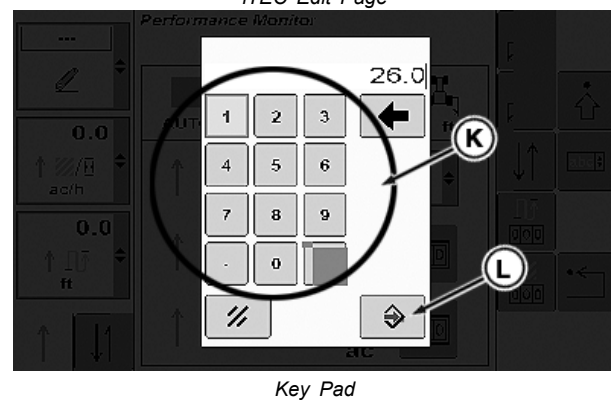
14. Rotate thumb wheel to function drop down box (H) and select SCV 1 for example.
15. Rotate thumb wheel to operation drop down box (I) and select operation, extend for example.
16. Rotate thumb wheel to distance drop down box (J), then select Confirm button.
17. When key pad displays, using key pad keys (K) select distance before function begins.
18. Press Save/Enter key (L).
19. Using the same procedures listed in steps 14 through 17, enter each function up to 20 functions.
20. After all functions are loaded, select Save/Enter softkey (M).

NOTE: The sequence is now in memory. Each consecutive time tractor is at edge of field, select sequence, then functions are executed in the same **distance** that they were recorded.

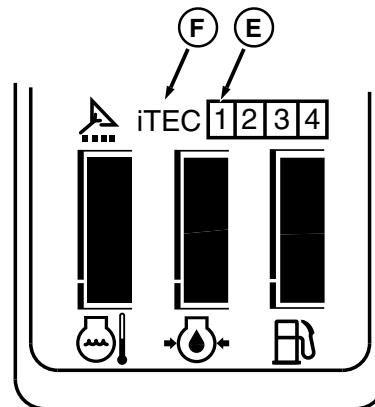
Execution of a sequence cannot start below 0.5 km/h (0.3 mph). If during execution a sequence speed drops below 0.5 kph (0.3 mph), no further function execution via iTEC will occur until speed is greater than 0.5 kph (0.3 mph).



RXA0104374 —UN—26AUG09



RXA0104376 —UN—26AUG09



Corner Post Display

RXA0104524 —UN—26AUG09

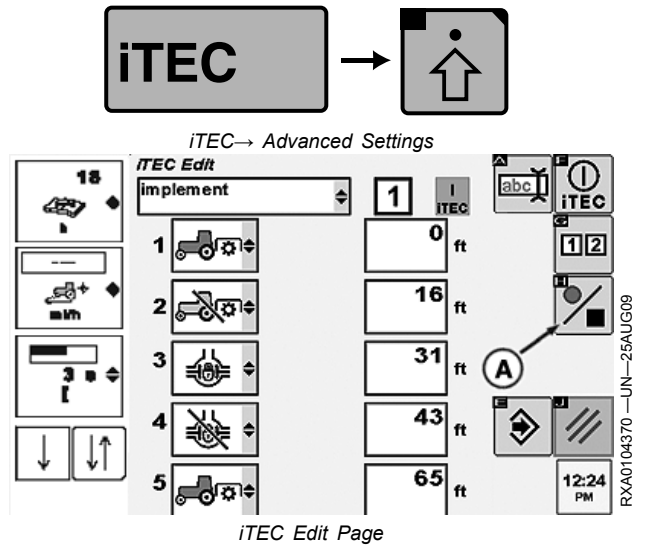
- | | |
|--------------------------------------|----------------------------|
| A—Sequence Softkey | H—Function Drop Down Box |
| B—Indicator Box | I— Operation Drop Down Box |
| C—Implement Name Drop Down Box | J— Distance Box |
| D—Start/Stop Record Sequence Softkey | K—Key Pad |
| E—Corner Post Display iTec | L—Save/Enter Softkey |
| F—Sequence Number | M—Save/Enter Softkey |
| G—iTEC Indicator | |

OURX935,0000156 -19-09NOV10-2/2

RXA0104055 —UN—22JUL09

Aborting and/or Clearing iTEC Sequence

1. Select **iTEC**.
2. Select **Advanced Settings** softkey.
While on the iTEC™ Edit page, ensure iTEC is “On.”
3. Rotate thumb wheel to Recording On/Off softkey and press Confirm button.
4. Select Confirm button again. Sequence is now cleared.



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OURX935,0000157 -19-09NOV10-1/1

iTEC Functions

Intelligent Total Equipment Control (iTEC) is used to combine any of the following functions together to make one sequence perform with the touch of one switch.

NOTE: APS maximum gear must be set each time the tractor is started.

APS Switch (A) can be resumed during LEARN mode.

APS is cancelled by programming a transmission shift in iTEC. (See Operating Automatic Powershift in Operating the Tractor Section.)

MFWD Button (B) can be turned on or off during sequence execution. Button can be used to override a function by iTEC.

Hitch Raise Lower lever (C) can be activated to raise or lower hitch during an iTEC sequence.

Rear PTO Lever (D) lever can be used to override a function by iTEC. Lever must be in the ON position for iTEC to control the PTO engagement status.

Manually operating PTO requires rear PTO lever to be turned OFF and then ON again.

Sequence Switch (E) starts or cancels an iTEC sequence.

Record/Playback softkey (F) enables programming a sequence of functions for iTEC. Pressing a second time ends the string of functions learned for that sequence.

SCV Levers (G) control the raising and lowering of individual implements.

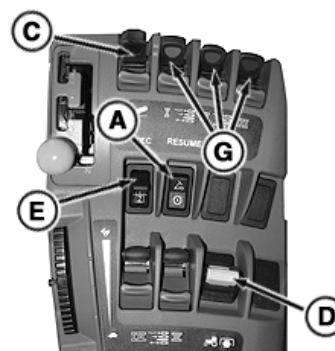
NOTE: Learn mode requires SCV control to be in **detent position**. Flow Rate and Timed detent will **not** be learned and can be changed at any time. Timed detent is used to cancel SCV functions.

while executing a sequence, any manual adjustment to a function made will result in that function no longer be allowed under iTEC control and the "error" indicator will be shown over that function.

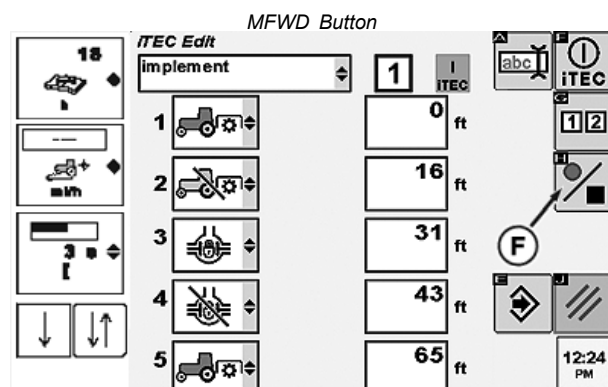
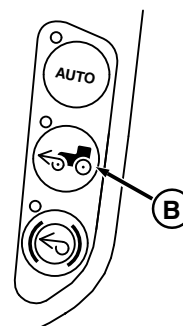
iTEC can learn four functions for SCVs:

- Extend Detent
- Retract Detent
- Float
- Neutral (Used to cancel Float or Detent operations)

Differential lock can be engaged by depressing switch on floor board between clutch and brakes or disengaged by pressing the brakes during a sequence.



CommandARM™



Record/Playback Softkey

A—Automatic Power Shift Switch
B—MFWD Button
C—Hitch Raise/Lower Lever
D—PTO Lever

E—Sequence Switch
F—Record/Play Back Softkey
G—SCV Levers

RXA0101584 —UN—02APR09

RXA0101583 —UN—02APR09

RXA0104008 —UN—30JUL09

Continued on next page

OURX935,0000158 -19-09NOV10-1/2

LEARNED FUNCTIONS	
Item	Function(s)
Rear Hitch	RAISE, LOWER, Cancel
Transmission Gear	Upshift or Downshift in Forward Gear
SCV (CommandARM™/Touch-Set™ Only)	EXTEND/ RETRACT/FLOAT/ NEUTRAL
MFWD	ON/Brake Assist/Auto
Rear PTO	ON/OFF
Differential Lock	ON/OFF
Automatic Powershift (PST Transmission Only)	Resume
IVT (Infinitely Variable Transmission)™ Set Speed Forward (IVT Only)	Increase/Decrease

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 TouchSet is a trademark of Deere & Company
 IVT (Infinitely Variable Transmission) is a trademark of Deere & Company

OURX935,0000158 -19-09NOV10-2/2

ITEC Functions—IVT (Infinitely Variable Transmission)™ Transmission



A—Speed Band 1

B—Speed Band 2

NOTE: For IVT Tractors when iTEC is executing, iTEC requests set speed adjustments. If speed lever or encoder is moved, set speeds will not execute.

IVT Set Speed: The current forward set speed (FSS1 or FSS2) can be changed up or down with the set speed adjuster, during Learn mode. Transmission ratio changes will be executed at the normal rate once the set speed has been changed.

During Learn mode, the set speed may be changed more than once. iTEC will record the time of the first set speed change in the sequence. If additional changes occur at less than two second intervals, they will be combined

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with the first into a single event. The direction of the set speed change (up or down), the speed control lever position (speed band 1 [A] or 2 [B]), and the final set speed are recorded. If drive lever goes into a non-forward position, set speed changes will not be saved, learned, or executed. The minimum set speed that can be saved is 0.8 km/h (0.5 mph). Changing the set speed or moving the lever during execution of a sequence will not cause iTEC to abort, but set speed changes will not be commanded for the remainder of the sequence.

When a set speed is changed by iTEC, the control unit will react just as if the operator changed the set speed, pushing other set speeds up or down as a result.

OURX935,0000AF7 -19-23SEP09-1/1

RXA0102174—UN—21APR09

Hitch

Hitch Set-up and Use (Quick Reference)

Select adjustment to display by pressing required short cut button (A, B, C, or E). Use thumb wheel to change adjustment setting.

Set Operating Depth

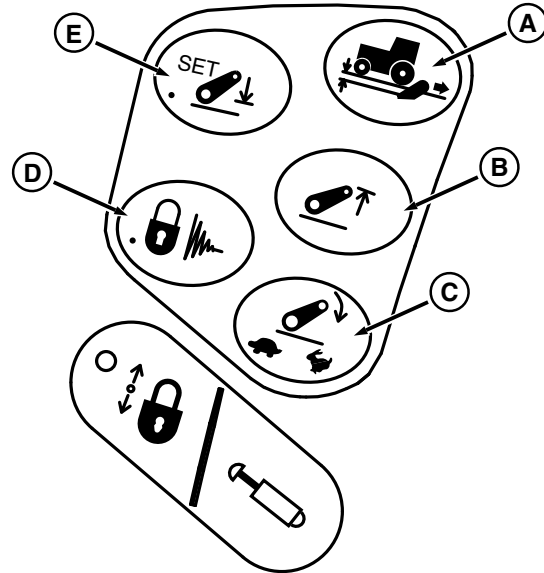
- Lower implement to desired operating depth using Hitch Command lever (J)
- Press Depth Set button (E) to save operating depth.

Turn at End

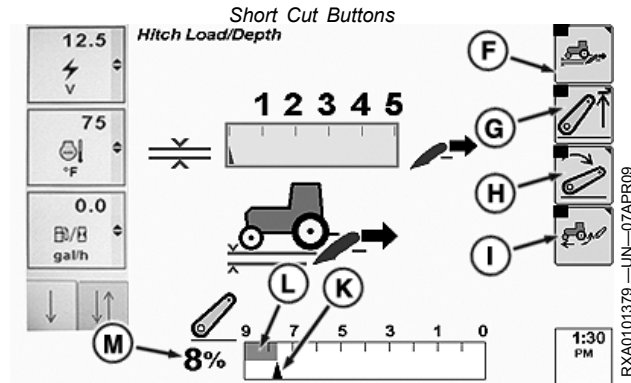
- At end of field, pull lever into raise detent and release. Hitch will raise to upper height limit.
- After turnaround, push lever into lower detent and release. Hitch will lower to saved depth setting.

Hitch command information appears in lower portion of hitch pages. Commanded depth is represented by commanded depth indicator (K). Stored depth setting is represented by stored depth indication. Pressing depth Set button (E) will move bar to align with commanded depth indicator (K). Hitch position value (M) represents actual hitch position. When hitch is completely down, the hitch position value is 0%. When hitch is completely up, the hitch position value is 100%.

- | | |
|-----------------------------------|-----------------------------|
| A—Load Depth Short Cut Button | H—Drop Rate Soft Key |
| B—Upper Limit Short Cut Button | I—Hitch Slip Soft Key |
| C—Drop Rate Short Cut Button | J—Hitch Command Lever |
| D—Transport Lock/Dampening Button | K—Commanded Depth Indicator |
| E—Depth Set Button | L—Stored Depth Indication |
| F—Load Depth Soft Key | M—Hitch Position Value |
| G—Upper Limit Soft Key | |



RXA0099818 —UN—24NOV08



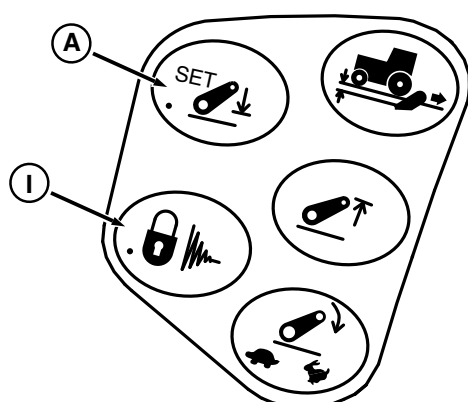
RXA0101379 —UN—07APR09



RXA0101053 —UN—19MAR09

OURX935,000091E -19-16SEP09-1/1

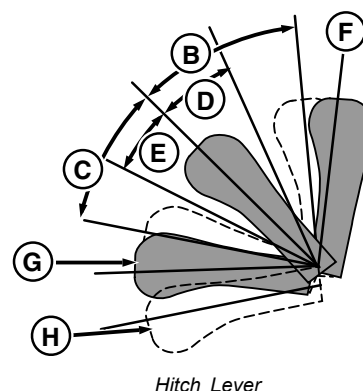
Using Hitch Command Lever



CommandARM™ Controls

A—Hitch Lower Limit Button
B—Hitch Raise—Fast
C—Hitch Lower—Fast

D—Hitch Raise—Slow
E—Hitch Lower—Slow
F—Detent Position, Raise



Hitch Lever

G—Detent Position, Lower
H—Float Position
I—Hitch/Lock Dampening Button

Lever movements within the proportional region (D and E), commands hitch to raise or lower. Raise or lower rate depends on how far the lever is moved from center position. Push lever down to lower hitch; pull lever up to raise hitch.

- Lever will not raise hitch above upper height limit, but will move hitch below the saved depth setting.
- A short duration "flick" of the lever into proportional region will change depth command by a fixed amount.

Setting Depth

Use lever to move hitch to desired operating depth, then press Hitch Lower Limit button (A) to store in memory.

- Each time Hitch Lower Limit button, the previous depth setting is erased and the current depth is saved as the new setting.
- Operating depth can be pre-set before field operation. Hold lever forward until depth command reaches desired value, then store by pressing Depth Set Switch.

Lever Detents

When lever is pulled into detent (F) and released, hitch raises to upper height limit. When pushed into detent (G) and released, hitch lowers to stored depth.

- If lever is held in the forward detent while lowering, hitch will lower beyond saved depth setting. If tractor is moving, hitch will raise to stored depth when lever is released.
- Depth can be varied by moving lever in the proportional region. Pushing lever into forward detent and releasing will return hitch to saved depth setting.

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Lever Float

Float position (H) holds hitch lower valve open continuously and is useful when detaching an implement. See Using Float Operation in this section for proper setup if implement requires that hitch floats during field operation.

Lock/Dampening

CAUTION: To prevent possible injury and equipment damage, set hitch lock and dampening ON before transporting.

Before transport or during operations when hitch is not used, raise hitch with lever then press Hitch Lock / Dampening button (I). This locks the hitch and enables hitch dampening.

- If hitch leaks down while tractor is stopped, hitch will return to locked height when tractor begins moving.
- Hitch command lever is disabled so hitch cannot be lowered (but can be raised back up to the locked position if lever held in detent).
- Hitch dampening interrupts tractor pitching/rocking that can occur when transporting hitch-mounted equipment.

To unlock hitch and turn dampening off, press Hitch Lock /Dampening button again.

RXA0101477 —UN—31MAR09

RXA0104294 —UN—11AUG09

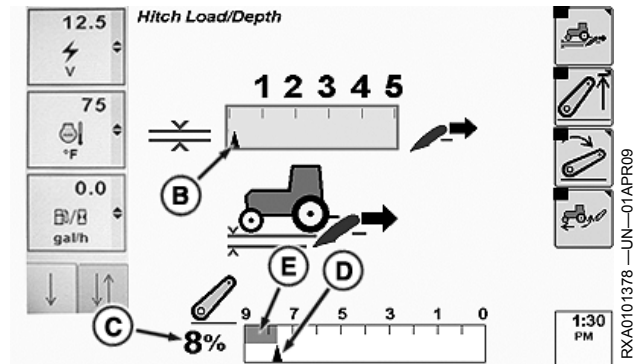
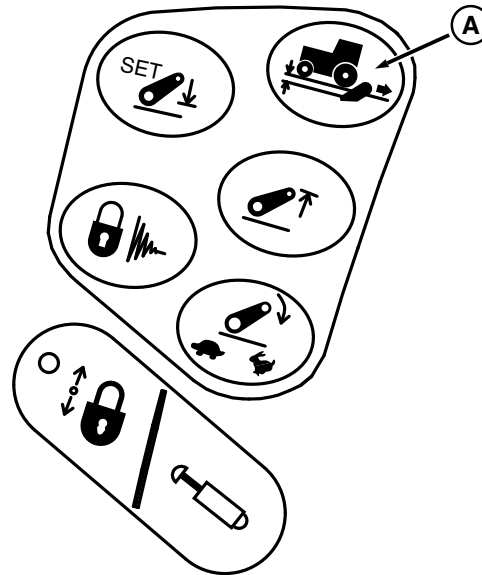
OURX935,0000B1F -19-16SEP09-1/1

Adjusting Load/Depth Control (Draft Response)

NOTE: Load/depth adjustment changes draft responsiveness only. Operating depth is set with hitch lever.

1. Press Load/Depth short cut button (A).
2. Rotate thumb wheel and observe draft response setting indicator (B).
 - Zero draft response provides “position” control (See Using Position Control.)
 - Higher settings are used for “draft” control (See Using Draft Control.)
 - Changes to response setting take place immediately.

A—Load Depth Settings Short Cut Button
 B—Draft Response Settings Indicator
 C—Hitch Position Value
 D—Commanded Depth Indicator
 E—Stored Depth Setting Graph



OURX935,0000926 -19-16SEP09-1/1

Using Position Control

Use position control to operate non-ground engaging implements, and implements that fully rest on gauge wheels to control depth.

To adjust load/depth for position control, set draft response to zero.

0 1 2 3 4 5



Hitch Held at Selected Position

OURX935,0000921 -19-27MAR09-1/1

Using Draft Control

Use draft control to help maintain operating depth of non-floating tillage equipment in rolling terrain, or if tractor attitude/pitch and rear wheel sinkage force implement deeper than desired. If soil density/resistance varies, higher response setting will cause more depth variation. The best setting depends on implement type and field conditions.

Higher values provide more/faster draft response. Lower values provide less/slower draft response.

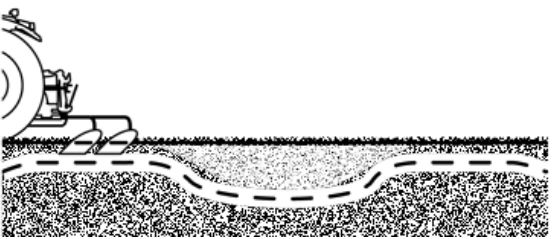
Typical load/depth settings, by implement type, are:

Integral Field Cultivator	4—5
Integral Moldboard Plow	3—5
Semi-Integral Moldboard Plow	2—4
Integral Chisel Plow	2—4
Integral Ripper/Subsoiler	1—3

Adjusting load/depth only changes draft responsiveness. Use hitch lever to control/change operating depth.

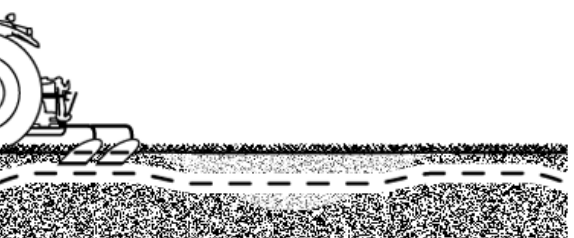
NOTE: Low draft response settings may slow the drop rate of some implements. Hold lever in forward detent to speed entry. Hitch will lower at the drop rate selected.

0 1 2 3 4 5



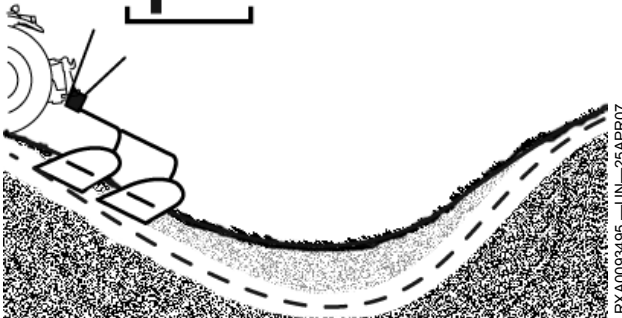
High Response Causes More Depth Variation If Soil Varies

0 1 2 3 4 5




Lower Response Controls Depth Better If Soil Varies

0 1 2 3 4 5



Lower Response Causes More Depth Variation In Rolling Terrain

0 1 2 3 4 5



Higher Response Controls Depth Better In Rolling Terrain

OURX935,0000922 -19-27MAR09-1/1

RXA0093493 —UN—23APR07

RXA0093494 —UN—23APR07

RXA0093495 —UN—25APR07

RXA0093496 —UN—23APR07

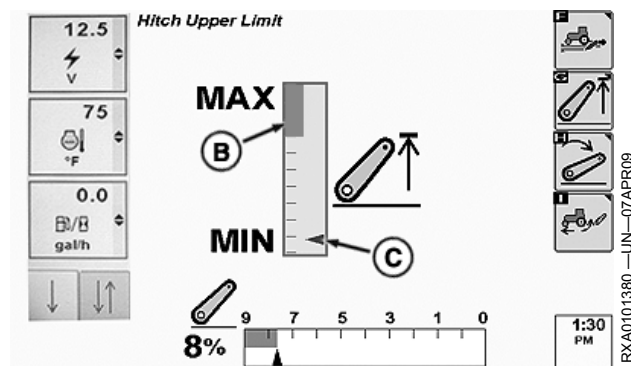
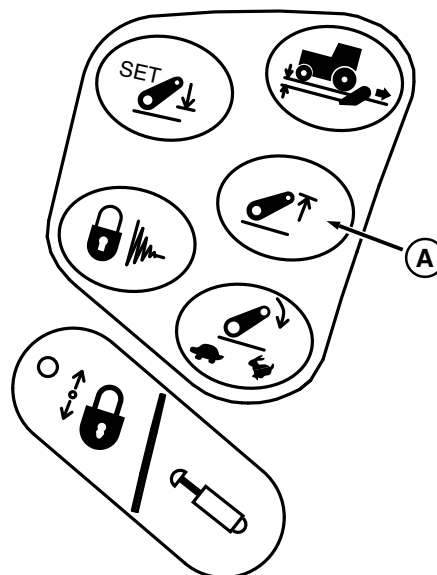
Adjusting Hitch Upper Limit

1. Press upper limit short cut button (A).
2. Rotate thumb wheel and observe upper limit setting indicator (B). Current hitch position represented by indicator mark (C).

NOTE: Changes to upper limit setting take place immediately.

3. Turn thumb wheel to adjust upper limit setting.

A—Hitch Upper Limit Short Cut Button
 B—Upper Limit Setting Indicator
 C—Current Hitch Position Indicator Mark



OURX935,0000923 -19-04APR09-1/1

RXA0099158 —UN—25SEP08

RXA0101380 —UN—07APR09

Adjusting Hitch Drop Rate

IMPORTANT: Excessive drop speed may cause injury or machine damage. Fully lowering implement should take at least two seconds.

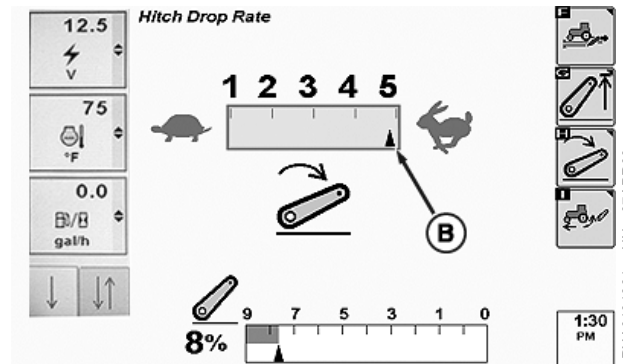
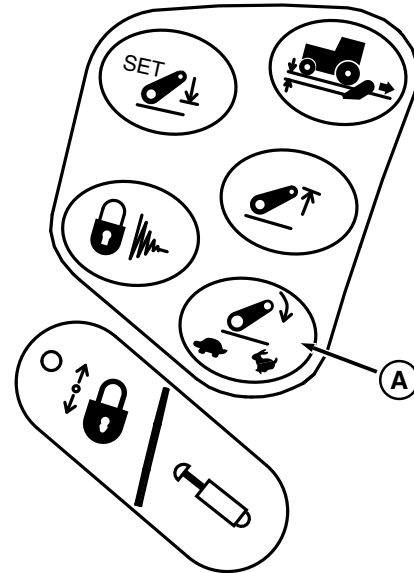
1. Press drop rate short cut button (A).
2. Observe display. Drop rate setting is represented by indicator (B).

NOTE: Changes to rate of drop setting take place immediately.

3. Rotate thumb wheel to adjust drop rate and observe drop rate setting indicator (B).

A—Hitch Drop Rate Short Cut Button

B—Hitch Drop Rate Setting Indicator



OURX935,0000927 -19-16SEP09-1/1

RXA0101489 —UN—02APR09

RXA0101381 —UN—07APR09

Setting Hitch Slip Response

NOTE: Tractor must be equipped with **radar**, and load/depth control must be in **draft control** mode for hitch slip to function. See *Using Draft Control* in this section.

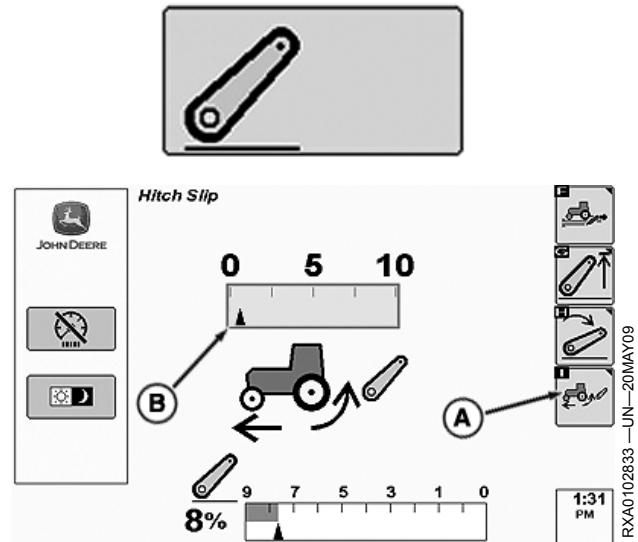
Hitch can be operated with draft sensing only, or with draft sensing and hitch slip. Hitch slip adjustment is independent from draft response.

Hitch slip uses wheel slip data to supplement draft control system and help maintain uniform working depth. Hitch slip only functions if wheel slip is above 10%.

Response Setting Guidelines *	
Chisel Plow	2—4
Subsoiler	5—7
Moldboard Plow	7—9
V-Ripper	8—10
* Appropriate setting will depend on implement type, soil conditions and tractor setup	

1. At the CommandCenter™ main menu select hitch icon.
 2. Select Hitch Slip soft key (A).
- NOTE:** Changing slip response setting will only affect operation if wheel slip is above 10%.
3. Changes to slip response take place immediately.
 4. Rotate thumb to adjust slip response. As hitch slip response is adjusted, indicator adjusts in bar graph (B). Higher values provide more/faster response to slip

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A—Hitch Slip Soft Key

B—Bar Graph

variation. Lower values provide less/slower response to slip variation. Changes to slip response setting take place immediately.

NOTE: Slip response automatically returns to zero during transport (speed above 20 km/h [12.4 mph]).

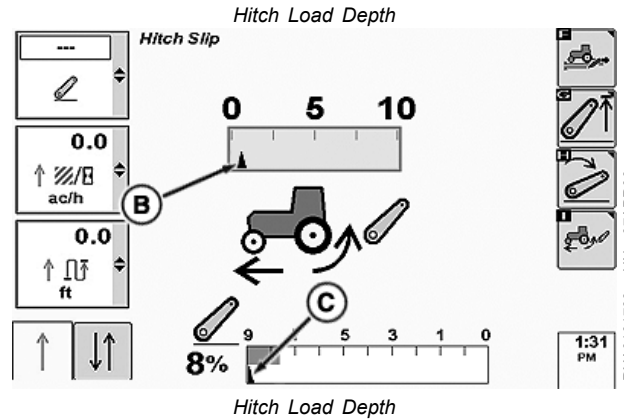
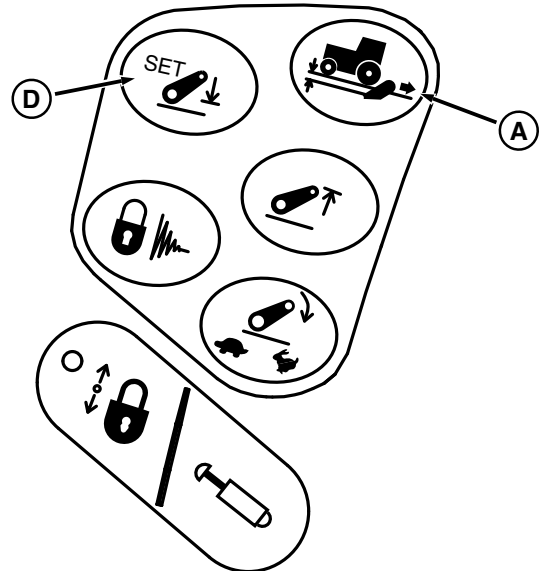
Using Float Operation

Implements that fully rest on gauge wheels to control depth, require that the hitch float to follow ground contour.

1. Press Load/Depth short cut button (A).
2. Turn thumb wheel to set load/depth setting indicator (B) to a minimum for position control until indicator.
3. Hold hitch lever forward until commanded depth indicator (C) is full down to 9 on the bar graph.
4. Press hitch lower limit button (D) to save full down as stored depth setting.
5. Lift links can be adjusted for lateral float. See changing Lateral Float in this section.

A—Load/Depth Short Cut Button
B—Load/Depth Setting Indicator

C—Commanded Depth Indicator
D—Hitch Lower Limit Short Cut Button

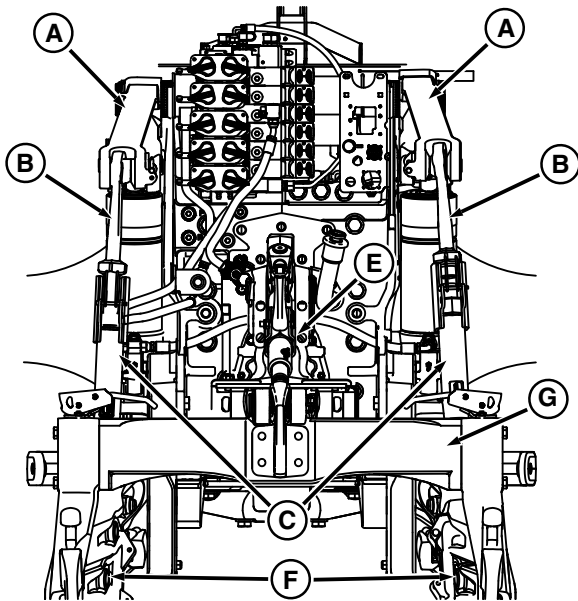


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RXA0102832 —UN—05JUN09

RXA0101733 —UN—07APR09

Hitch Components



Hitch Components

A—Lift Arms
B—Lift Cylinders

C—Lift Links
D—Hitch Lever

E—Center Link
F—Draft Links

G—Quick Coupler



Hitch Lever

RXA0101054 —UN—19MAR09

RXA0097040 —UN—29AUG08

OURX935,0000007 -19-20MAR09-1/1

Using External Raise and Lower Switches

CAUTION: To prevent injury or damage caused by tractor movement, be sure transmission is in **PARK** position before using external raise and lower switches. Stay clear of interference points when using external raise and lower switches.

When external switches (A and B) are pressed hitch moves slowly, but slowly increases speed the longer hitch switch is held down.

Press and hold external switches to raise (A) or lower (B) hitch. Hitch moves at slow speed when using external switches.

NOTE: Hitch command lever cannot be used simultaneously with external raise/lower switch.



Fender Mounted Switches

A—External Raise Switch

B—External Lower Switch

RXA0100898 —UN—06MAR09

OURX935,000080C -19-01APR09-1/1

Using Hitch Manual Lowering Feature

CAUTION: Avoid personal injury or death. Do not disconnect any hitch sensors, solenoids, or connectors from the hitch control valve when engine is operating or key switch is ON. Unexpected hitch movement may occur. Stay clear of hitch area when starting engine or manually lowering hitch.

Hitch manual lowering is possible when hydraulic pressure and/or electrical power is not available.

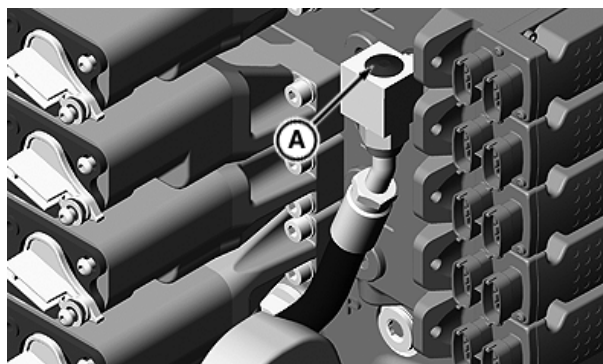
Remove plug (A) to access the manual lowering screw (B). Turn screw counterclockwise to lower the hitch.

NOTE: The hitch cannot be raised mechanically. Both hydraulic and electrical power are required to raise the hitch.

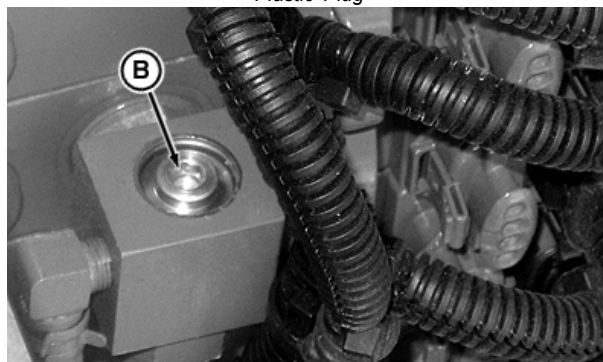
Turn screw clockwise and install plug after hitch has been lowered.

A—Plug

B—Manual Lowering Screw



Plastic Plug



Manual Lowering Screw

OURX935,00007C7 -19-24DEC08-1/1

Using Correct Center Link Position

IMPORTANT: Excessive power can damage an implement, and a too large implement can damage the tractor.

This tractor requires center link with recessed retaining mount (C) to prevent interference with SCV valve stack. Using a center link without a recessed retaining mount may result in damage to SCV stack.

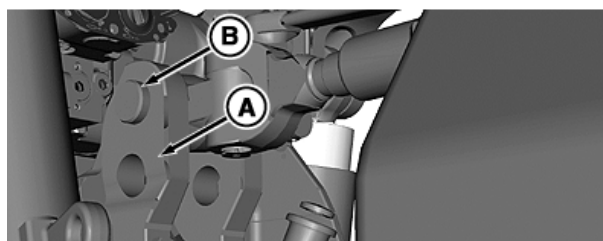
NOTE: Upper hole offers greater lift capacity. Lower hole offers greater ground clearance.

Attach center link to lower hole (A) for most standard implements. Use upper hole (B) when implements requiring higher lift capacity are used. See implement operator's manual for recommendations.

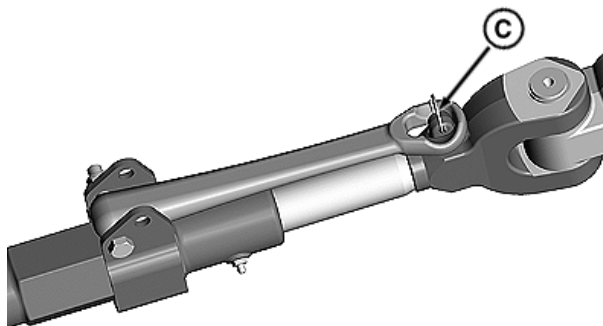
Refer to lift capacities in Specifications Section.

A—Lower Hole
B—Upper Hole

C—Recessed Retaining Mount



Use Correct Hitch Category



Recessed Retaining Mount Center Link

OURX935,0000813 -19-29DEC08-1/1

Using Sway Blocks

Install sway blocks (A) in lower position to minimize side sway of hitch.

Adjust bumper (B) by loosening lock nut and sliding forward or rearward as needed to limit the amount of sway.

Mount sway blocks in upper position to allow side sway when hitch is lowered. Side sway is prevented when hitch is raised.

NOTE: Use shims as needed to provide desired sway control. Shims can be purchased from your John Deere dealer.

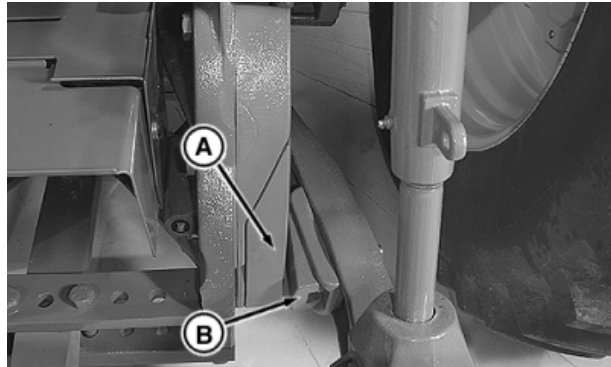
If there is not enough adjustment in bumper block to remove hitch sway, install shims as necessary between bumper block and spacer (F).

IMPORTANT: Tires must have at least 25 mm (1 in.) clearance distance (D) with fenders. To prevent draft link interference, be sure distance (E) between tires is:

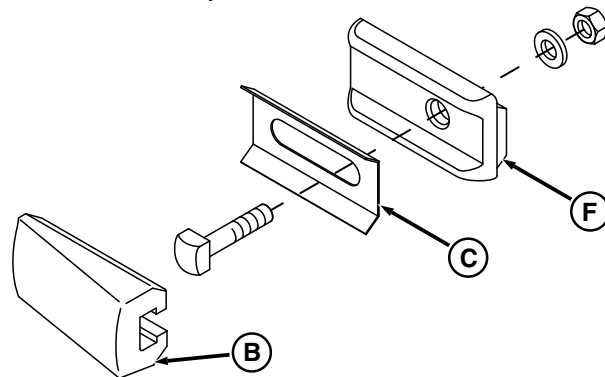
- Category 3N Hitch—1.09 m (43 in.)
- Category 3 Hitch—1.17 m (46 in.)
- Category 4N Hitch—1.17 m (46 in.)

A—Sway Blocks
B—Bumper
C—Shim

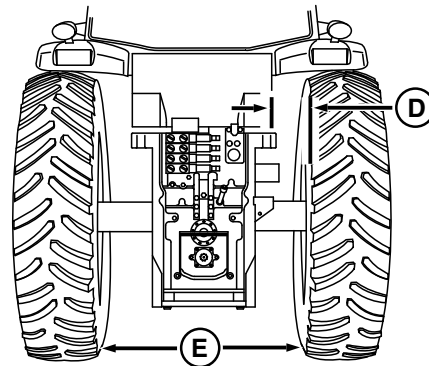
D—Distance Clearance
Between Tires And Cab
E—Distance Between Tires
F—Spacer



Sway Blocks in Lower Position



Install Shim Between Bumper block and Spacer



Distance Between Tires

RXA0052493 —UN—28MAR01

RXA0090041 —UN—04AUG06

RXA0089661 —UN—04AUG06

OURX935,0000814 -19-29DEC08-1/1

Using Deluxe Stabilizers

IMPORTANT: Check full range of hitch movement when using stabilizing system. Check for interference when tractor is equipped with 710/70R38 or larger tires.

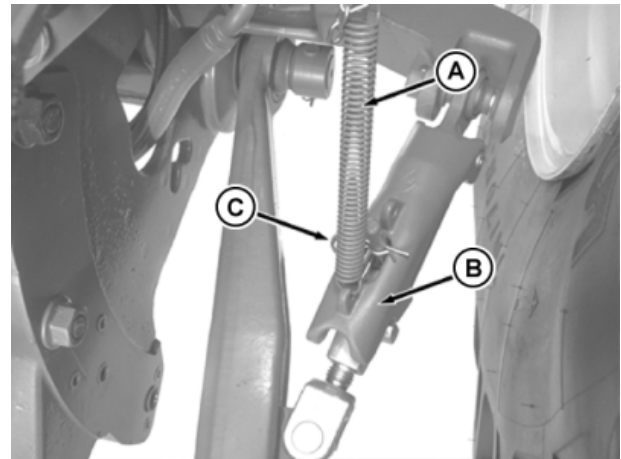
The stabilizing system is operated by means of chain/spring (A) and latch (B). If latch is raised (remove pin (C) to raise latch), the draft links have lateral sway, otherwise they are locked.

Chain (A) Short:

Draft links are locked in raised position (rigid setting), in lowered position they have lateral sway.

Chain (A) Long:

Draft links are locked in all positions.



RW55548A —UN—06NOV99

A—Chain/Spring
B—Latch

C—Pin

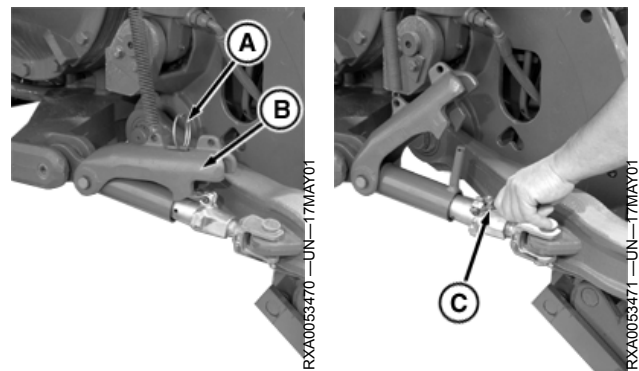
OURX935,0000816 -19-29DEC08-1/2

Back tractor to the center of the implement. Remove retainer (A), raise latch (B) and lift handle (C).

Adjust support by turning handle. After adjustment, lower the latch and install retainer (A).

A—Retainer
B—Latch

C—Handle



RXA0053470 —UN—17MAY01

RXA0053471 —UN—17MAY01

OURX935,0000816 -19-29DEC08-2/2

Attaching Implement to Walterscheid Couplers

CAUTION: To avoid bodily injury or machine damage, put transmission in **PARK** position and check the full range of hitch for interference, binding, or PTO separation whenever an implement is attached.

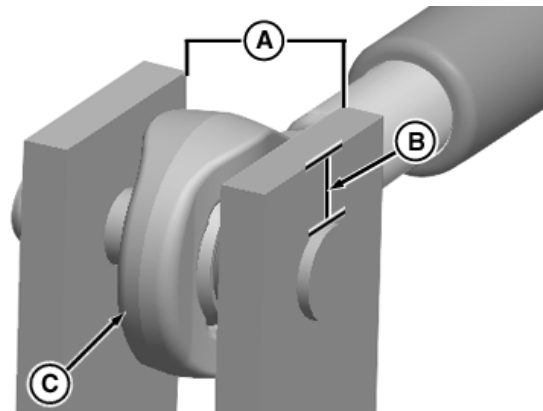
Do not stand between tractor and implement.

1. Turn load/depth control fully counterclockwise before attaching implements.

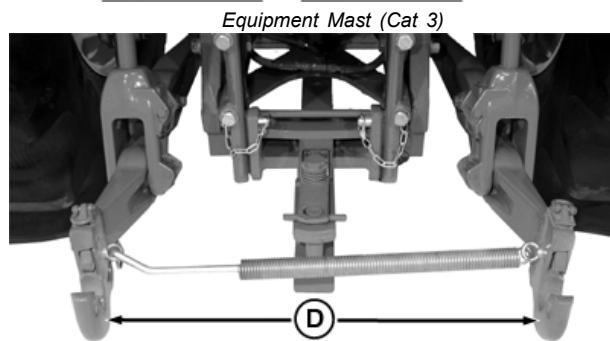
CAUTION: Avoid bodily injury. **DO NOT** use raise/lower switch when attaching or detaching implements. Use only hitch control lever or **EXTERNAL** raise/lower switches.

2. Lower hitch using hitch control lever. Back up tractor until the coupler hooks (C) are below the implement hitch pins.
3. Slowly raise hitch until pins are engaged in coupler hooks and correctly locked into position.
4. Attach center link to the implement mast. Mast height on implement must not exceed 885 mm (34.8 in.).

IMPORTANT: If the implement upper mast opening is greater than 70 mm (2.8 in.) or if there is less than 14 mm (0.6 in.) around the upper mast hole, use a combination of shims on both sides of the center link ball.



RXA0086593 —UN—09FEB06



RXA0098806 —UN—12AUG08

A—Distance
B—Distance

C—Yoke
D—Coupler Hooks

OURX935,0000817 -19-14APR09-1/1

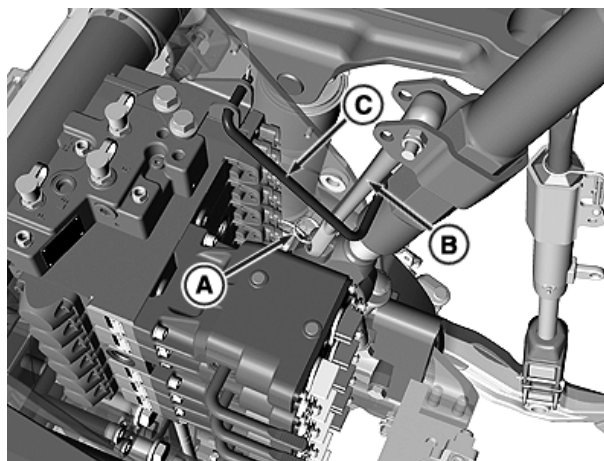
Detaching Implement from Walterscheid Couplers

1. Lower implement to the ground.

NOTE: For tractors equipped with Independent Link Suspension induce tractor leveling with engine operating:

- Depress clutch
- Put transmission shift lever in gear for four seconds
- Move shift lever to NEUTRAL position
- Repeat until suspension is level

2. Disconnect hydraulic hoses and electrical connections.
3. Retract lower hooks and lower the hitch until couplers are clear of implement hitch pins.
4. Disconnect center link from implement.
5. Carefully drive tractor forward away from implement.
6. Lock center link into the transport position. Remove retaining ring (A). Lift center link handle (B) and lock retaining link (C) into position.



A—Retaining Ring
B—Link Handle

C—Lock Retaining Link

OURX935,0000818 -19-29DEC08-1/1

Attaching Implement to Quick Coupler



A—Coupler Latch Handle

B—Hitch Control Lever



Lever

CAUTION: To avoid bodily injury or machine damage, put transmission in **PARK** position and check the full range of hitch for interference, binding, or PTO separation whenever an implement is attached.

Do not stand between tractor and implement.

1. Pull up on coupler latch handles (A).
2. Lower hitch until quick coupler hooks are lower than implement hitch pins.
3. Back up tractor to implement.

4. Raise hitch enough to engage implement pins in hooks.

CAUTION: To avoid bodily injury or machine damage make sure implement is attached correctly. Incorrect attachment can allow implement to be pulled over the tractor wheel and onto the operator station.

5. Push coupler latch handles down to lock implement to quick coupler.
6. Connect hydraulic hoses and electrical connections.

Continued on next page

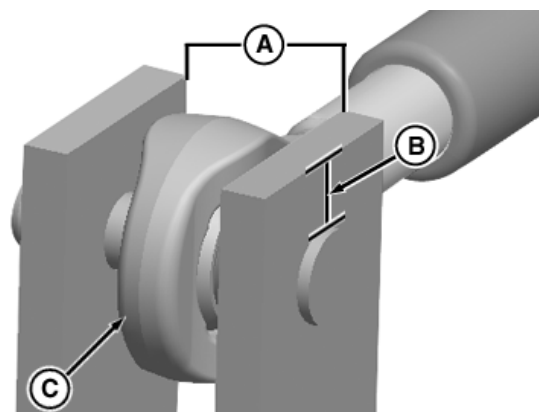
OURX935,0000819 -19-01APR09-1/2

IMPORTANT: Check for implement interference.
Drawbar removal may be necessary.

7. Slowly pull hitch control lever (B) to raise implement. Lower implement to ground and adjust upper height limit control if necessary.

IMPORTANT: If center link is attached directly to implement, measure upper mast opening (A) and height above pin (B). If upper mast opening is greater than 70 mm (2.8 in.) or height above pin is less than 14 mm (0.6 in.), use shims to limit/restrict swiveling of yoke (C).

- If connecting to a category 4N hitch, use a combination of shims on both sides of center link pivot.



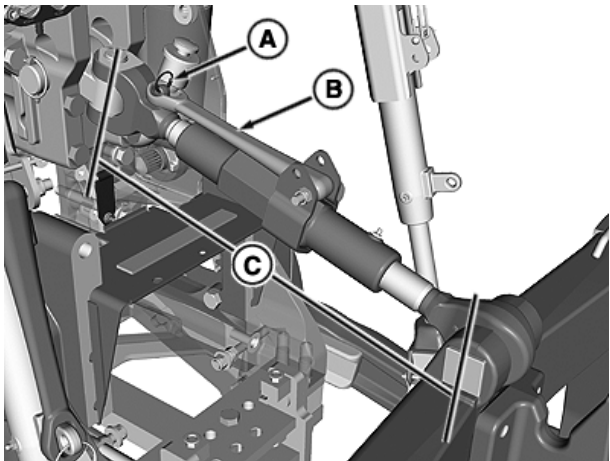
RXA0086593 —UN—09FEB06

A—Distance
B—Distance

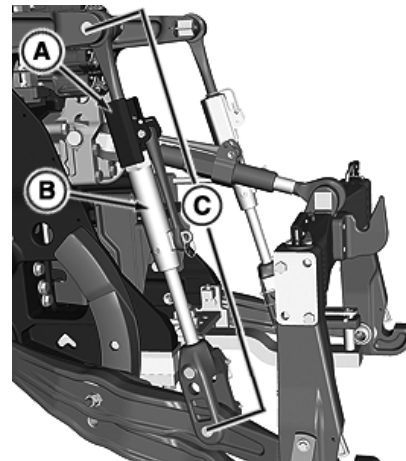
C—Yoke

OURX935,0000819 -19-01APR09-2/2

Adjusting Implement Level



RXA0098642 —UN—16JUL08



RXA0098643 —UN—16JUL08

A—Locking Ring
B—Handle

C—Center Link Adjustment Length
D—Collar

E—Center Portion
F—Lift Link Adjustment Length

- Adjust center link to level implement front-to-rear.

- Remove Locking Ring (A).
- Lift Handle (B).
- Rotate center portion of center link to desired position.

- Secure handle with locking ring.

- Measure between centers of pins (C).

Center Link—Specification

Adjustment—Category	
3 Length With Quick	
Coupler.....	627—790 mm (24.7—31.1 in.)
Category 3 Length	
Without Quick Coupler.....	698—861 mm (27.5—33.9 in.)
Category 4 Length With	
Quick Coupler.....	681—814 mm (26.8—32. in.)
Category 4 Length	
Without Quick Coupler.....	735—897 mm (28.9—35.3 in.)

- Adjust lift links to level implement side-to-side. Slide collar (D) upward. Rotate center portion (E) of lift link to desired position.

Lift Link Length—Specification

Adjustment—Category 3	
Length (With or Without	
Quick Coupler).....	966—1135 mm (38.— 44.7 in.)
Category 4 Length	
(With or Without Quick	
Coupler).....	966—1135 mm (38.— 44.7 in.)

- Lock out lateral float.

- Secure collar in position.

OURX935,0000850 -19-22JAN09-1/1

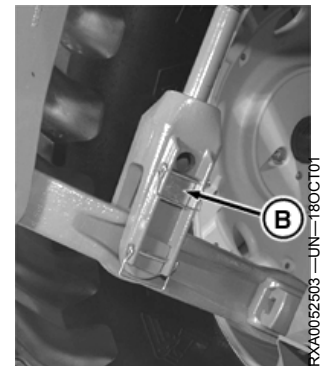
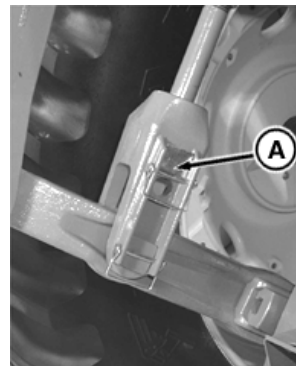
Changing Lateral Float

Put lateral float pins in upper holes (A) to hold implement rigidly.

Put lateral float pins in lower holes (B) to allow either draft link to raise slightly as implement follows ground surface.

A—Upper Holes

B—Lower Holes



TXA0052502 —UN—18OCT01

TXA0052503 —UN—18OCT01

OURX935,000081B -19-29DEC08-1/1

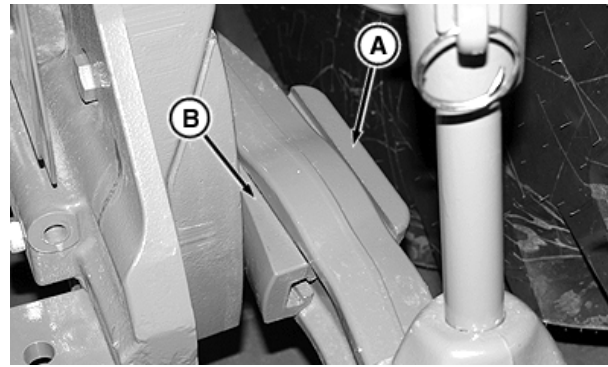
Hitch Conversion—Convertible Quick Coupler

1. Converting to category 3N is necessary for some narrow row/tread spacing operations. Quick coupler is convertible to Category 3 or Category 3N. Use Category 3 whenever possible, especially for heavy loads.

Install spacer (A) on outside of draft link for Category 3N.

IMPORTANT: If coupler is converted to category 3N, sway block spacer (A) must be mounted on the outside of draft link to avoid damaging equipment.

2. Adjust bumper block (B) to minimize clearance.
3. Tighten nut securely.



Spacer and Bumper Block

A—Spacer

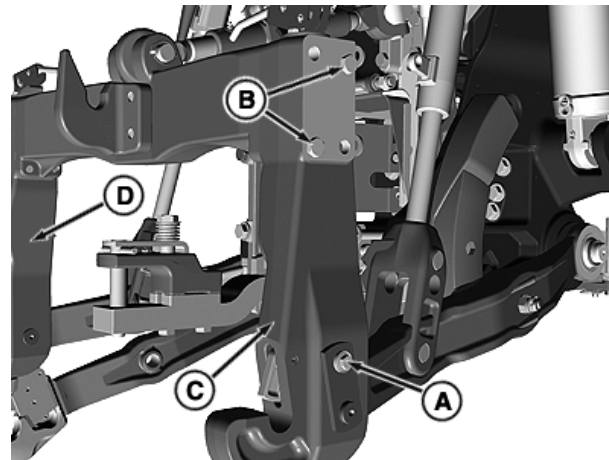
B—Bumper Block

OURX935,000081C -19-29DEC08-1/2

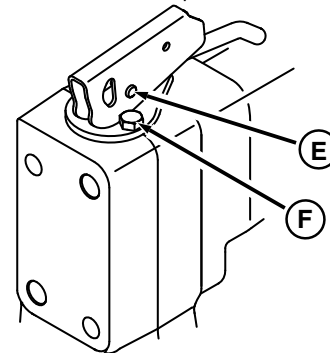
4. Support center of quick coupler. Remove pin retaining bolts (A) and pins from draft link. Remove side member cap screws (B).
5. Swap quick coupler side members, left-side member (C) to right end and right-side member (D) to left. Tighten cap screws to 320 +/-64 N·m.
6. Disconnect latch levers by removing C-clip and pin (E).
7. Remove cap screw (F) from wear plate and turn so tab is inward.
8. Install cap screws and tighten securely.
9. Reconnect levers.

A—Retaining Bolts
B—Cap Screws
C—Left Side Member

D—Right Side Member
E—C-Clip and Pin
F—Cap Screw



Quick Coupler



Quick Coupler

OURX935,000081C -19-29DEC08-2/2

Detaching Implement from Quick Coupler

1. Raise both latch levers (A) with implement raised.
2. Disconnect hydraulic hoses and electrical connections.
3. Lower implement to ground. Continue lowering quick coupler until hooks clear implement hitch pins.

NOTE: For tractors equipped with Independent Link Suspension induce tractor leveling with engine operating:

- Depress clutch
- Put transmission shift lever in gear for four seconds
- Move shift lever to NEUTRAL position
- Repeat until suspension is level

4. Carefully drive tractor away from implement.



Coupler Latch Handle

A—Latch Lever

RXA0087988 —UN—21MAR06

OURX935,000081D -19-14APR09-1/1

Converting Category 4—Convertible Quick Coupler Lower Hooks

CAUTION: Use proper lifting device when converting coupler. Failure to do so can result in personal injury.

NOTE: A second person is recommended to align components during conversion.

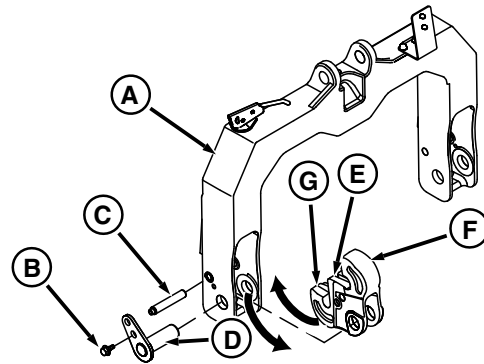
If category 4 lower hooks are to be used on category 3 implements, bushings are needed over the category 3 pins; these bushings can be purchased through your John Deere dealer.

NOTE: Lower hooks are not marked for left-hand or right-hand side. Do not move lower hooks from one side to the other.

1. Support quick coupler frame (A).
2. Remove cap screw (B).
3. Remove retainer (C), then pin (D).

NOTE: Because lower hook (E) has a category 3 hook (F) on one end and a category 4N hook (G) on the opposite end, it is used for both category 3 and 4N simply by turning it end for end.

4. Remove lower hook by rotating it down and to the rear of the coupler, then sliding it out at the front of the coupler.



Converting Lower Hooks

A—Quick Coupler Frame
B—Cap Screw
C—Retainer
D—Pin
E—Lower Hook
F—Category 3 Hook
G—Category 4N Hook

5. Install lower hook, with desired end facing out. Using a reverse motion of removal, rotate it up and in.
6. Install pin, retainer and cap screw. Tighten to torque.

Specification

Lower Hook Cap
Screws—Torque..... 100 N·m (74 lb-ft)

RXA0085785 —UN—10JAN06

OURX935,000081E -19-29DEC08-1/1

Converting Category 3/4 Convertible Quick Coupler Upper Hook

CAUTION: Use proper lifting device when converting coupler. Failure to do so can result in personal injury.

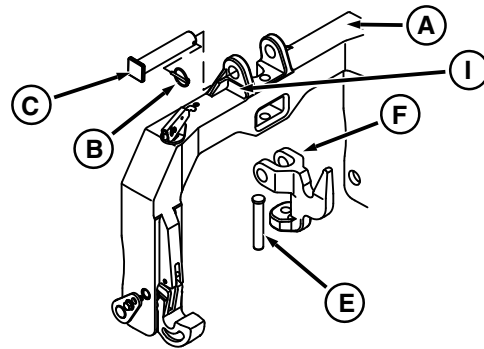
NOTE: A second person is recommended to align components during conversion.

When full power is to be used on 8320R and 8345 tractors with ground engaging implements it is recommended to use CAT 4 upper hook if implement set up allows. The CAT 3 upper hook may be overloaded with very high draft loads.

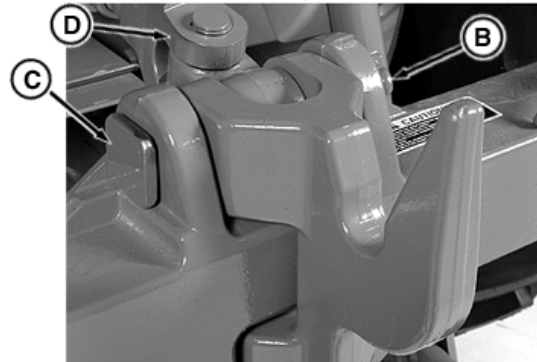
1. Support quick coupler frame (A).
2. Remove quick lock pin (B) and pin (C) to release center link (D).
3. Remove pin (E) and upper hook (F).
4. Use reverse sequence of steps to remove upper hook from quick coupler. Install previously stored upper hook into quick coupler.

A—Quick Coupler Frame
B—Quick Lock Pin
C—Pin
D—Center Link
E—Pin

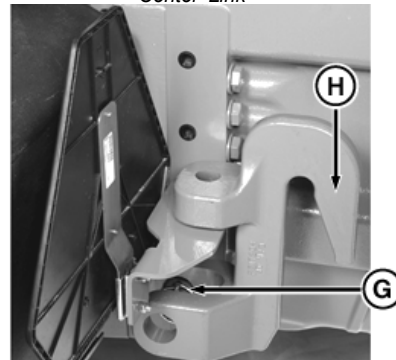
F—Upper Hook
G—Pin
H—Stored Upper Hook
I—Shoulder



Coupler



Center Link



Stored Upper Hook

RXA0087383 —UN—02MAR06

RXA0081100 —UN—02JUN05

RXA0081101 —UN—09AUG05

OURX935,0000A4B -19-16AUG09-1/1

Operating the Wagon Hitch

Wagon hitch can be released from the operator's seat using lever (A).

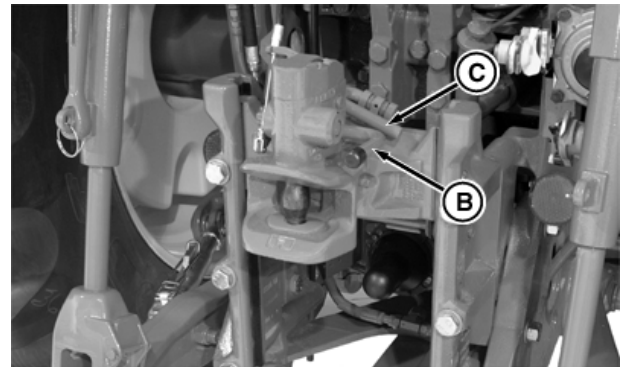
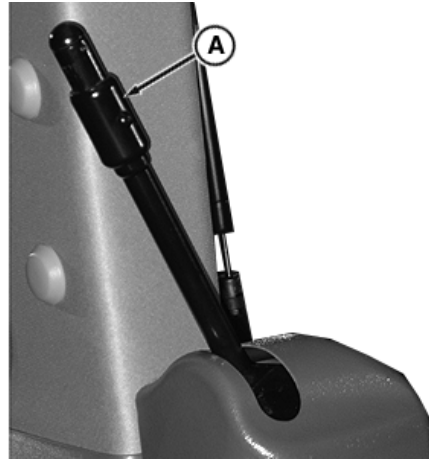
⚠ CAUTION: Avoid personal injury. Keep hands and fingers from hitch latching mechanism.

The wagon hitch closes automatically when trailer towing eye enters the hitch or can be manually closed using release lever (B).

Wagon hitch height can be adjusted using height adjustment lever (C).

A—Lever (In Cab)
B—Release Lever

C—Height Adjustment Lever



RXA0100506 —UN—11FEB09

RXA0056499 —UN—29AUG01

OURX935,0000931 -19-01APR09-1/1

Operating Pickup Hitch

NOTE: The pickup hitch is operated using selective control valves. SCV I (B) raises or lowers hitch and SCV II (C) extends or retracts hitch.

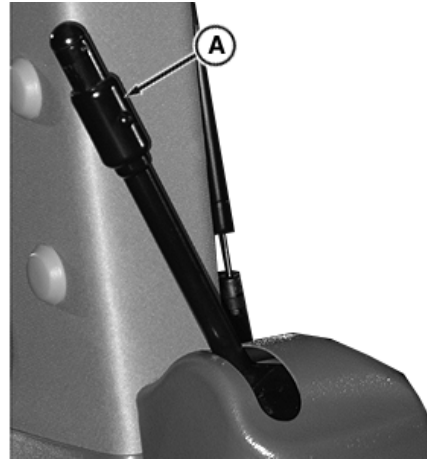
1. To release pickup hitch, raise hitch while pulling lever (A) to the right then lower hitch to desired height.
2. Back up tractor and raise pickup hitch so hitch hook engages in trailer towing eye.
3. Raise pickup hitch to transport/locked position.
4. Check to make sure pickup hitch is in **locked position**. Pull release lever to the right. Lever should not move.

CAUTION: Avoid bodily injury or machine damage whenever pickup hitch is used. Before driving away, make sure pickup hitch is fully raised and locked in position. Adjust sway blocks or stabilizers to prevent interference or binding.

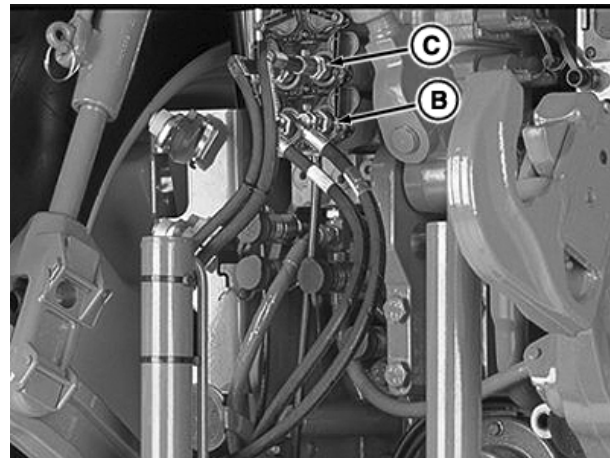
5. To change couplers, remove pins (F) and hook (D), then slide in drawbar (E) and reinstall pins.

A—Lever
B—SCV I Coupler
C—SCV II Coupler

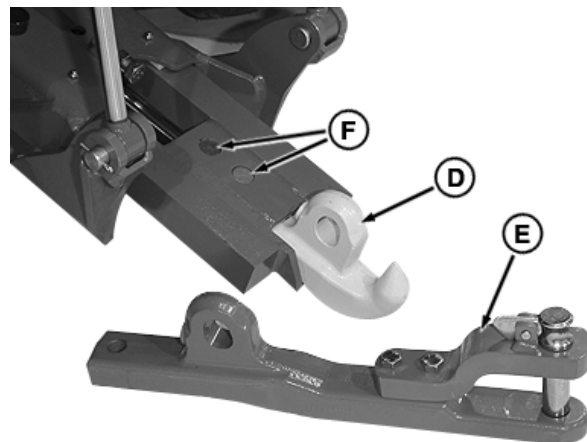
D—Hook
E—Drawbar
F—Pins



RXA0100506 —UN—11FEB09



RXA0083371 —UN—15AUG05



RXA0083395 —UN—15AUG05

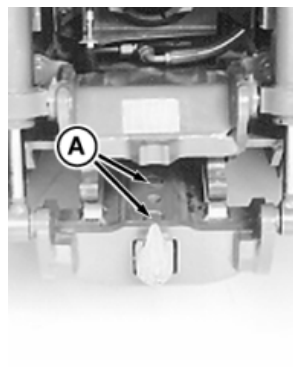
OURX935,0000932 -19-01APR09-1/1

Changing Pickup Hitch Coupler

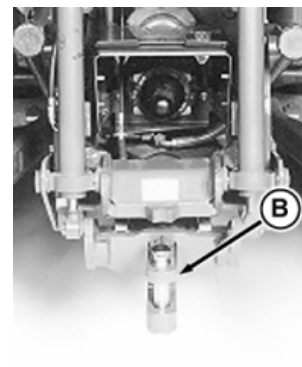
1. Lower pickup hitch.
2. Remove pins (A) from hook.
3. Install swinging drawbar (B) and replace pins.
4. Store hook or drawbar element in holder on left side of tractor frame by batteries.

A—Pins

B—Swinging Drawbar



RW5555A —UN—06NOV99



RW5555A —UN—06NOV99

OURX935,0000821 -19-29DEC08-1/1

3 in 1 Hitch System

CAUTION: Avoid personal injury. Keep hands and fingers from pickup hitch latching mechanism.

The pickup hitch pin closes automatically when trailer towing eye enters the pickup hitch or can be manually closed using lever (A).

Install piton coupling (B) or ball coupling (C) by pulling spring release pins (H) and locking pins (F). Slide either coupling into pickup hitch rails and reinstall locking pins.

IMPORTANT: If using 35 mm (1 3/8 in.) PTO or PTO adaptor with 3 in 1 hitch rails, it may be necessary to limit steering angles to prevent PTO drive line from rubbing and/or damaging hitch rails.

A—Lever (In Cab)

B—Piton Coupling

C—Ball Coupling

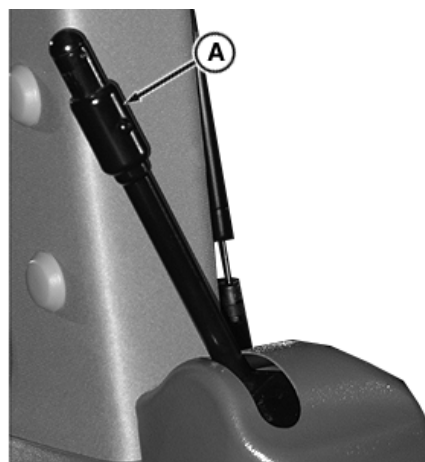
D—Wagon Hitch Release Lever

E—Wagon Hitch Height Adjustment Lever

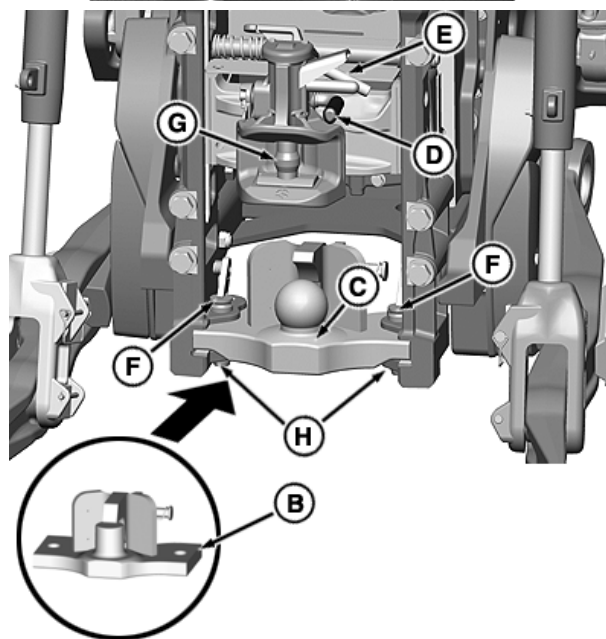
F—Locking Pins

G—Wagon Hitch

H—Spring Release Pins



RXA0100506 —UN—11FEB09



RXA008664 —UN—14FEB06

OURX935,0000933 -19-01APR09-1/1

Using Front Hitch (If Equipped)

NOTE: Front hitch used only on tractors equipped with Independent Link Suspension.

Lift Arm Storage and Operating Positions

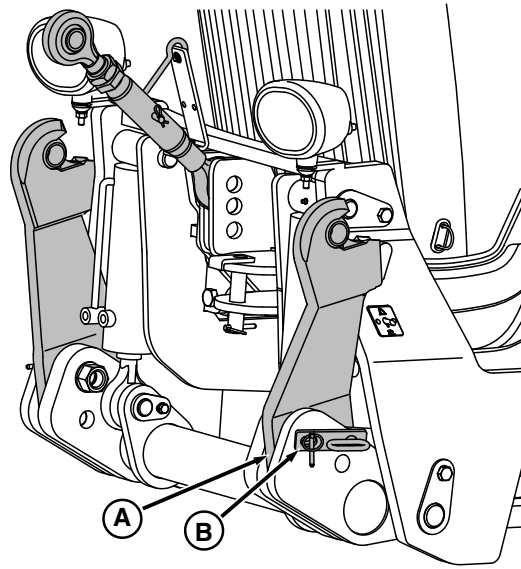
Perform the following procedures to prepare the front hitch for operation:

1. Support lift arm (A) and remove quick lock pin and pin (B).
2. Lower lift arm to align holes with hitch frame for one of the following operations:
 - Position (C)—Rigid; Lift arms stable
 - Position (D)—Float; Allows lift arms/hitch to follow ground contours
3. Install pin and quick lock pin.
4. Repeat on opposite side.

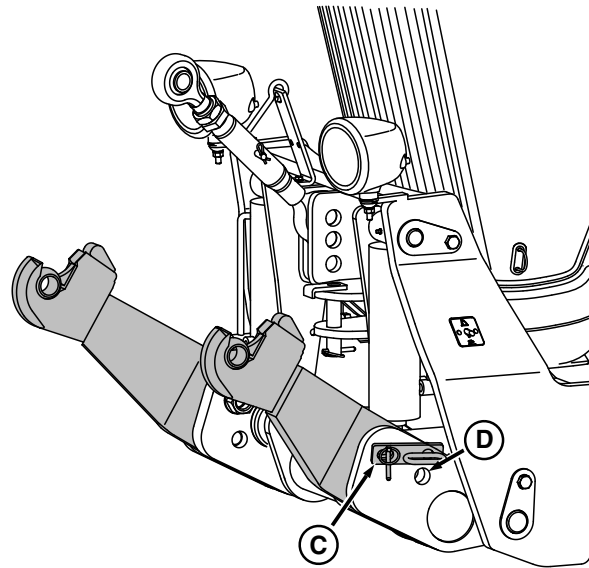
To store lift arms, remove pins and raise lift arm into upright position. Install pin and quick lock pin in location (C).

A—Lift Arm
B—Quick Lock Pin and Pin

C—Rigid Position
D—Float Position



Storage Position



Operating Position

RXA0080755 —UN—20MAY05

RXA0080754 —UN—20MAY05

Continued on next page

OURX935,0000823 -19-16SEP09-1/2

Attaching and Detaching Implement to/from Hitch

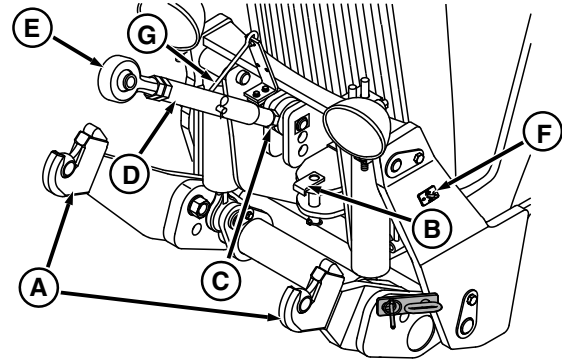
⚠ CAUTION: Avoid possible personal injury and tractor damage. DO NOT use front hitch to lift tractor. Use correct lifting equipment.

IMPORTANT: Avoid damage to equipment. Be sure load is balanced side-to-side and front-to-rear.

1. Adjust implement attaching points. (See implement operator's manual.)
2. Lower lift arms (A) using remote hitch switch (F).
3. Position coupler ends of lift arms below implement link pins and slowly raise hitch until coupler ends lock on implement link pins.

NOTE: Keep center link in stored position when not in use.

4. Remove retainer (G) from center link.
5. Loosen lock nut (C).
6. Hold link end (E) and turn center link (D) to adjust length. Tighten lock nut.



A—Lift Arms
B—Quick Lock Pin and Pin
C—Lock Nut
D—Center Link

E—Link End
F—Remote Hitch Switch
G—Retainer

7. Remove quick lock pin and pin (B) from storage location and attach center link to implement.

Detach implement from hitch in reverse order of attaching.

OURX935,0000823 -19-16SEP09-2/2

RXA0085786 —UN—10JAN06

TouchSet Depth Control

Using TouchSet™ Depth Controls

CAUTION: Avoid personal injury or death. Do not attempt to install depth control sensors on implements not intended for this system. See implement operator's manual.

Moving implement control unit, sensor, connectors, or linkages, when engine is running, may cause unexpected movement. Stay clear of implement when starting engine.

Tractor selective control valve (SCV I) is used to electronically control raising, lowering, and setting of implement depth, without leaving the cab.

1. Connect implement to tractor.

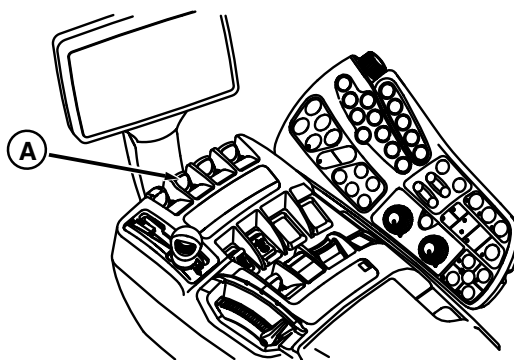
NOTE: When using TOUCHSET, SCV must be set for feature mode. See Hydraulics and Selective Control Valves Section.

Height setting is the upper edge of grayed area, implement range (B). The lower limit (depth setting) is the bottom portion of the implement range. Actual implement position is depicted by indicator (C).

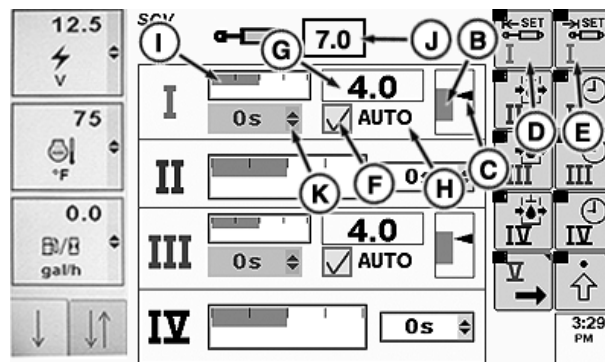
2. Using SCV I lever (A), lower implement to desired depth while watching implement and CommandCenter™ vertical implement bar graph setting (B).
3. When implement is at desired depth, rotate Cab Switch Module thumb wheel to extend soft key (D) and select by pressing Cab Switch Module Confirm button.
4. Using SCV I lever, raise implement to desired height while watching implement and CommandCenter vertical implement bar graph setting (B).
5. When implement is at desired height, rotate Cab Switch Module thumb wheel to retract soft key (E) and select by pressing Cab Switch Module Confirm button.
6. Rotate Command Switch Module thumb wheel to bar graph (G). Press Cab Switch Module Confirm button to highlight. Rotate thumb wheel to adjust flow.

NOTE: As in previous SCV applications, bar graph (I) will depict flow and amount of flow will be shown in

TouchSet is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company



RXA0099916 —UN—08DEC08



RXA0101839 —UN—08APR09

A—SCV I Control Lever
B—Implement Range
C—Implement Indicator
D—Extend Set Soft Key
E—Retract Set Soft Key
F—Check Box

G—Set Points
H—AUTO Status
I— Detent Flow Bar Graph
J— Detent Flow Box
K—Detent Drop Down Box

box (J). Timed detent, drop down box (K) cannot be adjusted when the system is set to "Auto" (H). If "Auto" has a slash mark across it indicating this feature is turned off and the box in front of Auto is uncheck and gray, then the detent time can be adjusted. See Standard Mode in Hydraulics and Selective Control Valves Section.

OURX935,0000937 -19-10APR09-1/1

Attaching Implement and Control System

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines.

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.

IMPORTANT: Be sure to correctly connect remote hydraulic hoses to couplers. If hose connections are reversed, machine will not respond to system controls. Extend hose always goes in coupler left-hand port. Retract hose always goes in coupler right-hand port.

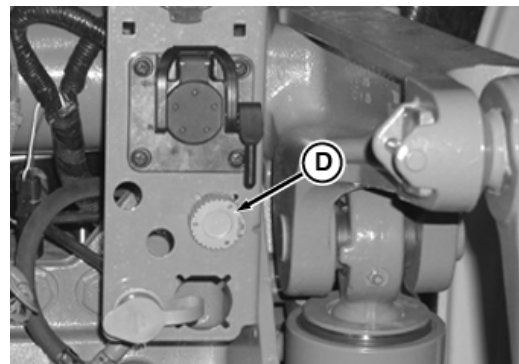
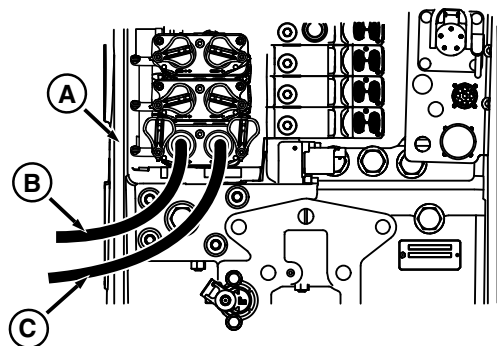
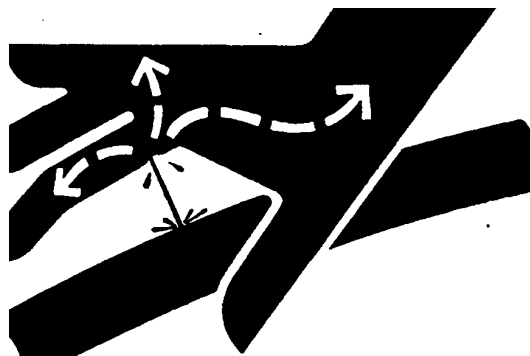
- Extend = Left Side
- Retract = Right Side

NOTE: Hose identification kits are available from your John Deere Dealer.

1. Identify extend hose (B) and retract hose (C).
2. Back tractor into position and attach hitch link to drawbar. Be sure hitch pin is locked into position.

IMPORTANT: Always shut engine off before connecting/disconnecting implement position sensor. Connect/disconnect with engine running will cause system faults. Shut engine off then restart to restore correct function.

3. Shut off tractor engine.
4. Connect implement hydraulic hoses according to Hydraulics and Selective Control Valves in this Operator's Manual.
5. Install implement position sensor to tractor wiring harness connector (D).



A—SCV handle
B—Extend Hose

C—Retract Hose
D—Wiring Harness Connector

OURX935,000067C -19-03DEC08-1/1

X9811 —UN—23AUG88

RXA0097038 —UN—13AUG08

RXA0097019 —UN—15JAN08

TouchSet™ Scraper Control—for Scrapers Equipped with Scraper Control Unit

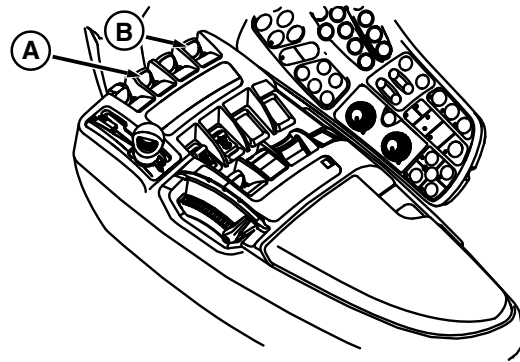
NOTE: To configure SCV page, See *Using TouchSet Depth Controls* in this section.

CAUTION: Avoid personal injury or death. Moving scraper control unit, connectors, or linkages, when engine is running, may cause unexpected movement. Stay clear of implement when starting engine.

Tractor selective control valve (SCV I and/or SCV III) are used to electronically control raising, lowering, and setting of implement depth, without leaving the cab. (Used primarily in areas requiring automated laser guidance system for scraper applications.)

Control lever (A) is used to manually control SCV I and activate an automatic scraper control system.

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A—SCV I Control Lever

B—SCV III Control Lever

Control lever (B) is used to manually control SCV III and activate a second automatic scraper control system.

RXA0099925 —UN—04DEC08

OURX935,000067E -19-03DEC08-1/1

Hydraulics and Selective Control Valves

Configuring Selective Control Valves On CommandCenter™

Each SCV can be configured to three different modes: standard mode displayed in SCV I (A), independent mode displayed in SCV II (B) or feature mode displayed in SCV III (C).

NOTE: Current estimated SCV flow is indicated by current flow bar graph indicator (H).

Additionally when SCV is set to float as in SCV IV (D) the COMMANDCENTER display for that individual SCV will show the float symbol (E).

Standard Mode

SCV I in standard mode has flow and detent time setting which adjusts both extend and retract.

1. Press Detent Flow soft key (F) to highlight flow bar graph (G).

NOTE: Current flow bar graph indicator depicts amount of flow. Flow is displayed in increments of 0.04 beginning at 0.04 through 10 in box (I).

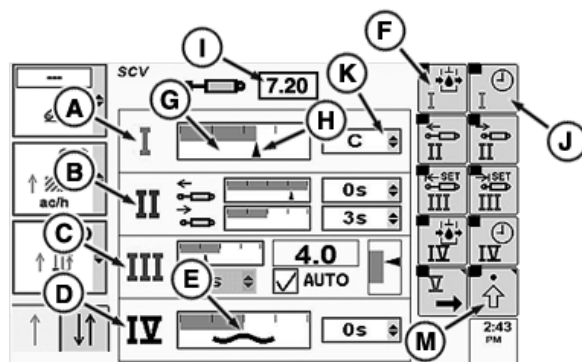
Current estimated SCV flow is indicated by the flow bar graph indicator (H).

2. Rotate CommandARM™ controls thumb wheel forward or rearward while watching current flow bar graph indicator (H) move right or left respectively. Value in detent flow box (C) increases or decreases as thumb wheel is rotated.

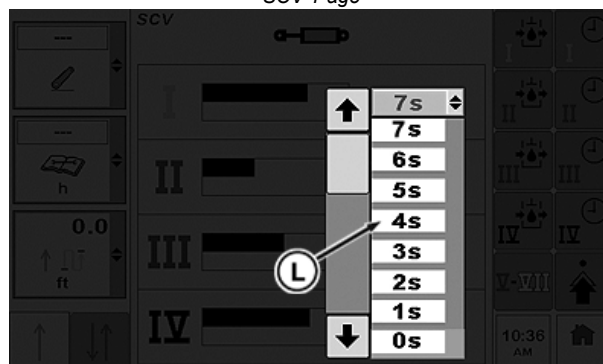
NOTE: When selected, detent time drop down box (K) will display amount of time in 1 second increments up to 10, then increments of every two seconds; 12, 14, 16, 18, up to 20, then 25, 30, 40, 50, 60, 90 seconds or C for continuous.

3. Using Confirm button select detent time soft key (J) to navigate to detent time drop down box (K). Open drop down box displaying available detent time selections (L).
4. Press Confirm button to select desired time. Desired time will now appear in drop down box (E).

CommandCenter is a trademark of Deere & Company
CommandARM is a trademark of Deere & Company



SCV Page



- | | |
|---------------------------|------------------------------------|
| A—SCV I—Standard Mode | H—Current Flow Bar Graph Indicator |
| B—SCV II—Independent Mode | I— Detent Flow Box |
| C—SCV III—Feature Mode | J— Detent Time Soft Key |
| D—SCV IV—Float Operation | K—Detent Time Drop Down Box |
| E—Float Symbol | L— Detent Time Selections |
| F—Detent Flow Soft Key | M—Advanced Settings Soft Key |
| G—Flow Bar Graph | |

NOTE: To set any SCV in independent mode select advanced settings indicator (M).

Continued on next page

OURX935,0000B1D -19-02SEP09-1/3

RXA0102613 —UN—06MAY09

RXA0102608 —UN—06MAY09

Independent Mode

NOTE: Although SCV VI icon (O) and SCV VII icon (P) are both displayed in this depiction, under normal conditions either SCV VI or SCV VII would be displayed at any given time.

1. At the advanced settings page, place check in independent mode check box (A).
2. SCV I now has unique flow and detent times which are adjusted by selecting extend soft key (B), highlighting extend flow bar graph (C). Selecting retract soft key (D) highlights retract flow bar graph (E).

NOTE: Bar graph depicts amount of flow. Flow is displayed in increments of 0.04 beginning at 0.04 through 10 in detent flow box (F).

3. Rotate thumb wheel forward or rearward while watching specified bar graph indicator move right or left respectively. Value in detent flow box (F) increases or decreases as thumb wheel is rotated.

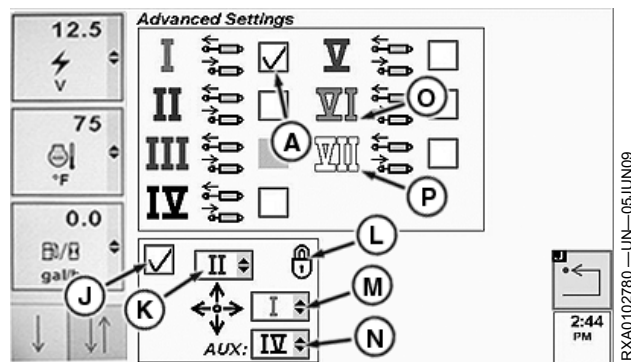
NOTE: Detent time drop down box (G for extend or H for retract) will display amount of time in 1 second increments up to 10, then increments of every two seconds; 12, 14, 16, 18, up to 20, then 25, 30, 40, 50, 60, 90 seconds or C for continuous.

4. Using thumb wheel, navigate to drop down box (G or H), then press Confirm button.
5. When drop down box opens, rotate thumb wheel to detent time selections (I) and press Confirm button.
6. Desired detent time now appears in respective drop down box (G or H).

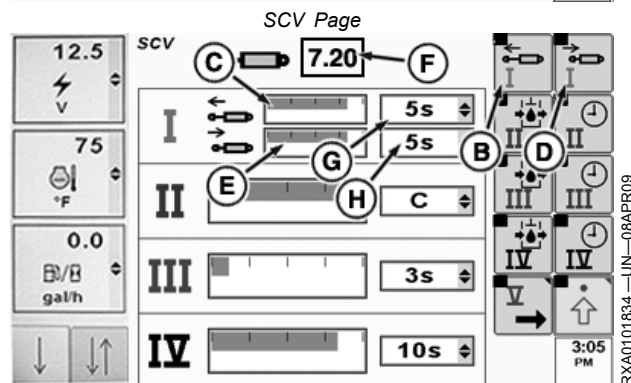
Advanced Settings Page—Single Lever Control

NOTE: When activating/deactivating single lever control (J) assigned SCV s detent times are zeroed.

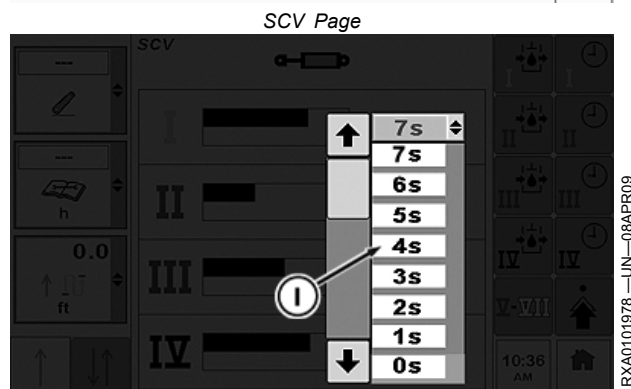
Single lever control check box (J) when checked, gives control of SCV to single lever control. When unchecked, SCV is controlled by SCV lever. Fore/Aft drop down box (K) allows any SCV I through SCV V to be selected. Side to Side drop down box (M) allows any SCV I through SCV V to be selected. Aux drop down box (N) allows any SCV I through SCV V to be selected. Lock (L) indicates lock/unlock state of single lever control.



RXA0102780 — UN—05JUN09



RXA0101834 — UN—08APR09



RXA0101978 — UN—08APR09

A—Independent Mode Check Box
B—Extend Flow Soft Key
C—Extend Flow Bar Graph
D—Retract Flow Soft Key
E—Retract Flow Bar Graph
F—Detent Flow Box
G—Extend Detent Time Drop Down Box
H—Retract Detent time Drop Down Box

I— Detent Time Selections
J— Single Lever Control Check Box
K—Fore/Aft SCV Drop Down Box
L— Lock (Single Lever Control)
M—Side to Side SCV Drop Down Box
N—Aux SCV Drop Down Box
O—SCV VI Icon
P—SCV VII Icon

Continued on next page

OURX935,0000B1D -19-02SEP09-2/3

Feature Mode

NOTE: To use feature mode, connect implement to tractor. SCV page with feature option will be displayed for selected SCVs. On advanced page, specified SCV independent mode check box (A) is grayed out.

Available feature modes are:

- TouchSet™ control
- Laser Scraper control
- AccuDepth™ control

NOTE: When connected through can bus or implement connector, SCV (s) will automatically enter feature mode.

1. Connect tractor to implement.

NOTE: Detent time drop down box (F) can only be adjusted when feature mode check box (B) is un-checked. See Standard Mode. If feature mode check box is checked, detent time cannot be adjusted. See Standard Mode when adjusting detent time.

2. Rotate thumb wheel to bar graph (D). Press Confirm button to highlight. Rotate thumb wheel to adjust flow.

NOTE: As in previous SCV applications, bar graph (D) will depict detent flow and amount of detent flow will be shown in box (E).

“AUTO” (G) displayed indicates normal feature operation. “!AUTO!” (H) indicates there is a fault and feature mode is inoperable. “AUTO” with a slash across it (I) indicates that AUTO is not active.

3. To adjust detent, rotate thumb wheel to check box (B) to the left of “AUTO” (G), then press Confirm button. AUTO will have a slash across it, the check box will be unchecked.

A—Independent Mode Check Box

B—Feature Mode Check Box

C—Extend Set Soft Key

D—Detent Flow Bar Graph

E—Detent Flow Value Box

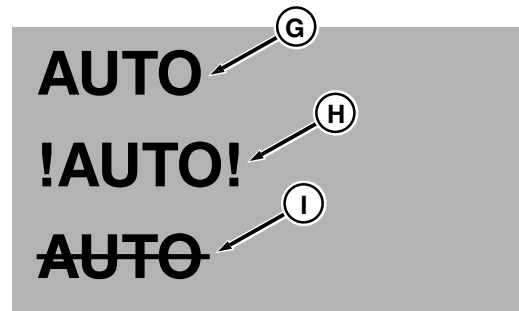
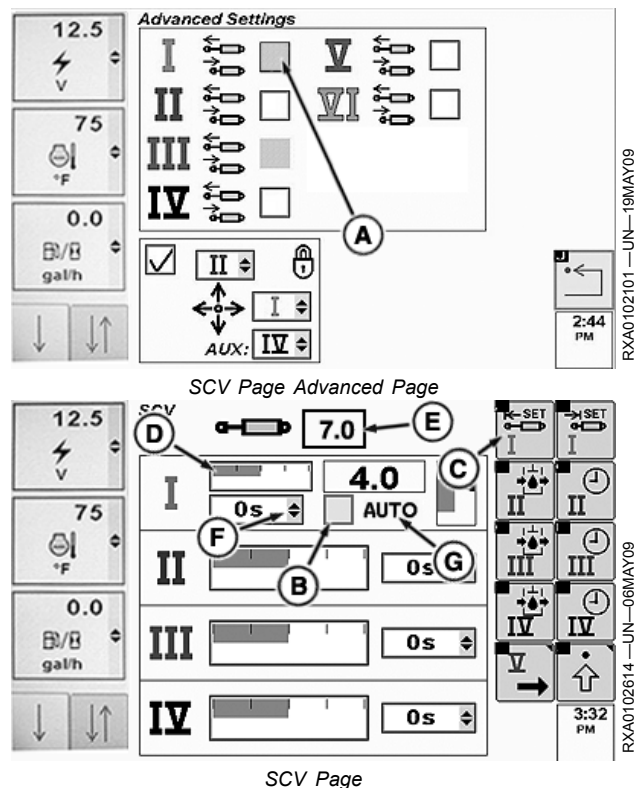
F—Detent Time Drop Down Box

G—Feature Status Indicator (Normal Operation)

H—Feature Status Indicator (Fault Identified)

I—Feature Status Indicator (Turned Off)

TouchSet is a trademark of Deere & Company
AccuDepth is a trademark of Deere & Company



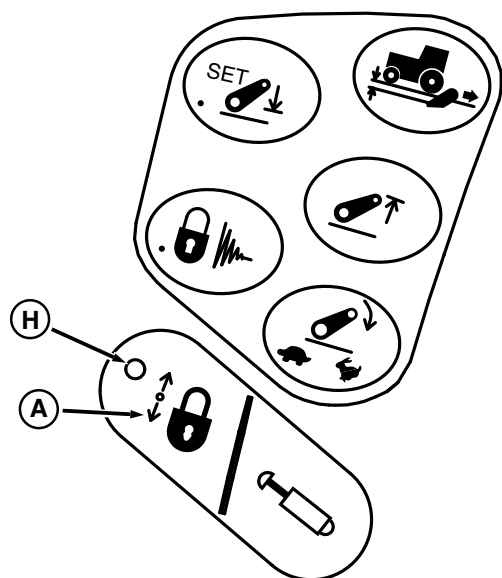
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RXA0102615—UN—06MAY09

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Connecting Hydraulic Hoses

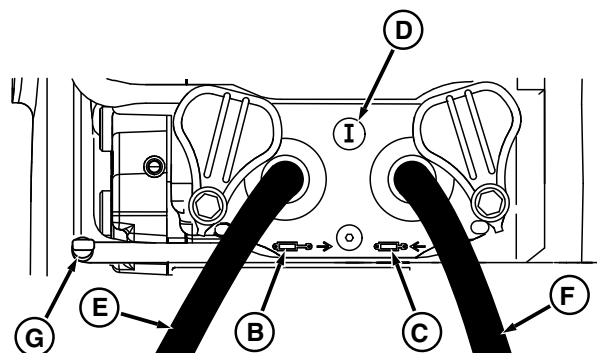


TouchSet Monitor

A—Transport Lock Button
B—Extend Icon

C—Retract Icon
D—SCV Identifier Number

RXA0099926 —UN—20FEB09



RXA0098645 —UN—17JUL08

E—Extend Hose
F—Retract Hose

G—Handle
H—Transport Lock Light

IMPORTANT: Steam cleaning or use high pressure washer in the area around the SCV connections and electronics may damage equipment. Any pressure washer exceeding 1000 psi (75 bar). should be kept a minimum of 200 mm (8 in.) away from connections.

NOTE: SCVs are color coded for easier identification.

SCV Numbers And Corresponding Colors	
SCV Number	Color
SCV I	Green
SCV II	Blue
SCV III	Brown
SCV IV	Black
SCV V	Violet
SCV VI	Gray (Front Hitch)
SCV VII	White (Grapple)

1. Back tractor up to implement and connect hitch.

CAUTION: Make sure no oil flow is commanded before connecting or disconnecting hydraulic hoses. Failure to perform one of these steps prior to connecting or disconnecting SCV hoses may result in personal injury or damage to equipment.

- Turn off tractor engine
- Push Transport Lock button
- SCV lever is in neutral.

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2. Push Transport Lock button (A) to engage transport lock.

NOTE: When transport lock is engaged, transport lock light (H) will be on.

3. Check CommandARM™ Controls to ensure transport lock is engaged.

4. Clean tractor SCVs and area around SCVs and hose ends.

NOTE: When connecting couplers, ensure you are connecting to the correct SCV port by noting the number indicated on the identifier (D) on each SCV. If hose connections are reversed, machine will not respond to system controls. Couplers are designated I through V with I being the bottom coupler. Always connect one-way cylinders to the extend side as indicated by the extend icon (B). When connecting two-way cylinders, the extend side will be the left side. The retract side is the right side as indicated by the retract icon (C). Lever (G) is only pushed down when couplers are disconnected. Disconnect both couplers at the same time.

5. Push extend hose (E) and retract hose (F) firmly into receptacle.

6. Push Transport Lock button again to disengage transport lock. Padlock light is no longer displayed.

OURX935,0000B1E -19-16SEP09-1/1

Disconnecting Hydraulic Hoses

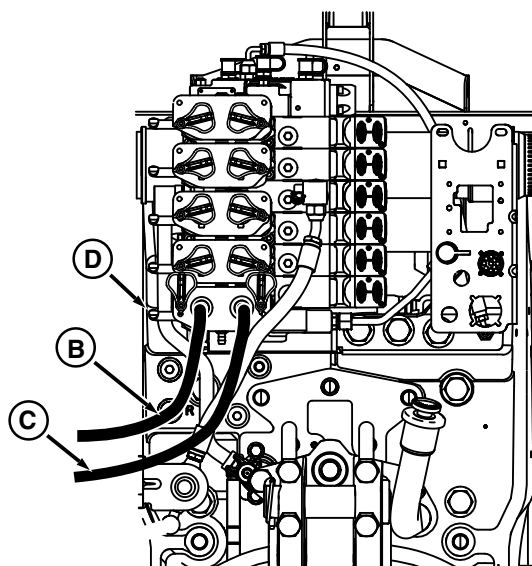
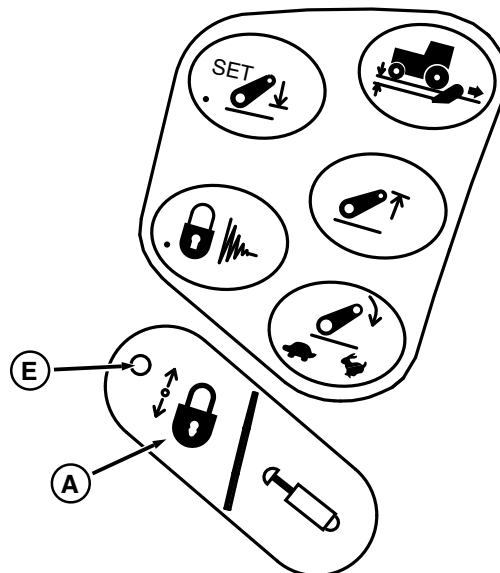
IMPORTANT: Steam cleaning or use high pressure washer in the area around the SCV connections and electronics may damage equipment. Any pressure washer exceeding 1000 psi (75 bar). should be kept a minimum of 200 mm (8 in.) away from connections.

CAUTION: Push Transport Lock button (A) before detaching implements to prevent implement movement and possible personal injury.

1. Lower implement to ground.
2. Push Transport Lock button to engage transport lock.
3. Observe CommandARM™ Controls to ensure transport lock light (E) is displayed.
4. Push lever (D) down to release both extend hose (B) and retract hose (C).

A—Transport Lock Button
B—Extend Hose
C—Retract Hose

D—Lever
E—Transport Lock Light



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RXA0099927 —UN—20FEB09

RXA0097039 —UN—13AUG08

Determining Total Flow Demand

1. Check flow setting for each function, independently. (See implement operator's manual, applications section, to determine correct motor flow settings.)

Examples of functions which may cause the pump to operate at high pressure:

- Down pressure systems (drills, air seeders, disks)—usually can be considered to be zero flow demand after completion of raise or lower cycle. See Remote Hydraulic Connections section, Implement Connection Example 1—Pressure Control Valve Applications (Grain Drills Or Air Seeders With Constant Down-Pressure System) in this Operator's Manual.
 - Auxiliary flow control valves (vacuum flow control)—Completely open implement flow control valve and adjust tractor flow rate to desired setting. See Remote Hydraulic Connections section, Implement Connection Example 4—Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip in this Operator's Manual.
 - Cylinder functions, where line or orifice restrictions control flow—Adjust tractor flow control to point where function speed begins to decrease. See Remote Hydraulic Connections section, Implement Connection Example 2—Motor Application Using Motor Case Drain in this Operator's Manual.
 - Auxiliary control valves (implement stack valves, row guidance)—Adjust tractor flow control to lowest setting resulting in correct operation.
2. Determine total flow demand by adding flow requirements for each SCV using settings determined in Step 1. Include hitch and power beyond flow requirements, if applicable. (Refer to chart for correct settings.)
 3. Determine if flow demand exceeds available pump flow. (Refer to chart for available pump flow)
 - Flow demand is less than available pump flow but there is performance concern. (See your John Deere Dealer.)
 - Flow demand exceeds pump flow:
 - Increase engine rpm if possible
 - Decrease flow setting on non critical functions
 - Convert implement open-center valves to closed-center operation, if implement is so equipped.

NOTE: Flow measurements are made without steering or hitch being used.

MAIN HYDRAULIC PUMP FLOW (APPROXIMATE)		
Engine rpm	Pump	Pump Flow
1000	63 cc	80 L/min (21 gpm)
2000	63 cc	160 L/min (42 gpm)
1000	85 cc	108 L/min (28.5 gpm)
1500	85 cc	162 L/min (43 gpm)
2000	85 cc	216 L/min (57 gpm)

SCV FLOW OUTPUT (APPROX. ^a)	
SCV Flow Settings	Flow
0.1 ^b	—
1.0	3.4 L/min (0.9 gpm)
2.0	7.5 L/min (2.0 gpm)
3.0	12.5 L/min (3.3 gpm)
4.0	17.4 L/min (4.6 gpm)
5.0	20.8 L/min (5.5 gpm)
6.0	27.6 L/min (7.3 gpm)
7.0	40 L/min (10.6 gpm)
8.0	75 L/min (19.8 gpm)
9.0	110 L/min (29.3 gpm)
10.0	131.7 L/min (34.8 gpm)

^a at 2100 rpm

^b 0.1 = Minimum Flow Setting

Hitch Flow		
Hitch Cylinder	Flow	
Diameter (mm)	L/min	gpm
90/90	59.5	15.7
90/100	66.4	17.5
100/100	73.4	19.4
100/112	82.6	21.9
112/112	92.1	24.3

OURX935,00007D7 -19-24DEC08-1/1

Using Six Position SCV Control Levers

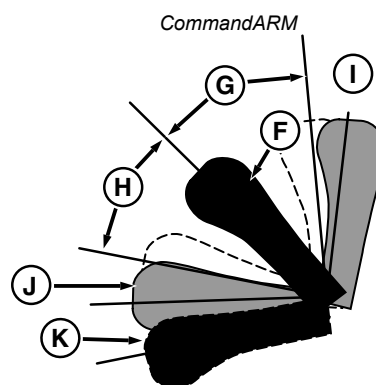
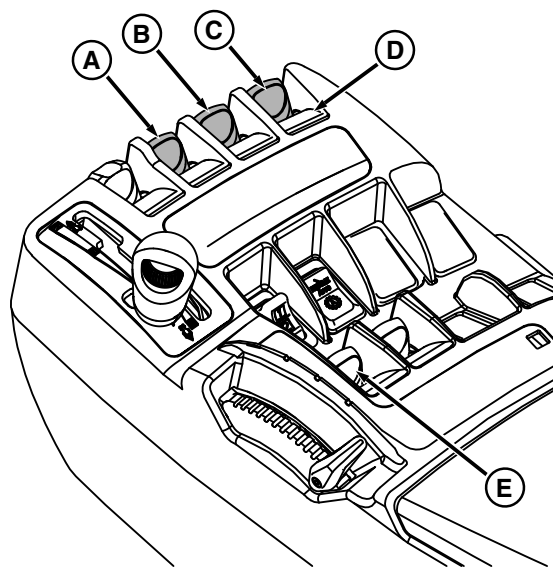
CAUTION: To avoid personal injury, ensure hoses are not reversed. If hoses are reversed, cylinder will extend when it should retract.

NOTE: Float can also be used to allow hydraulic motors to coast when shutting down an implement. Neutral and Float are the only positions that SCV lever will remain without being held.

- **Neutral (F)**—Lever returns to center position when released except in float position.
- **Extend** (rearward between Neutral and Detent Position Extend)—Variable flow to extend cylinder, proportional to lever movement and flow settings; shuts off when released to center position.
- **Extend Detent Position (I)** (rearward to "click" position)—Timed flow to extend cylinder, based on detent time setting and at a rate set by flow rate control. (See ADJUSTING TIMED DETENT and ADJUSTING SCV FLOW RATE in this section). Lever returns to neutral when released.
- **Retract** (forward between Neutral and Detent Position Retract)—Variable flow to retract cylinder, proportional to lever movement; shuts off when released.
- **Retract Detent Position (J)** (forward to "click" position)—Timed flow to retract cylinder, based on detent time setting and rate set by flow rate control, (See ADJUSTING TIMED DETENT and ADJUSTING SCV FLOW RATE). Lever returns to neutral when released.
- **Float (K)** (fully forward and down into locked position)—Valve is open to sump to allow cylinder to extend or retract to allow implement to follow ground contour; must be pulled up and out of locked position to disengage.

NOTE: To relieve hydraulic pressure in an implement, move SCV control lever to float position, while engine is running.

Push SCV lever cover (D) forward when SCV is not in use.



Armrest Controls—Six Position SCV Levers

A—SCV I
B—SCV II
C—SCV III
D—Cover
E—SCV IV
F—SCV lever (In Neutral)

G—Extend Range
H—Retract Range
I— Extend Detent Position
J— Retract Detent Position
K—Float

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SCV Lever—Neutral Position

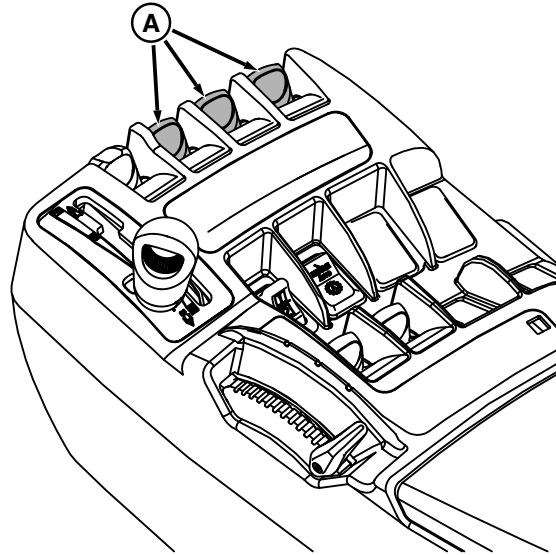
Neutral (A) allows flow to continue until timed detent has expired. If no timed detent was "commanded", then both extend and retract valves will be off.

NOTE: SCV control lever should be in neutral position at tractor start up.

Levers in extend or retract positions automatically return to neutral when released. Float position will remain detented.

Any position other than neutral or float will be ignored, until lever is cycled to neutral after engine start up.

A—Neutral Position



RXA0101979 —UN—08APR09

OURX935,000070F -19-10APR09-1/1

SCV Lever—Extend and Extend Detent Position

Extend

Pull lever slightly to rear of neutral. This slowly extends cylinder at a variable flow rate. (See Adjusting SCV Flow Rate in this section.)

Pull the lever all the way rearward to extend the remote cylinder at maximum rate. Detent operation mode depends on the SCV detent selected.

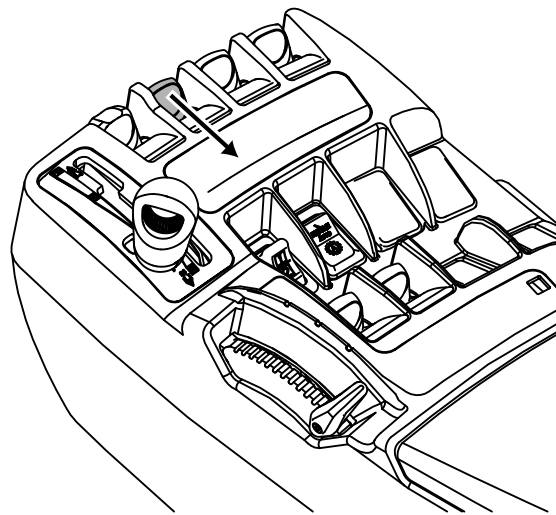
NOTE: Time setting is ignored in extend position.

Extend Detent

Pull lever rearward to "click" detent position and release. Lever will return to neutral position, but flow will continue at rate set on TouchSet panel. (See Adjusting SCV Flow Rate and Adjusting Timed Detent in this section.)

Flow timing begins when lever is moved into detent. SCV flow time should be adjusted so cylinder will be fully extended when time has elapsed.

NOTE: If lever is not returned from detent to neutral in less than 0.8 seconds, detent cancels.



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Detent can be cancelled by moving SCV lever forward or rearward from neutral.

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SCV Lever—Retract and Retract Detent Position

Retract Position

Push lever slightly forward of neutral. This slowly retracts cylinder at a variable flow rate. (See Adjusting SCV Flow Rate in this section.) Lever returns to neutral and flow stops when released.

Push the lever forward to the first detent notch to retract the remote cylinder at maximum rate.

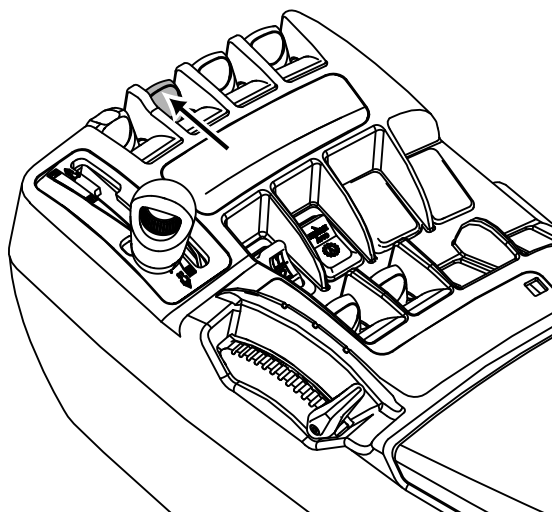
NOTE: Time setting is ignored in retract position.

Retract Detent Position

Push lever forward to "click" detent position and release. Lever will return to neutral position, but flow will continue at rate. (See Adjusting SCV Flow Rate and Adjusting Timed Detent in this section.)

Flow timing begins when SCV lever is first moved into detent. SCV flow time should be adjusted so cylinder will be fully retracted when time has elapsed.

Detent can be cancelled by moving SCV lever slightly forward or rearward from neutral after lever has returned to neutral or by holding lever in retract position for more than 0.8 seconds after lever is released from detent.



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NOTE: Detent positions are ignored at start up until lever is cycled to NEUTRAL.

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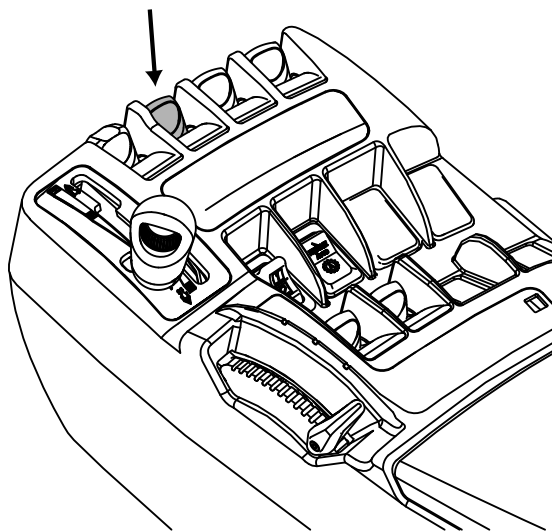
SCV Lever—Float Position

Push SCV lever all the way forward and down to lock in float position. Lever and SCV will remain in float position until lever is manually returned to neutral. Cylinder is free to extend or retract, letting implement follow ground contour.

NOTE: Time setting is ignored in Float position.

If lever is in float position at engine start up, float function will operate if lever was moved to float position at least 10 seconds before engine was stopped and had not moved out of float position. If lever was not operated in this manner, float function will be disabled until lever is cycled to neutral.

Cycle cylinder fully in both directions after being used in the float position to insure cylinder is filled with oil.



RXA0101982 —UN—08APR09

OURX935,0000712 -19-10APR09-1/1

Operator Presence Sensor

Service Alert indicator light will flash with an audible warning signal if operator leaves seat with transmission in PARK or NEUTRAL and SCV control in "Continuous" or "Timed Detent" modes.

After 5 seconds, Service Alert indicator and audible warning signal will stop, and Information indicator light

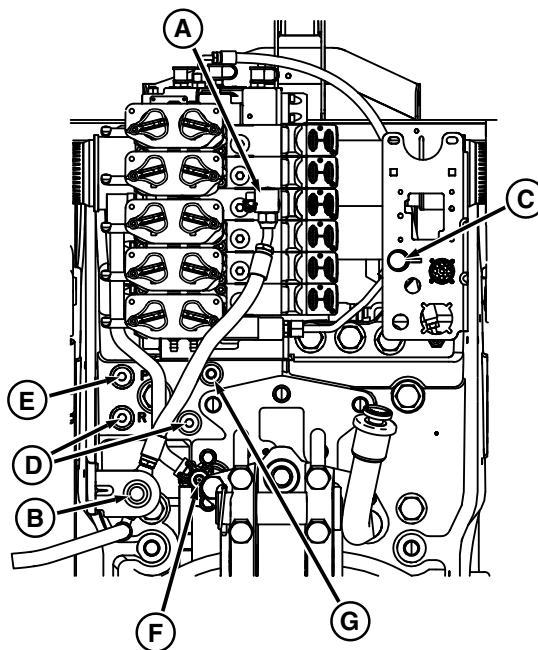
will come on with an associated message appearing on the CommandCenter display.

NOTE: SCV does not disengage when operator leaves seat.

OURX935,00007DE -19-24DEC08-1/1

Remote Hydraulic Connections

Hydraulic Component Identification



A—Hitch Valve
B—Auxiliary Hitch Valve Port (If Equipped)¹

C—Power Beyond Load-Sense Coupler (If Equipped)
D—Return Ports

E—Pressure Port (Primary)
F—Drain Port (To Sump)

G—Pressure Port (Limited Access)

¹Field installed kit available through your John Deere dealer.

OURX935,000008B -19-13AUG08-1/1

RXA0096590—UN—13AUG08

Using Load-Sensing Hydraulic System—Power-Beyond

Power-Beyond is used as a pressure/flow source for auxiliary functions equipped with independent flow control valves. Use Power-Beyond when:

- Tractor SCV control is not needed
- Implement control valve requires external load sense signal to prevent pump operation at high pressure
- No other SCV outlet is available

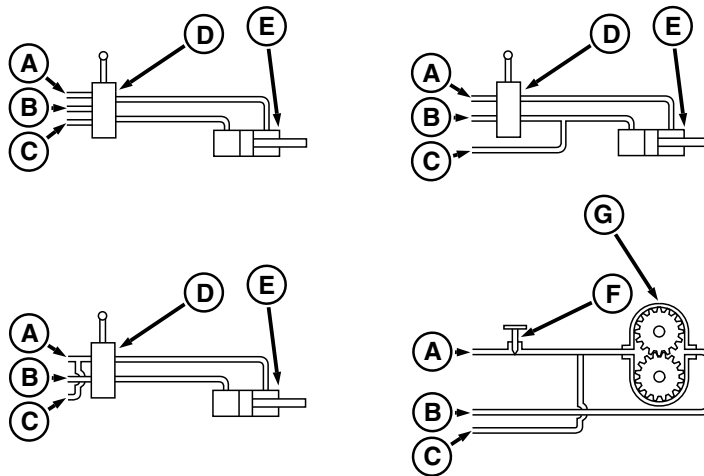
Power Beyond functions require a "load-sense" signal to regulate pump pressure, therefore, a "load-sense"

hydraulic line is used. Certain equipment may require modification. Special hydraulic couplers are available from your John Deere™ Dealer.

NOTE: The available flow to power-beyond is limited when using a load-sense connection to the implement.

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OURX935,000008C -19-15JAN08-1/1

Examples Using Load-Sensing Hydraulic System—*Power-Beyond*Four Examples of Load-Sensing Hydraulic System — *Power Beyond*

A—Pressure Line
B—Return Line

C—Load-Sense Line
D—Control Valve

E—Cylinder
F—Pressure-Compensated Flow
Valve

G—Hydraulic Motor

Upper Left—Control valves with a load-sense provide a load-sense signal to hydraulic system and can be operated manually or by solenoids.

Upper Right—Control valve directs oil into extend or retract circuits. Connect load-sense line to circuit requiring pressure. An example is a wagon lift cylinder with load supported by mechanical stops in full down position. Load-sense signals pump when increased pressure is needed. Pressure remains low when not needed.

IMPORTANT: Circuit allows cylinder "leak-down" through load-sense line (C). If leakage is not acceptable for operation, use Example 3.

Lower Left—Control valve directs oil into extend or retract circuits, either requiring high pressure. Connect load-sense line to pressure line before control valve.

NOTE: System will maintain a maximum pressure of 20000 kPa (200 bar) (2900 psi) as long as power-beyond hoses are connected.

An example is a folding implement, where pressure is needed to extend or retract cylinders.

Lower Right—Pressure-compensated flow control valve is used to regulate hydraulic motor speed. Connect load-sense line to pressure line after control valve.

NOTE: Motor speed can fluctuate when other functions cause system pressure change. Minimize fluctuations by installing a pressure-compensated flow control valve.

RXA0085800 —UN—10JAN06

OURX935,000008D -19-15JAN08-1/1

Using Hydraulic Spray Pumps

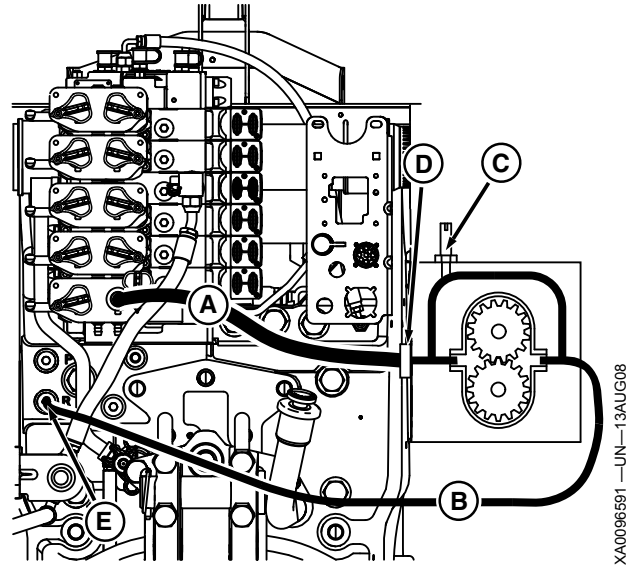
1. Follow spray pump manufacturers recommendations for pump model selection, setup and operation.

NOTE: Select the smallest displacement motor recommended for multiple hydraulic function operation. The smaller displacement will lower total hydraulic flow demand and improve overall system performance.

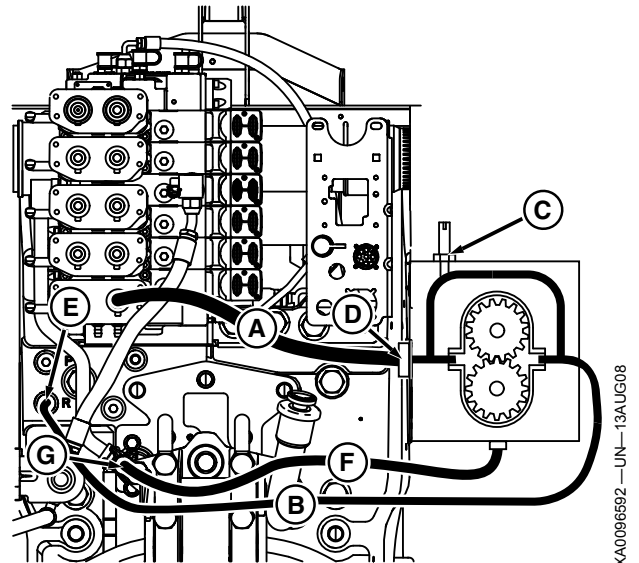
2. Connect motor pressure line (A) to retract port of SCV (right-hand side).
3. Connect return line (B) to power beyond return coupler (E).
4. Some hydraulic motors have a separate case drain line for internal leakage. The case drain line (F) must be routed to the hitch frame drain port (G) to direct oil to sump (zero back pressure.)
5. Activate SCV by moving lever forward to retract detent position and adjust hydraulic flow rate per pump manufacturers guidelines.
6. Shut off spray pump by moving SCV control lever to float position (full forward and down). Stopping spray pump by moving SCV to neutral position will cause high pressure oil to be trapped between SCV and pump. This may cause damage to spray pump seals. This also applies to other motors using the SCV pressure and return couplers.

IMPORTANT: Some motors are not equipped with over-speed protection. Extended operation above recommended speed can cause failure.

A—Pressure Line	E—Power Beyond Return Coupler
B—Return Line	F—Case Drain Line
C—Needle Line (Closed)	G—Drain Port (To Sump)
D—Inlet Line Orifice (Remove)	



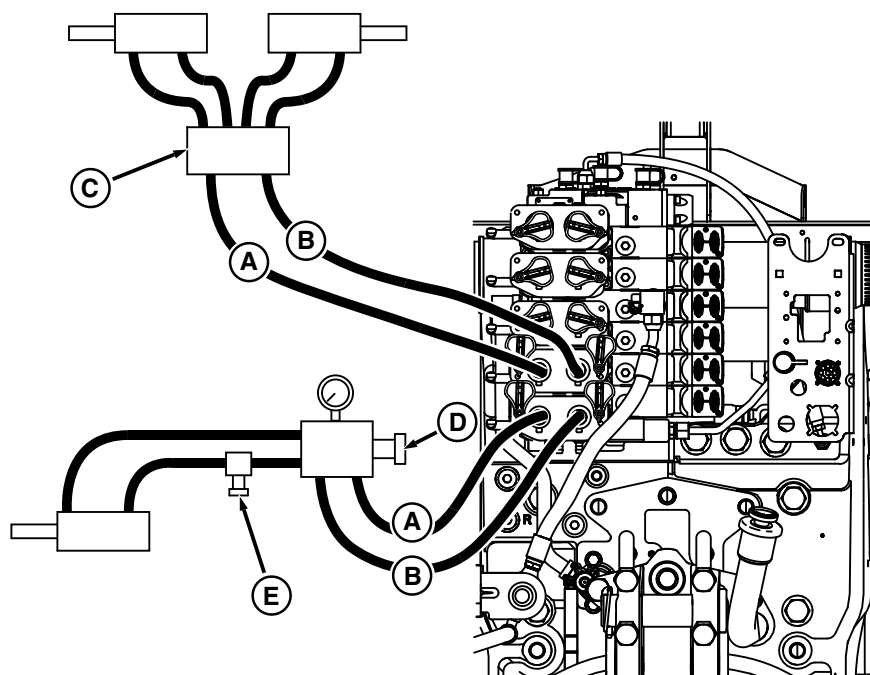
Spray Pump



Spray Pump with Drain Directly to Sump (Zero Back Pressure)

OURX935.000008E -19-15JAN08-1/1

Implement Connection, Example 1—Pressure Control Valve Applications (Grain Drills or Air Seeders with Constant Down-Pressure System)



A—Extend Coupler Line
B—Retract Coupler Line

C—Selector Valve
D—Pressure Control Valve

E—Transport Lock Valve

For implements using active down force set flow control to continuous and move lever to retract detent position.

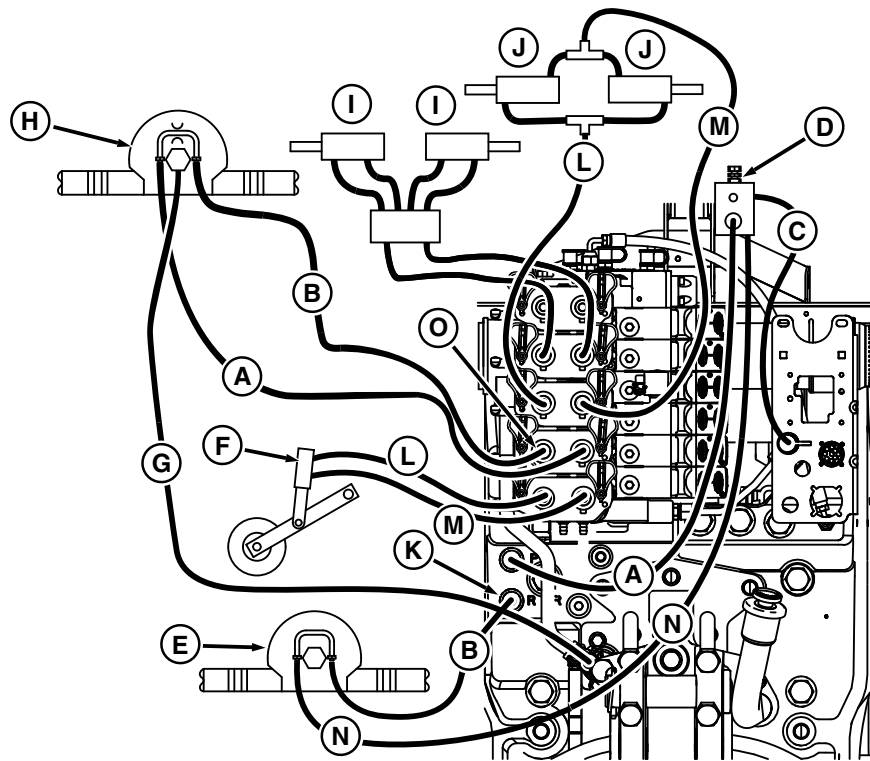
This will cause hydraulic pump to operate at maximum pressure which may cause overheating of hydraulic oil if

operating hydraulic motors on other SCV's at same time outside air temperature is high. To avoid this problem, keep the number of motors to a minimum when active down force is being used.

RXA0096593 —UN—13AUG08

OURX935.000008F -19-15JAN08-1/1

Implement Connection, Example 2—Motor Application Using Motor Case Drain



A—Pressure Line
B—Return Line
C—Load Sense Line
D—Control Valve

E—Vacuum Motor
F—Raise/Lower Cylinder
G—Motor Seal Drain Line
H—Second Motor

I—Marker
J—Fold
K—Power Beyond Return Port
L—Extend Coupler Line

M—Retract Coupler Line
N—Controlled Flow Line

In this application, vacuum motor (E) is being operated from power beyond which requires a load sense connection (C) to signal hydraulic pump for operation.

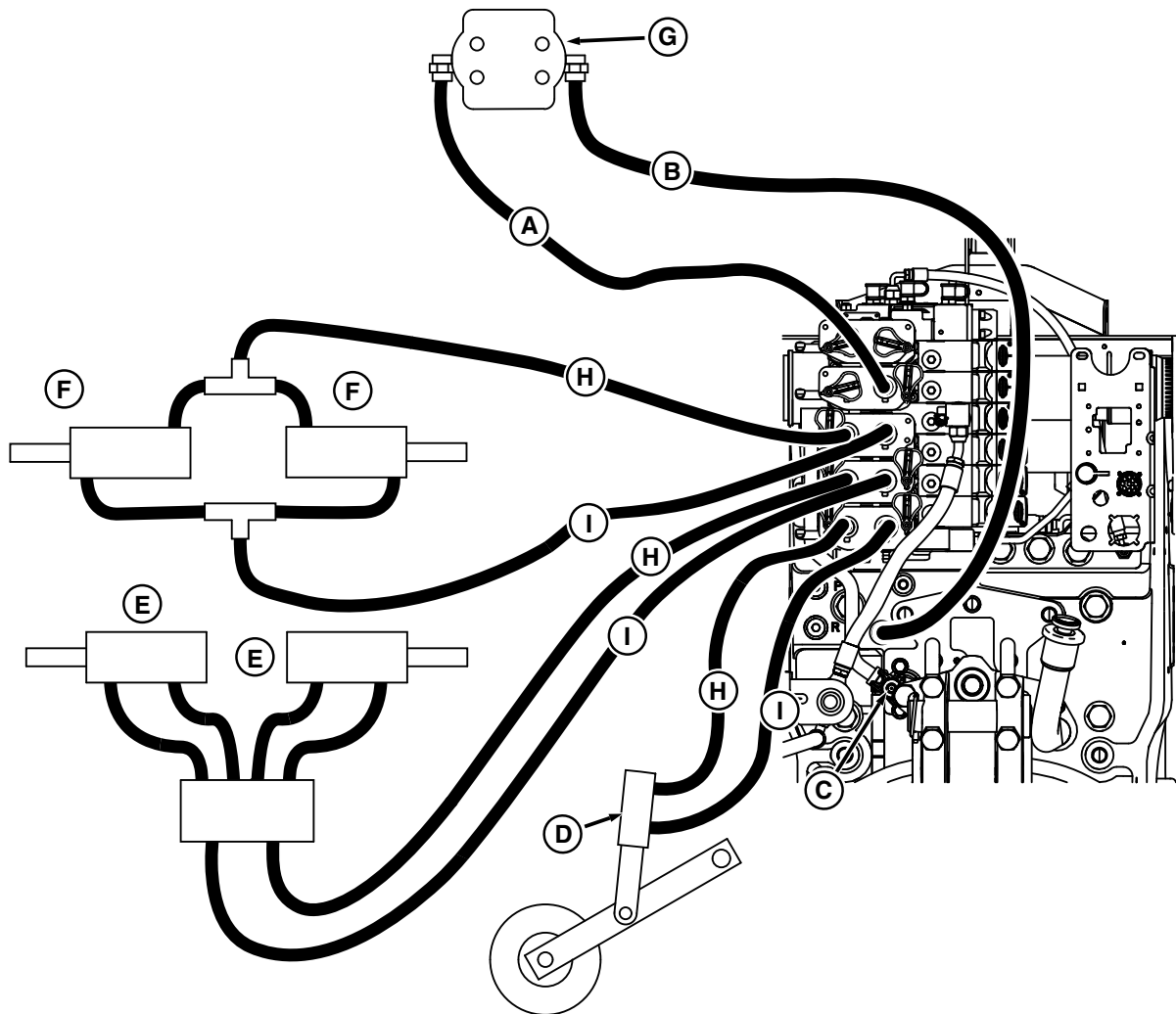
The second motor (H) is equipped with motor case drain line (G). Pressure oil comes from the retract port on the SCV and return oil is routed to the extend port. When motor return oil is routed to an SCV, a special return hose

tip with check valve is required to prevent high pressure oil from moving back toward the motor and possibly damaging the seals. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

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RXA0096594 —JUN—29AUG08

Implement Connection, Example 3—Closed Center Valve with Pump at High Pressure



A—Pressure Line
B—Return Line
C—Drain Port To Sump

D—Raise/Lower cylinder
E—Markers
F—Fold

G—Hydraulic Motor
H—Extend Coupler Line
I—Retract Coupler Line

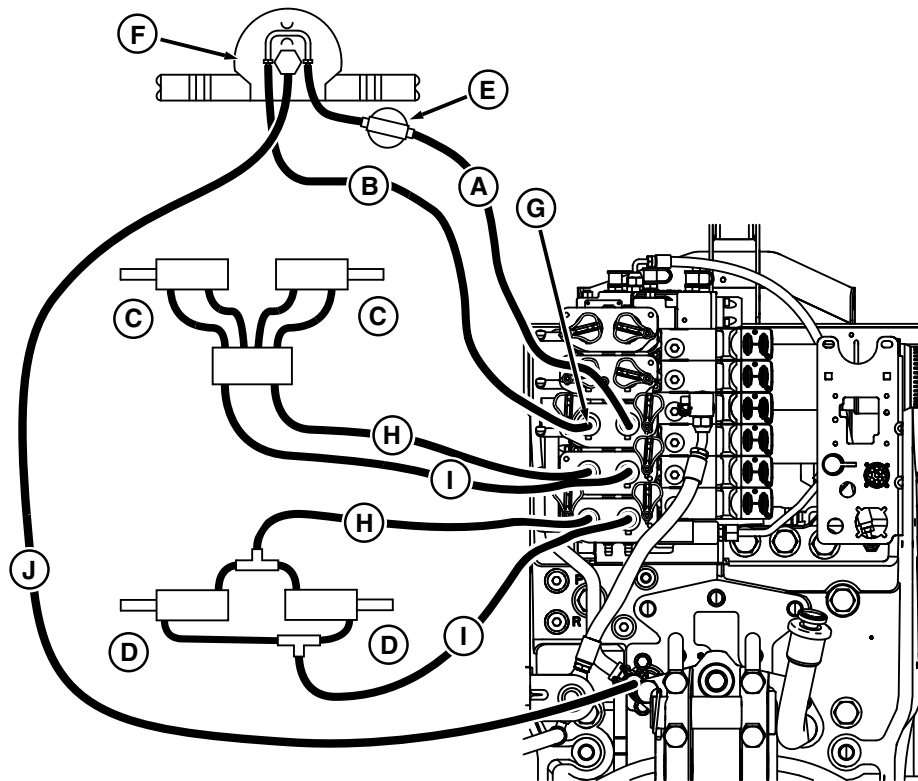
In this application motor (G) receives pressure oil from the retract port on SCV. Return oil is routed to power beyond return port. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop.

Moving lever to neutral can cause motor to stop abruptly and may damage seals. Since return oil is routed to power beyond return port, no special hose tip is required.

RXA0096595 —UN—13AUG08

OURX935,0000091 -19-14JUL08-1/1

Implement Connection, Example 4—Planter with Vacuum Motor and Return Line to SCV Using Motor Return Tip



A—Pressure Line
B—Return Line
C—Marker

D—Fold
E—Flow Control Valve (Wide Open)
F—Vacuum Motor

G—Special Return Hose Tip
H—Extend Coupler Line
I—Retract Coupler Line

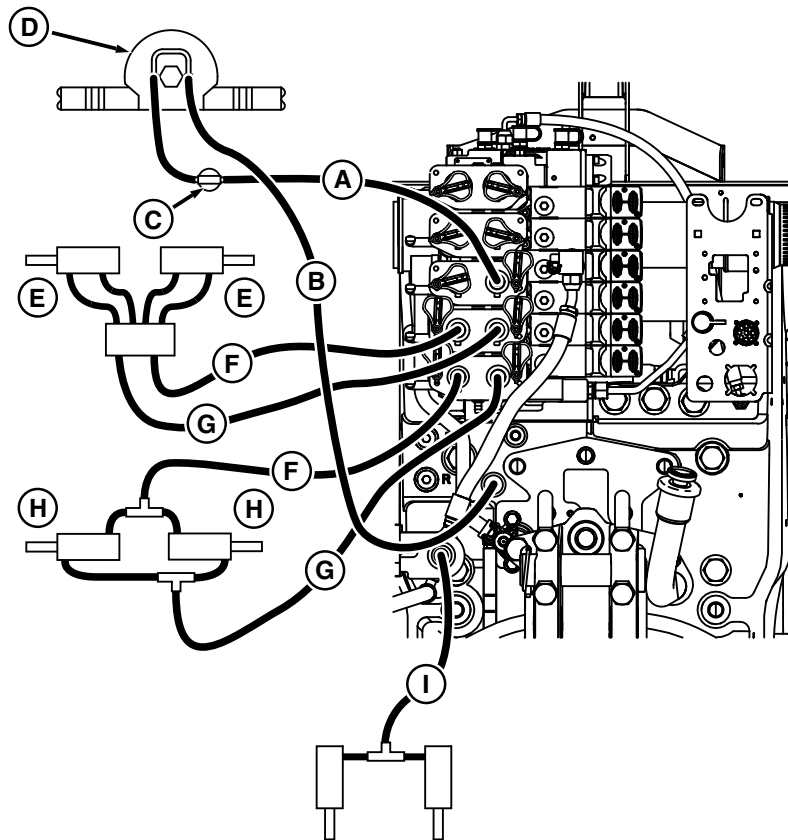
J—Case Drain Line¹

In this application vacuum motor (F), similar to a planter blower, receives pressure oil from the retract port on SCV. Since return oil is routed to an SCV, a special return hose tip (G) with check valve is required to prevent high pressure oil from moving back toward the motor and possibly damaging the seals. When motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

Flow control valve (E) should be wide open and flow controlled by SCV setup panel. If flow is controlled by flow control valve, it will cause hydraulic pump to operate at maximum pressure which may cause overheating of hydraulic oil if operating at same time outside air temperature is high.

¹For motor returns equipped with case drain only

Implement Connection, Example 5—Planter with Vacuum Motor, Return Line to Motor Return and Lift Assist



A—Pressure Line
B—Return Line
C—Flow Control Valve (Wide Open)

D—Vacuum Motor
E—Fold
F—Extend Coupler Line

G—Retract Coupler Line
H—Markers
I—Lift Assist

In this application vacuum motor (D) receives pressure oil from the SCV retract port. Return oil is routed to power beyond return port. If return hose is equipped with special return hose tip, it can be connected directly to SCV #3 extend port. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

Control valve (C) is wide open and flow is controlled by tractor control panel. If valve is used to control oil flow,

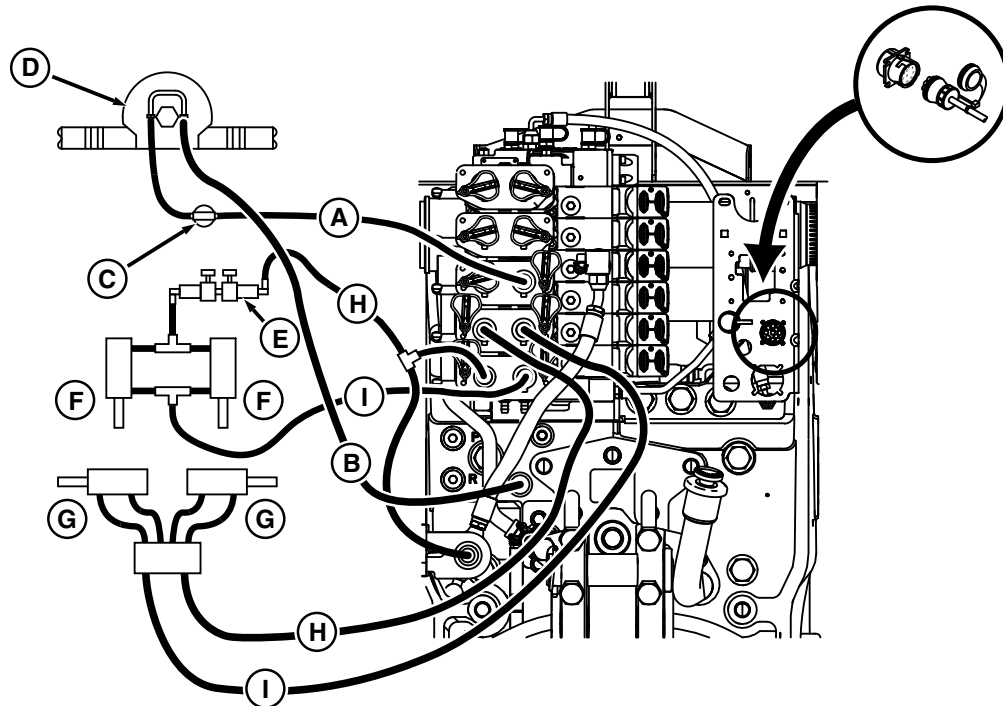
pump will operate at maximum pressure which may cause overheating of hydraulic oil if operating at same time outside air temperature is high.

Lift assist cylinder oil is connected to auxiliary hitch valve port which is controlled by hitch command lever settings in the cab.

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OURX935,0000093 -19-15JAN08-1/1

Implement Connection, Example 6—Planter with Vacuum Motor and Return Line to Motor Return



Implement Connection Example 6 (SCV Controlled)

A—Pressure Line
B—Return Line
C—Flow Control Valve (Wide Open)

D—Vacuum Motor
E—Control Valve
F—Lift Assist

G—Markers
H—Extend Coupler Line
I—Retract Coupler Line

In this application vacuum motor (D) receives pressure oil from the retract port of SCV. Return oil is routed to power beyond return port. If return hose is equipped with special planter return hose tip, it can be connected directly to SCV #3 extend port. When the motor is shut off, the SCV lever is moved to float position to allow motor to coast to a stop. Moving lever to neutral will cause motor to stop abruptly and may damage seals.

Control valve (C) is wide open and flow is controlled by tractor control panel. If valve is used to control oil flow,

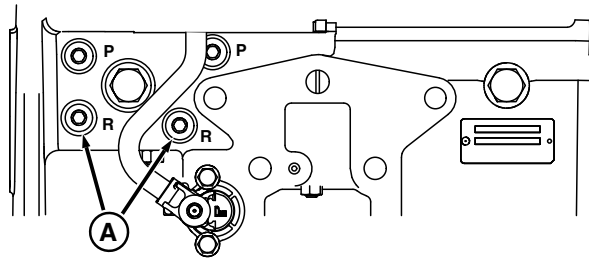
pump will operate at maximum pressure which may cause overheating of hydraulic oil if operating at same time outside air temperature is high.

In this configuration, SCV #1 is being used to control both the hitch valve and lift assist. The special 9-pin harness contains a loop circuit that disables tractor hitch control unit when it is connected to 9-pin connector that is wired into tractor main electrical harness.

OURX935,0000094 -19-15JAN08-1/1

RXA0096598 —JUN—13AUG08

Using Hydraulic Motor Return



A—Return Port Plug

Hydraulic motor return kit provides a convenient port to access the tractor low pressure return circuit.

Remove one of the two return port plugs (A) and install hydraulic motor return coupler. If routing two return lines through a single coupler results in excessive return line pressure, install an additional connector in the second return port. Always make sure hose end and coupler are clean.

Using the motor return coupler will prevent:

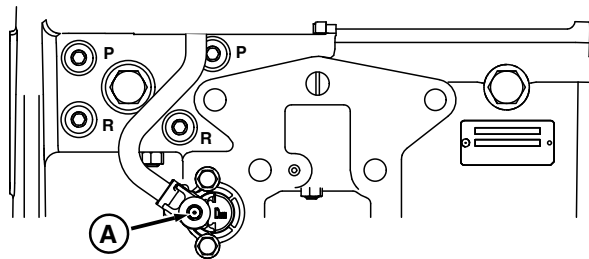
- Inadvertent reverse operation
- Pressurization of auxiliary function return line
- Potential flow checking of the return-side SCV coupling

NOTE: Motors without overrunning check valves should be connected to the motor return coupler to prevent return line pressurization when SCV is returned to neutral.

OURX935,0000095 -19-15JAN08-1/1

RXA0065801 —UN—10JAN06

Using Hydraulic Motor Case Drain (Sump)



A—Plug

Remove plug (A) and install a hydraulic sump coupler available from your John Deere™ Dealer. Connect motor case or seal drain hose to coupler, making sure hose end and coupler are clean.

Allows oil to drain directly to reservoir (differential case) from hydraulic motor, by-passing remote coupler, SCV and filter.

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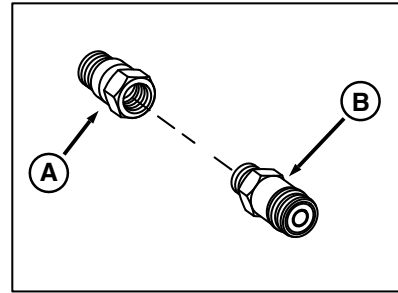
OURX935,0000096 -19-15JAN08-1/2

RXA0065802 —UN—10JAN06

NOTE: Couplers may vary depending on equipment. Older equipment uses a standard coupler while newer seeding equipment may require a Flush Face coupler (B) and adapter (A) for the drain.

A—Adapter

B—Flush Face Coupler



RXA0082406 —UN—25JUL05

OURX935,0000096 -19-15JAN08-2/2

Using Implement Requiring Large Volumes of Oil

NOTE: Do not add oil to reservoir with engine running.

If additional oil capacity is needed for large one way cylinders, an optional field installed auxiliary reservoir is available. See your John Deere™ dealer.

IMPORTANT: Removing too much oil can result in malfunction when raising the hitch or using the "extend" function of SCVs.

Cycle all implement cylinders after starting tractor.

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Check the transmission-hydraulic oil level. (See Checking Transmission-Hydraulic Oil Level in the Lubrication Section.)

Add oil if required.

Lower the implement to return the oil to the reservoir.

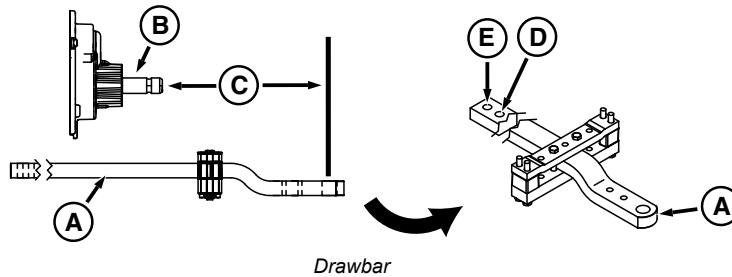
Recheck oil level when implement is removed.

Drain excess oil if necessary.

OURX935,0000097 -19-15SEP09-1/1

Drawbar and PTO

Observing Drawbar Load Limitations



IMPORTANT: Heavy implements together with rough terrain and speed can place excessive strain on drawbar. Do not exceed maximum static vertical load on drawbar for a given drawbar (A) length/position, as indicated in the following table.

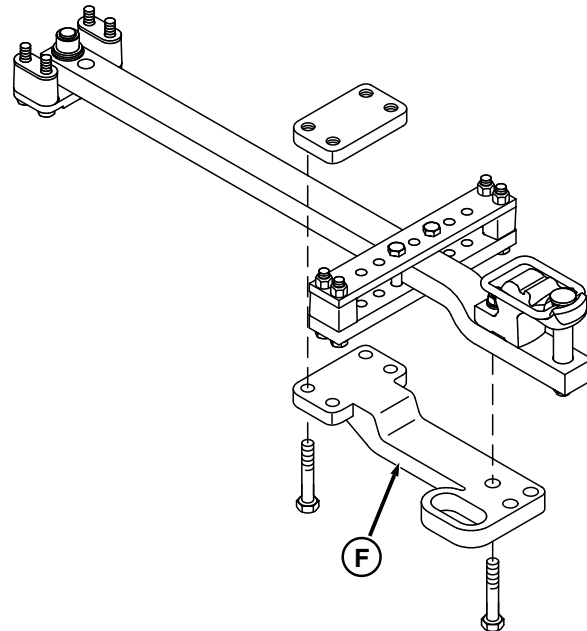
IMPORTANT: Heavy duty drawbar support must be used when maximum static vertical load exceeds 2245 kg (4950 lb).

NOTE: Special cap screws are used on drawbars. See your John Deere dealer if cap screws must be replaced.

When vertical load exceeds 2245 kg (4950 lb), attach heavy duty support (F) on Category 4 drawbar and tighten special cap screws to torque specification.

Heavy Duty Drawbar Support—Specification

Support Cap
Screws—Torque..... 430 N·m (318 lb-ft)



Heavy Duty Drawbar with Support

A—Drawbar
B—PTO Shaft
C—Dimension

D—Short Position
E—Long Position
F—Heavy Duty Support

Drawbar Load Limits Based on Drawbar Position, Length and PTO Type				
Tractor Model and Drawbar Category	PTO Shaft (B)	End of PTO Shaft to Draw Pin Hole Distance (C)	Drawbar Position	Maximum Vertical Drawbar Load
8225, 8245, 8270, and 8295 with Cat 3 Drawbar	Standard 1000 rpm w/20 splines, 45 mm (1-3/4 in.) Diameter Shaft	500 mm (20 in.)	Front Hole (E) Long Position	1837 kg (4050 lb)
8225, 8245, 8270, and 8295 with Cat 3 Drawbar	Optional 540 rpm w/6 splines, 35 mm (1-3/8 in.) Diameter shaft	350 mm (14 in.)	Rear Hole (D) Short Position	2700 kg (6000 lb)
8225, 8245, 8270, and 8295 with Cat 3 Drawbar	Optional 1000 rpm w/21 splines, 35 mm (1-3/8 in.) Diameter Shaft	400 mm (16 in.)	Front Hole (E) Long Position	1837 kg (4050 lb)
8320 and 8345 with Cat 4 Drawbar	Standard 1000 rpm w/20 splines, 45 mm (1-3/4 in.) Diameter Shaft	500 mm (20 in.)	Single Hole Drawbar	2245 kg (4950 lb)
8320 and 8345 with Cat 4 Drawbar	Optional 540 rpm w/6 splines, 35 mm (1-3/8 in.) Diameter Shaft	N/A	N/A	N/A
8320 and 8345 with Cat 4 Drawbar	Optional 1000 rpm w/21 splines, 35 mm (1-3/8 in.) Diameter Shaft	400 mm (16 in.)	Single Hole Drawbar	2245 kg (4950 lb)
8225, 8245, 8270, 8295, 8320 and 8345 with Cat 4 Drawbar and Heavy Duty Drawbar Support	Standard 1000 rpm w/20 splines, 45 mm (1-3/4 in.) Diameter Shaft	500 mm (20 in.)	Single Hole Drawbar	4990 kg (11,000 lb)

Continued on next page

OURX935,0000B78 -19-15SEP09-1/2

Drawbar Load Limits Based on Drawbar Position, Length and PTO Type

Tractor Model and Drawbar Category	PTO Shaft (B)	End of PTO Shaft to Draw Pin Hole Distance (C)	Drawbar Position	Maximum Vertical Drawbar Load
8225, 8245, 8270, 8295, 8320 and 8345 with Cat 4 Drawbar and Heavy Duty Drawbar Support	Optional 540 rpm w/6 splines, 35 mm (1-3/8 in.) Diameter shaft	Not Recommended		
8225, 8245, 8270, 8295, 8320 and 8345 with Cat 4 Drawbar and Heavy Duty Drawbar Support	Optional 1000 rpm w/21 splines, 35 mm (1-3/8 in.) Diameter shaft	400 mm (16 in.)	Single Hole Drawbar	4990 kg (11,000 lb)

Category 3 drawbar uses a 38 mm (1.5 in.) draw pin.
Category 4 uses a 51 mm (2.0 in.) draw pin.

OURX935,0000B78 -19-15SEP09-2/2

Adjusting Drawbar Length, Height and Side-to-Side

Adjusting Drawbar Length

IMPORTANT: For PTO-driven implement, drawbar (A) must be positioned as instructed in **Attaching PTO Driven Implement** in this section.

Loosen drawbar locking bolts (D).

Remove cap screw (B), retaining pin (C) and retaining strap.

Slide drawbar to desired position.

Install drawbar retaining strap and pin.

Retaining Cap Screws—Specification

Cap Screw—Torque..... 70 N·m (50 lb-ft)

Tighten drawbar locking bolts to torque specification.

Drawbar Locking Bolts—Specification

Locking Bolts—Torque..... 430 N·m (318 lb-ft)

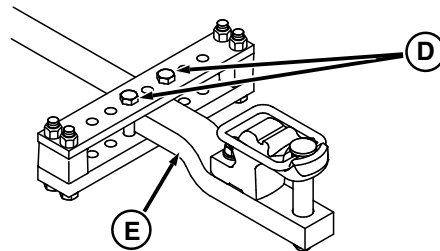
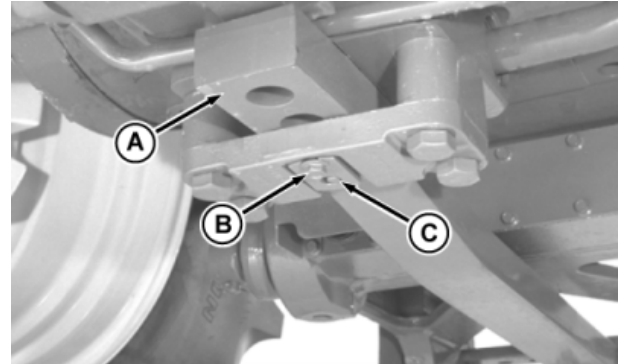
Adjusting Drawbar Height

Height of drawbar is adjustable by turning offset (E) up or down. Proceed as in length adjustment. Slide drawbar all the way out and turn drawbar over.

IMPORTANT: Clevis assembly must always be on top of drawbar if used.

Heavy duty support cannot be used with drawbar offset positioned upward.

Adjusting Drawbar Side-To-Side



A—Drawbar
B—Cap Screw
C—Retaining Pin

D—Locking Bolts
E—Offset

Remove drawbar locking bolts.

Slide drawbar to desired position.

Install a locking bolt against each side of drawbar. Tighten bolts to torque specification.

RW55309A —UN—22OCT99

RXA0085803 —UN—10JAN06

OURX935,0000665 -19-25NOV08-1/1

Installing and Using Clevis Assembly

IMPORTANT: Remove clevis assembly, before using PTO shaft, or whenever PTO shaft might cause interference.

Clevis assembly (A) must be attached **ONLY** to top of drawbar.

Install clevis assembly and tighten cap screws (B).

Clevis Assembly Retaining Cap Screws—Specification

Category 3—Torque.....	610 N·m (450 lb-ft)
Category 4—Torque.....	430 N·m (320 lb-ft)

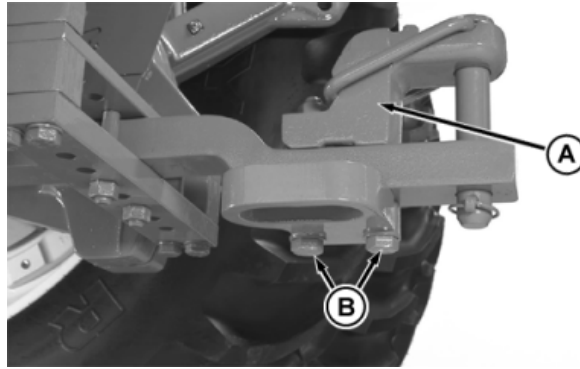
Remove lock pin (D). Lift pin with handle (C) and position in notch of clevis assembly.

Attach implement.

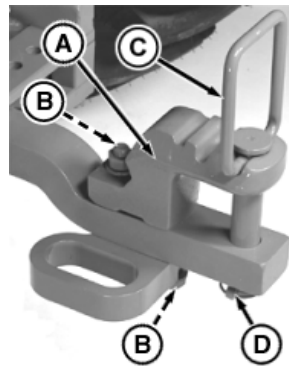
Insert pin only through drawbar, not through clevis assembly, if towed implement also has a clevis assembly. **DO NOT** insert pin through all four members.

A—Clevis Assembly
B—Cap Screw

C—Lift Pin with Handle
D—Lock Pin



RW26279 —UN—12JUN99



RX A0085808 —UN—10JAN06



RW26282 —UN—12JUN99

OURX935,0000666 -19-25NOV08-1/1

Attaching PTO-Driven Implement

CAUTION: Entanglement in rotating driveline can cause serious injury or death. **STOP THE ENGINE** and be sure PTO driveline is stopped before making adjustments, connections, or before cleaning PTO-driven equipment.

Keep PTO shield and driveline shields in place at all times. Make sure rotating shields turn freely. Wear close fitting clothing.

Lock drawbar in center position and remove clevis assembly.

PTO Shaft	PTO Shaft End to Hitch Pin Hole (A)
540 rpm - 6 Splines *	350 mm (14.0 in.)
1000 rpm - 21 Splines *	400 mm (16.0 in.)
1000 rpm - 20 Splines **	508 mm (20.9 in.)

* 35 mm (1-3/8 in.) Shaft Diameter

** 45 mm (1-3/4 in.) Shaft Diameter

Attach implement to drawbar before connecting PTO driveline. If implement will be connected to quick coupler, be sure drawbar will not interfere.

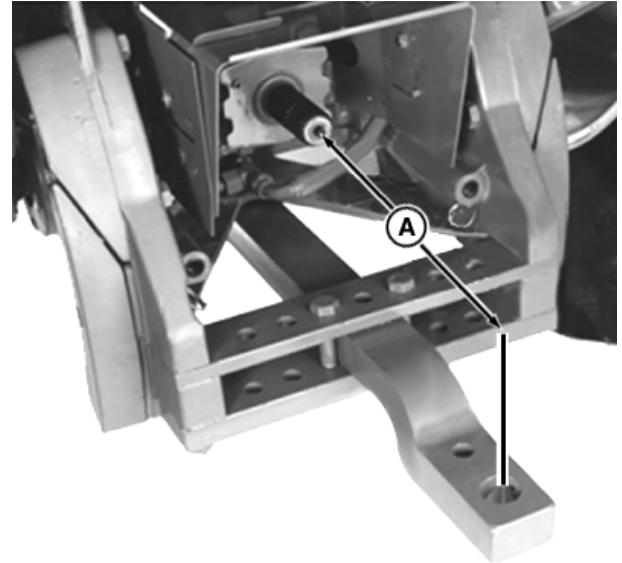
Connect driveline to PTO shaft. Turn shaft slightly by hand, to line up splines. Be sure yoke is in correct position and firmly locked.

Move PTO shield into position for size PTO shaft being used.

A—PTO Shaft to Pin Hole Distance



TSS1644 —UN—22AUG95



RXA0058071 —UN—29OCT01

OURX935,0000667 -19-25NOV08-1/1

Using PTO Shield

⚠ CAUTION: Avoid personal injury. Put the PTO shield in correct position at all times. Do not use shield as a step.

Move main support (B) into correct position.

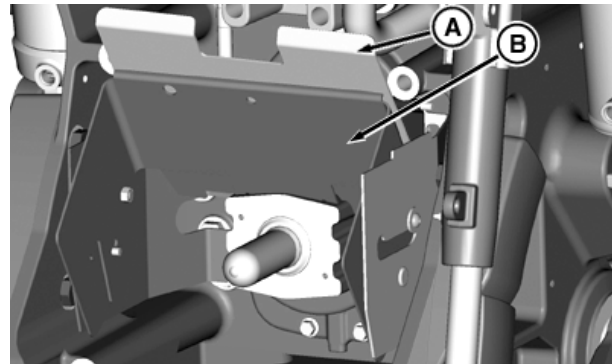
To extend shield, lift up upper support (A) and tilt main support down. Slide main support portion of shield forward and pull up to locked position (C).

Lift main and upper supports to raised position to provide clearance while connecting implement driveline to the PTO shaft.

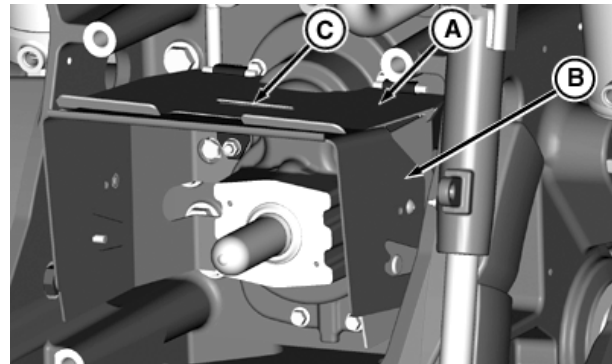
To connect an implement with an old-style tunnel shield, cut slot in the PTO shield. Cut from the edge of the main support to the small slot (D).

A—Upper Support
B—Main Support

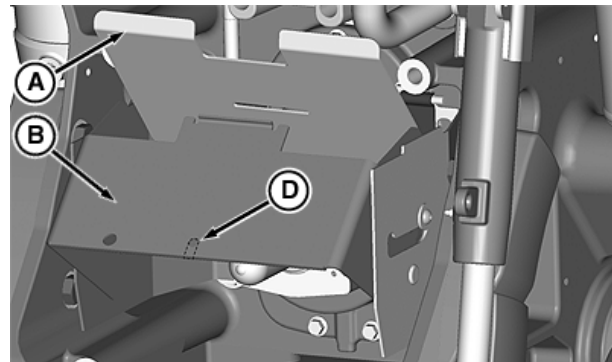
C—Lock Position
D—Slot



RXA0086821 —UN—16FEB06



RXA0086817 —UN—16FEB06



RXA0086818 —UN—16FEB06

OURX935,0000668 -19-25NOV08-1/1

Using Correct Engine Speed

Correct engine speed is very important. Run engine at 2000 engine rpm for 1000 rpm PTO speed operation with the 45 mm (1-3/4 in.) 20 spline shaft or the 35 mm (1-3/8 in.) 21 spline shaft.

Run engine at 1817 engine rpm for 540 rpm PTO speed operation with the 35 mm (1-3/8 in.) 6 spline shaft.

OURX935,000066A -19-25NOV08-1/1

Operating Rear PTO

CAUTION: Avoid personal injury. Stop engine and allow PTO driveline to stop before adjusting, connecting, or cleaning PTO-driven equipment.

Always disengage the PTO when not in use.

PTO can be engaged or disengaged without operating the clutch.

NOTE: Service Alert indicator light will flash, a message appears on the CommandCenter™ display and an audible warning signal sounds if operator leaves seat with PTO engaged. PTO does not disengage when operator is off the seat.

Push down and forward on PTO switch (A) to engage PTO clutch. PTO indicator on corner post monitor will light.

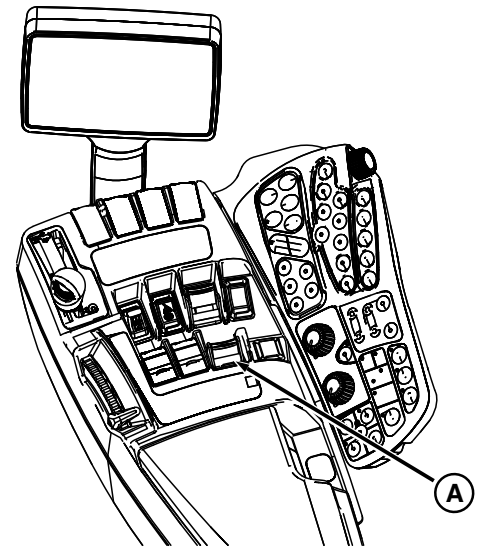
IMPORTANT: If PTO disengages during start up in cold-weather operation, wait 5 minutes before re-engaging PTO to avoid damage.

Tractor software will NOT allow operator to re-engage PTO immediately if engine rpms drop excessively due to heavy load at PTO startup. Diagnostic trouble code will display on CommandCenter. There will be a 10—15 second delay before operator can re-engage PTO. This delay allows clutch to cool before it is re-engaged.

Pull back PTO switch to disengage clutch and PTO brake will engage automatically.

NOTE: If engine is stopped and then restarted while PTO is running, PTO will not operate. Disengage PTO control switch and then engage the PTO again.

CommandCenter is a trademark of Deere & Company



Rear PTO

A—Rear PTO Switch

For tractor equipped with Independent Link Suspension, suspension will automatically level when tractor is stationary with PTO switch ON.

RXA0098433 —UN—07JUL08

OURX935,000066B -19-30JAN09-1/1

Setting Rear PTO Engagement Rate

RXA0104058 —UN—22JUL09

1. Select **PTO**.

NOTE: When FieldCruise™ setting soft key (A) is selected **FIELDCRUISE** settings box (C) is highlighted. Using thumb wheel engine rpm can be adjusted.

2. Rotate thumb wheel forward to increase or rearward to decrease engine rpm.
3. Select **FIELDCRUISE** On/Off soft key (D). Check mark in **FIELDCRUISE** settings box (E) will indicate **FIELDCRUISE** is ON (checked) or OFF (unchecked).

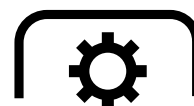
NOTE: PTO advanced settings page will display the current PTO engagement rate.

4. Select PTO Advanced Soft Key (B).

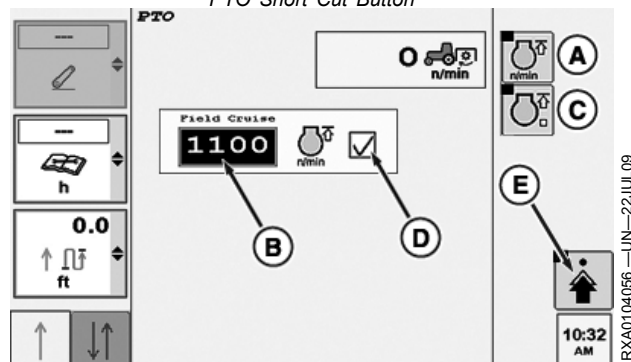
NOTE: Drop down box will offer 3 options; Auto, Low Rate and High Rate.

5. To change PTO engagement rate, click on double arrow in drop down box (F).
6. Using thumb wheel, scroll to rate needed and press Confirm button.

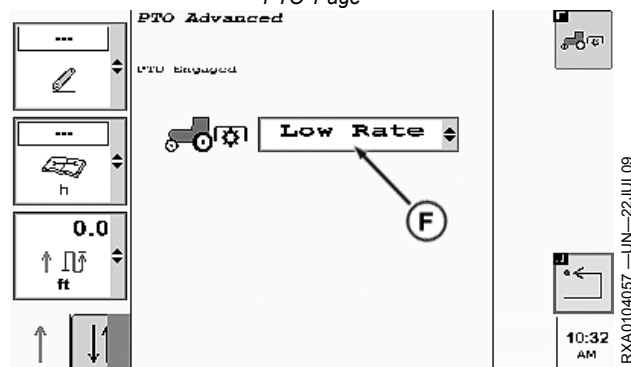
- | | |
|--------------------------------|--------------------------------|
| A—FieldCruise Setting Soft Key | D—FieldCruise On/Off Soft Key |
| B—Advanced Settings Soft Key | E—FieldCruise On/Off Check Box |
| C—FieldCruise Settings Box | F—Drop Down Box |



PTO Short Cut Button



PTO Page



PTO Advanced Page

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OURX935,0000A22 -19-29JUL09-1/1

Using Correct PTO Shaft

Diameter of the standard PTO shaft is 45 mm (1-3/4 in.). High power, heavy PTO loads require the strength of this large 20 spline shaft. Use this size whenever possible.

The optional PTO package includes a 45 mm (1-3/4 in.), 1000 rpm stub shaft (A) with 20 splines for high power, heavy PTO loads and a 35 mm (1-3/8 in.), 1000 rpm shaft (B) with 21 splines and a 35 mm (1-3/8 in.), 540 rpm shaft (C) with six splines for light load applications *only*.

IMPORTANT: Use the 35 mm (1-3/8 in.) 540 rpm PTO shaft only on implements requiring less than 56 kW (75 PTO horsepower).

Use the 35 mm (1-3/8 in.) 1000 rpm PTO shaft only on implements requiring less than 112 kW (150 PTO horsepower).

Use the 35 mm (1-3/8 in.) 540 and 1000 rpm PTO option for light-duty farm use only. Use



- A—1000 RPM Stub Shaft
B—1000 RPM End

- C—540 RPM End

the 45 mm (1-3/4 in.) 1000 rpm PTO shaft if heavier loads are expected.

OURX935,000066D -19-25NOV08-1/1

Changing PTO Stub Shaft

CAUTION: Avoid personal injury. PTO shaft may be hot from operation. Allow shaft to cool before changing.

1. Remove snap ring (A), which retains the 45 mm (1-3/4 in.) 20 spline, 1000 rpm PTO stub shaft. Carefully clean surrounding areas.

NOTE: Rotate the ends of the snap ring to align with flat surface of the shaft.

2. Remove PTO stub shaft (B) from housing.
3. Clean stub shaft thoroughly, coat splines with John Deere SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section.
4. Select the 540 (C) or 1000 (D) rpm shaft end of the PTO adapter.
5. Install splined collar (E) on shaft and insert adapter into PTO housing.

540 rpm shaft - Rotate collar back and forth while installing, to ensure shaft is correctly seated in housing.

1000 rpm shaft - Rotate collar back and forth while installing until engagement is felt.

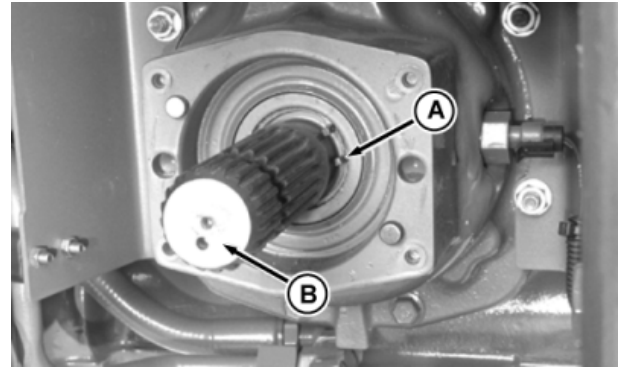
Shaft is correctly engaged when shaft turns with high effort.

6. Retain adapter with four cap screws.

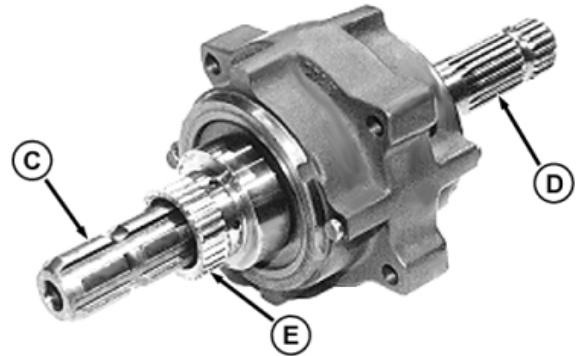
PTO Adapter Cap Screws—Specification

Cap Screw—Torque..... 52 N·m (70 lb-ft)

IMPORTANT: Prevent PTO damage. Clean bore in end of shaft thoroughly when installing six-spline PTO shaft for 1000 rpm use.



RW55322A —UN—22OCT99



RW55488A —UN—22JUN99

A—Snap Ring
B—Stub Shaft
C—540 End

D—1000 End
E—Collar

OURX935,000066E -19-25NOV08-1/1

Performance Ballasting

General Ballasting Information

Basic Ballasting Definitions

Ballast is mass added to tractor chassis and/or wheels to:

- Increase TOTAL WEIGHT
- Influence WEIGHT DISTRIBUTION between front axle and rear axle (static balance).

Static means that front and rear axle loads are determined when tractor is parked. The static weight distribution between front and rear axles is sometimes called WEIGHT SPLIT. It is usually expressed as percentages of total tractor static weight supported by the front axle and by the rear axle. For example, if the front axle supports 40% of the total static tractor weight, the tractor has a 40/60 weight split. The percentage of front axle weight is always stated first in this formula.

Major Considerations

NOTE: Radial-ply and bias-ply tires use same ballasting procedures.

Factors Determining Amount of Ballast

Soil surface—loose or firm

Type of implement—integral/semi-integral or towed

Travel speed—slow or fast

Tractor power output—partial or full load

Tires—small or large

Type of front axle (MFWD, or Independent Link Suspension)

Too Little Ballast

Excessive wheel spin

Tire wear

Fuel waste

Lower productivity

Too Much Ballast

Soil compaction

Power loss

Increased load

Fuel waste

Lower productivity

- A tractor PROPERLY ballasted for a given type of implement (towed, integral, or semi-integral) has both the correct TOTAL WEIGHT and STATIC BALANCE for that type of implement.
- Pulling a lighter load at a higher speed is more economical and more efficient than pulling heavier loads at a lower speed.

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- When changing from one implement or attachment to another it may be necessary to reconfigure ballast on the tractor.
- Correct ballast allows most efficient use of tractor available power. Ballast will not make up for an implement which is too big for the tractor. Adding ballast will not improve performance, if engine speed falls below rated speed and/or wheel slip is not in the recommended range.

Ballasting Is Required To:

1. Insure that front axle carries sufficient weight for steering security and stability. Sufficient front axle weight is important for stability. Sufficient front axle weight is important for stability with field draft loads as well as transport in the field and on the road.
2. Ensure proper steering response when using AutoTrac™.
3. Provide sufficient traction to efficiently pull high draft loads.
4. Provide proper fore-aft balance to minimize occurrence of power hop in tractors equipped with MFWD and Independent Link Suspension.
5. Insure that rear axle carries sufficient weight for traction, braking, and stability when an implement is attached to front of tractor.

Ballast Limitations

IMPORTANT: Tractor weight exceeding heavy ballast limits should be avoided and may void the warranty due to "overload" conditions.

Ballast should be limited by the lowest of either tire capacity or tractor capacity. Carrying capacity of each tire should not be exceeded. If a greater amount of weight is needed, larger carrying capacity tires should be considered.

OURX935,00007DF -19-06APR09-1/1

General Guidelines for Tractor Weight Based on PTO Power Rating

The total tractor weight needed to efficiently deliver power through wheels to ground for field draft applications depends on travel speed. The table shows recommended weight per PTO power rating for three draft speed ranges.

	Light	Medium	Heavy
Ground Speed	8.7 km/h (5.4 mph) and faster	7.2 - 8.7 km/h (4.5 - 5.4 mph)	7.2 km/h (4.5 mph) and slower
Kg/PTO-kW	70	79	86
Lb/PTO-HP	115	130	145

Travel Speeds

Wheel slip should normally be in the range of 8-12% for optimum power delivery efficiency at these field speeds. Wheel slip may briefly rise above this range when tractor encounters a higher draft area in the field, but it should not stay there continuously. Add more weight to drive wheels if slip is excessive. If there is less than minimum percent slip, ballast should be removed, unless needed for stability.

NOTE: It is recommended to use the radar to continually monitor wheel slip. Checking wheel slip manually is possible but will only show slip in one area of the field.

IMPORTANT: To extend drive train life, tractor should never be operated with continuous full-power loads below 6.4 km/h (4.0 mph). Ground speed may briefly drop below that level in hard pull situations, but it must recover to higher levels during normal operations. This applies to tractors with all types of transmissions. For tractors equipped with AutoPowr transmission operating in automatic mode, the engine will not labor in extremely high draft situations, but minimum ground speed guideline must still be followed.

OURX935,00007E0 -19-24DEC08-1/1

General Weight Split Guidelines

Weight split requirements are based on type of implement or attachment being used. A primary consideration is to maintain sufficient weight on front and rear axles to provide stability and steering security under both field and transport conditions. Other factors as indicated in following tables must also be considered.

IMPORTANT: Weight split will vary depending on the application. If heavy drawbar load or hitch-mounted implements are being used, INCREASE the weight on the front to insure stability and steering security.

Towed Draft Implements

Towed equipment that place SMALL VERTICAL LOADS on the tractor drawbar such as disks, chisel plows, and field cultivators:

MFWD	No more than 35% of total tractor weight on front axle. This is required for power hop control. (See Power Hop Control section for details.)
Independent Link Suspension	40% of total tractor weight up to approximately 55% of total tractor weight on front axle. Best tractive performance is attained in lower end of range, but there is only a modest reduction in performance at higher values.

Trailers, Towed Slurry and Fertilizer Tanks

Implements that place HIGH VERTICAL LOADS on the drawbar or are connected to a high hitch point such as Wagon Hitch:

MFWD and Independent Link Suspension	Up to approximately 55% of total tractor weight on front axle to insure steering security and stability.
	It may be practical to have a lower front percentage with heavy trailers, but steering security and stability must still be assured.

Integral and Semi-Integral Implements

Implements that place LARGE VERTICAL LOADS on the hitch such as mounted rollover plows.

MFWD and Independent Link Suspension	Up to approximately 55% of total tractor weight on front axle.
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CAUTION: Do not exceed front tire carrying capacities when using high percentages of front weight. See Maximum Load Per Wheel in this section.

OURX935,00007E1 -19-24DEC08-1/1

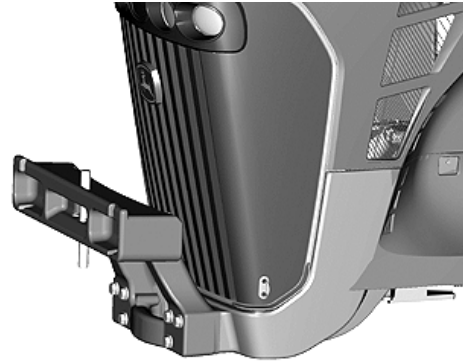
Ballast Types

Cast iron wheel weights and QUIK-TATCH weights are the preferred form of ballast. Liquid ballast in tires should be avoided if practical since it has a stiffening effect that causes rough ride and makes the tractor more susceptible to power hop. If liquid is used in rear tires, all tires on the axle must be filled to the same level which should not exceed 40% (4 o'clock valve stem position). Specific information on use of liquid ballast is given later in this section.

In some cases, it may be necessary or desirable to remove either front or rear ballast. A QUIK-TATCH weight facilitates this for front ballast. Installation and removal of rear weights on outside of wheels requires the use of a hoist or forklift. Removal of inner rear wheel weights should not be required after initial installation at factory or dealership.

Standard Front Weight Support

The standard front weight support weighs 170 kg (375 lb).



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Independent Link Suspension

The standard front weight support **ONLY** mounted on a tractor equipped with Independent Link Suspension effectively ADDS 147% of its weight to the front axle and SUBTRACTS 47% of its weight from the rear axle due to leverage.

Front Axle Multiplier **for tractors with front weight support only** = 1.47 Rear Axle Multiplier = -0.47

The standard front weight support **for tractors with front weight support only** ADDS $1.47 \times 170 \text{ kg (375 lb)} = 250 \text{ kg (551 lb)}$ to the front axle and SUBTRACTS $-0.47 \times 170 \text{ kg (375 lb)} = -80 \text{ kg (176 lb)}$ from the rear axle.

MFWD

The standard front weight support mounted on a tractor equipped with MFWD effectively ADDS 145% of its weight to the front axle and SUBTRACTS 45% of its weight from the rear axle due to leverage.

Front Axle Multiplier = 1.45 Rear Axle Multiplier = -0.45

The standard front weight support ADDS $1.45 \times 170 \text{ kg (375 lb)} = 247 \text{ kg (544 lb)}$ to the front axle and SUBTRACTS $-0.45 \times 170 \text{ kg (375 lb)} = -77 \text{ kg (169 lb)}$ from the rear axle.

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OURX935,00007E2 -19-24DEC08-1/5

QUIK-TATCH Weights

NOTE: Depending on the mounting position used (standard front support or support on front hitch), the effective weight added to the front axle will be greater due to leverage caused by the weight distance in front of the axle

NOTE: When adding front weights, some weight is transferred from the rear of the tractor to the front. Use following guidelines to figure tractor weight when front weights are added.



QUIK-TATCH Weights on Standard Support

QUIK-TATCH weights weigh 50 kg (110 lb) each. Up to 20 weights can be installed on the front weight support or on a support on a front hitch. These combinations can be limited by the front axle option.

Standard Front Weight Support (Independent Link Suspension)

QUIK-TATCH weights mounted on a standard front weight support on a tractor equipped with Independent Link Suspension effectively **ADD 157%** of their weight to front axle and **SUBTRACT 57%** from rear axle due to leverage.

Front axle **for tractors with front weight support and weights** multiplier = 1.57 Rear axle multiplier = -0.57

Each 50 kg (110 lb) QUIK-TATCH weight ADDS $1.57 \times 50 \text{ kg (110 lb)} = 79 \text{ kg (174 lb)}$ to the front axle and SUBTRACTS $-0.57 \times 50 \text{ kg (110 lb)} = -29 \text{ kg (64 lb)}$ from the rear axle.

Standard Front Weight Support with weights (MFWD)

QUIK-TATCH weights mounted on a standard front weight support on a tractor equipped with MFWD effectively **ADD 155%** of their weight to front axle and **SUBTRACT 55%** from rear axle due to leverage.

Front axle multiplier = 1.55 Rear axle multiplier = -0.55

Each 50 kg (110 lb) QUIK-TATCH weight ADDS $1.55 \times 50 \text{ kg (110 lb)} = 78 \text{ kg (172 lb)}$ to the front axle and SUBTRACTS $-0.55 \times 50 \text{ kg (110 lb)} = 28 \text{ kg (62 lb)}$ from the rear axle.

Front Weight Support on Front Hitch

NOTE: A front hitch is only available on tractors equipped with Independent Link Suspension.

Front axle multiplier = 1.69 Rear axle multiplier = -0.69

Each 50 kg (110 lb) QUIK-TATCH weight ADDS $1.69 \times 50 \text{ kg (110 lb)} = 85 \text{ kg (188 lb)}$ to the front axle and SUBTRACTS $-0.69 \times 50 \text{ kg (110 lb)} = 35 \text{ kg (77 lb)}$ from the rear axle.

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OURX935,00007E2 -19-24DEC08-2/5

900 kg (1984 lb) Block Weight

One 900 kg (1984 lb) block weight can be installed on the standard front weight support or on a support on the front hitch.

IMPORTANT: Front weight support will need to be modified to accept the 900 kg (1984 lb) block weight. See your John Deere™ dealer to install block weight on a standard front weight support.



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Standard Front Weight Support (Independent Link Suspension)

The 900 kg (1984 lb) block weight mounted on a standard front weight support on a tractor equipped with Independent Link Suspension effectively ADDS 157% of its weight to the front axle and SUBTRACTS 57% of its weight from the rear axle due to leverage.

Front Axle Multiplier = 1.57 Rear Axle Multiplier = -0.57

The 900 kg (1984 lb) block weight ADDS $1.57 \times 900 \text{ kg (1984 lb)} = 1413 \text{ kg (3115 lb)}$ to the front axle and SUBTRACTS $-0.57 \times 900 \text{ kg (1984 lb)} = 513 \text{ kg (1131 lb)}$ from the rear axle.

Standard Front Weight Support (MFWD)

The 900 kg (1984 lb) block weight mounted on a standard front weight support on a tractor equipped with MFWD effectively ADDS 155% of its weight to the front axle and SUBTRACTS 55% of its weight from the rear axle due to leverage.

Front Axle Multiplier = 1.55 Rear Axle Multiplier = -0.55

The 900 kg (1984 lb) block weight ADDS $1.55 \times 900 \text{ kg (1984 lb)} = 1395 \text{ kg (3075 lb)}$ to the front axle and SUBTRACTS $-0.55 \times 900 \text{ kg (1984 lb)} = -495 \text{ kg (1091 lb)}$ from the rear axle.

Front Weight Support on Front Hitch

The 900 kg (1984 lb) block weight mounted on a front weight support mounted on the front hitch effectively ADDS 189 % of its weight to the front axle and SUBTRACTS 89 % of its weight from the rear axle due to leverage.

Front Axle Multiplier = 1.89 Rear Axle Multiplier = -0.89

The 900 kg (1984 lb) block weight ADDS $1.89 \times 900 \text{ kg (1984 lb)} = 1701 \text{ kg (3750 lb)}$ to the front axle and SUBTRACTS $-0.89 \times 900 \text{ kg (1984 lb)} = 801 \text{ kg (1766 lb)}$ from the rear axle.

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OURX935,00007E2 -19-24DEC08-3/5

Rear Wheel Weights

Rear wheel weights are available in 75 kg (165 lb), 205 kg (450 lb), and 635 kg (1400 lb) sizes.

Each weight applies total weight to rear axle and none to front axle.



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Front Hitch

When tractor has a front hitch, additional front axle and rear axle loads due to its weight must be included in calculating total axle loads. The front and rear axle weights shown in Unballasted Tractor Weight Charts are based on tractors with a front weight support. With a front hitch installed instead of a front weight support the NET amounts of weight changes are used in determining axle loads.

NET Weight ADDED to front axle 696 kg (1534 lb)

NET Weight SUBTRACTED from rear axle 216 kg (476 lb)

NOTE: The front hitch REMOVES 216 kg (476 lb) from rear axle due to leverage.



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OURX935,00007E2 -19-24DEC08-5/5

Ballasting Suggestions for Specific Types of Implements

These recommendations are offered as starting points when ballasting for operations with several common types of implements. Some deviations may be needed for specific circumstances.

Towed Draft Implements

Towed equipment that place small vertical loads on the tractor drawbar such as disks, chisel plows, and field cultivators:

MFWD

	8245R	8270R	8295R
QUIK-TATCH Weights	None (support only)	None (support only)	8
Rear Weights	None	1 pair 205 kg (450 lb) 1 pair 75 kg (165 lb)	1 pair 635 kg (1400 lb) and 1 pair 205 kg (450 lb) and 1 pair 75 kg (165 lb)

Independent Link Suspension

	8245R	8270R	8295R	8320R and 8345R
QUIK-TATCH Weights	None	None (support only)	4	8
Rear Weights	None	None	1 pair 635 kg (1400 lb) and 1 pair 75 kg (165 lb)	1 pair 635 kg (1400 lb) and 1 pair 205 kg (450 lb) and 1 pair 75 kg (165 lb)

Trailers, Towed Slurry and Fertilizer Tanks

Implements that place high vertical loads on the drawbar or are connected to a high hitch point such as Premium Wagon Hitch:

MFWD and Independent Link Suspension

Front Ballast	20 QUIK-TATCH weights or 900 kg (1984 lb) block weight.
Rear Ballast	None required. If rear weights are already installed, it is not necessary to remove them.

NOTE: It may be practical to use less front weight with smaller trailers, but steering security and stability must be assured.

Integral and Semi-Integral Implements

Implements that place large vertical loads on the hitch such as mounted rollover plows:

MFWD and Independent Link Suspension

Front Ballast	20 QUIK-TATCH weights or 900 kg (1984 lb) block weight.
Rear Ballast	None

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Determining Ballasted Tractor Weight, Weight Split, Axle Loads and Required Tire Inflation Pressures

The Unballasted Tractor Weight Charts provide front axle, rear axle and total weights for all power train and tire size options. From this and information previously provided on weights of various ballast elements (QUIK-TATCH weights and wheel weights), front ballast multipliers and front hitch axle loads (if used), the ballasted tractor weight and axle

loads can be calculated. These are needed to determine if total weight and weight split recommendations are met and to look up required tire inflation pressures from the Recommended Pressures charts in Wheels, Tires, and Treads section.

8245R PST with Independent Link Suspension and Front Weight Support— 198 PTO-HP

Front Tires	480/70 R30
Rear Tires	710/70 R38
Front Ballast	Weight Support
Rear Ballast	None

According to the Unballasted Tractor Weight Charts on following pages, the front axle weight which may vary depending on front end type and transmission type is 4767 kg (10510 lb) and the rear axle weight is 6280 kg (13844 lb). Note that these charts do not assume that a front weight support is mounted.

Front Axle Weight ADDED by Front Weight Support: 170 kg (375 lb) x 1.47 = 250 kg (551 lb)

Rear Axle Weight REMOVED by Front Support: 170 kg (375 lb) x -0.47 = -80 kg (176 lb)

Combine all of these as shown

	Front Axle	Rear Axle	Total
Base Tractor Weight	4767 kg (10510 lb)	6280 kg (13844 lb)	11047 kg (24354 lb)
Front Weight Support	250 kg (551 lb)	-80 kg (176 lb)	170 kg (375 lb)
Total	5017 kg (11061 lb)	6200 kg (13668 lb)	11217 kg (24729 lb)

Example 1

So the tractor is ballasted to the level of 11217 kg (24729 lb) / 198 PTO-HP = 56.1 kg (125 lb) per PTO-HP (Light)

The percentage of weight on the front axle is 5017 kg (11061 lb) / 11217 kg (24729 lb) x 100% = 45%.

From the Recommended Pressures charts in Wheels, Tires, Treads section for calculated axle loads, the required inflation pressures are:

Front Inflation Pressure: 165 kPa (1.65 bar; 24 psi)

Rear Inflation Pressure 75 kPa (0.75 bar; 11 psi) but **only if tractor is towing an implement that places very little down load on drawbar (planter or air seeder).**

For implements that generate high weight transfer add approximately 50 kPa (0.5 bar; 7 psi) for a total of 110 kPa (1.1 bar; 16 psi) for rear tires. With the aid of an assistant, visually check tire deflection when tractor is pulling hard in the field to confirm that tires are not under-inflated with these pressures.

For trailers, tankers, or any heavy integral implement, the rear inflation pressures **MUST** be increased substantially to support the extra weight at transport speeds. The exact amount depends on the extra load. Usually it will be **MORE THAN DOUBLE** the base amount or 130 - 150 kPa (1.3 - 1.5 bar; 19 - 22 psi) for this example. To determine rear axle load exactly, weigh rear axle of loaded tractor on a platform scale.

8270R PST with MFWD and Standard Front Weight Support — 225 PTO-HP

Front Tires	540/65 R34
Rear Tires	520/85 R46
Front Ballast	Weight Support
Rear Ballast	1 pair - 635 kg (1400 lb) Wheel Weights and 2 pair - 205 kg (450 lb) Wheel Weights

According to the Unballasted Tractor Weight Charts, the front axle weight is 4224 kg (9312 lb) and the rear is 6175 kg (13612 lb). Note that these charts do not assume that a front weight support is mounted. The weight for the weight support and transfer effect is found in the section on attaching front weights.

Front Axle Weight ADDED by Front Weight Support: 170 kg (375 lb) x 1.45 = 247 kg (544 lb)

Rear Axle Weight REMOVED by Front Weight Support: 170 kg (375 lb) x -0.45 = -77 kg (169 lb)

The pair of 635 kg (1400 lb) rear wheel weights and two pairs of 205 kg (450 lb) wheel weights add nothing to the front axle and 2090 kg (4608 lb) to the rear axle.

Combine all of these as shown

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OURX935,00007E4 -19-06APR09-1/2

Performance Ballasting

	Front Axle	Rear Axle	Total
Base Tractor Weight	4224 kg (9312 lb)	6175 kg (13612 lb)	10399 kg (22924 lb)
Weight Support	247 kg (544 lb)	-77 kg (169 lb)	170 kg (375 lb)
1 Pair 635 kg (1400 lb) Wheel Weights	0 kg (lb)	1270 kg (2800 lb)	1270 kg (2800 lb)
2 Pair 205 kg (450 lb) Wheel Weights	0 kg (lb)	820 kg (1808 lb)	820 kg (1808 lb)
Total	4471 kg (9857 lb)	8188 kg (18051 lb)	12659 kg (27908 lb)

Example 2

So the tractor is ballasted to the level of 12659 kg (27908 lb) / 225 PTO-HP = 56 kg (124 lb) per PTO-HP (Light).

The percentage of weight on the front axle is 4471 kg (9857 lb) / 12659 kg (27908 lb) x 100% = 35%

From the Recommended Pressures charts in Wheels, Tires, and Treads section for the calculated axle loads, the required inflation pressures are:

Front Inflation Pressure: 110 kPa (1.1 bar; 16 psi)

Rear Inflation Pressure: 160 kPa (1.6 bar; 23 psi) but **only if the tractor is towing an implement that places very little load on the drawbar (planter or air seeder).**

This is the ideal configuration for a 8270R tractor equipped with MFWD when it is used with towed implements such as planters or air seeders. The front weight percentage should be approximately 35% or less to help prevent Power Hop. Power Hop can still occur, but it can be controlled using the procedures given in this section.

When this tractor is used to tow large trailers, the rear inflation pressure must be increased as outlined in Example 1.

If this tractor is used with heavy integral or semi-integral implements, additional front ballast and higher rear inflation pressures will be required.

OURX935,00007E4 -19-06APR09-2/2

Unballasted Tractor Weight Chart

NOTE: Unballasted weights are average tractor weights figuring a full tank of fuel.

	1300 MFWD		1500 MFWD		Independent Link Suspension	
	8245R-8295R PowerShift	8245R-8295R AutoPowr™	8245R-8295R PowerShift	8245R-8295R AUTOPOWR	8245R-8295R PowerShift	8245R-8320R and 8345R AUTOPOWR
Group 47						
520/85 R42						
Front in kg (lb)	4132 (9110)	4348 (9585)	4420 (9750)	4648 (10747)	4767 (10510)	4993 (11007)
Rear in kg (lb)	6084 (13413)	6129 (13513)	6129 (13513)	6175 (13613)	6129 (13513)	6175 (13613)
Total	10216 (22523)	10477 (23098)	10551 (23623)	10823 (23860)	10897 (24023)	11167 (24620)
Front %	40	41	42	42	44	45
Rear %	60	59	58	58	56	55
710/70 R38						
Front in kg (lb)	4132 (9110)	4348 (9585)	4420 (9750)	4648 (10747)	4767 (10510)	4993 (11007)
Rear in kg (lb)	6234 (13744)	6280 (13844)	6280 (13844)	6325 (13944)	6280 (13844)	6325 (13944)
Total	10366 (22854)	10627 (23429)	10660 (23595)	10973 (24147)	11047 (24354)	11318 (24951)
Front %	40	41	41	43	43	44
Rear %	60	59	59	57	57	56
650/65 R42						
Front in kg (lb)	4132 (9110)	4348 (9585)	4420 (9750)	4648 (10747)	4767 (10510)	4993 (11007)
Rear in kg (lb)	6214 (13700)	6260 (13800)	6260 (13800)	6305 (13900)	6260 (13800)	6305 (13900)
Total	10346 (22810)	10607 (23385)	10680 (23550)	10953 (24157)	11027 (24310)	11298 (24907)
Front %	40	41	41	42	43	44
Rear %	60	59	59	58	57	56
620/70 R42						
Front in kg (lb)	4132 (9110)	4348 (9585)	4420 (9750)	4648 (10747)	4767 (10510)	4993 (11007)
Rear in kg (lb)	6214 (13700)	6260 (13800)	6260 (13800)	6305 (13900)	6260 (13800)	6305 (13900)
Total	10346 (22810)	10607 (23385)	10680 (23550)	10953 (24157)	11027 (24310)	11298 (24907)
Front %	40	41	41	42	43	44
Rear %	60	59	59	58	57	56
Group 48						
520/85 R46						
Front in kg (lb)	4224 (9312)	4450 (9809)	4524 (9974)	4739 (10449)	4869 (10734)	5084 (11209)
Rear in kg (lb)	6174 (13612)	6019 (13271)	6020 (13271)	6065 (13371)	6020 (13271)	6065 (13371)
Total	10398 (22924)	10469 (23080)	10440 (23021)	10713 (23618)	10888 (24005)	11149 (24580)
Front %	41	43	44	43	45	46
Rear %	59	58	56	57	55	54
710/70 R42						
Front in kg (lb)	4224 (9312)	4450 (9809)	4524 (9974)	4739 (10449)	4869 (10734)	5084 (11209)
Rear in kg (lb)	6214 (13700)	6260 (13800)	6260 (13800)	6305 (13900)	6260 (13800)	6305 (13900)
Total	10438 (23012)	10709 (23609)	10788 (23774)	11044 (24349)	11128 (24534)	11389 (25109)
Front %	40	42	42	43	44	45
Rear %	60	58	58	57	56	55
620/70 R46						
Front in kg (lb)	4224 (9312)	4450 (9809)	4524 (9974)	4739 (10449)	4869 (10734)	5084 (11209)
Rear in kg (lb)	6034 (13303)	6080 (13403)	6080 (13403)	6125 (13503)	6080 (13403)	6125 (13503)
Total	10258 (22615)	10529 (23212)	10604 (23307)	10865 (23952)	10948 (24137)	11209 (24712)
Front %	41	42	43	44	44	45
Rear %	59	58	57	56	56	55
650/85 R38						

Continued on next page

OURX935,0000CE8 -19-30NOV09-1/2

Performance Ballasting

	1300 MFWD		1500 MFWD		Independent Link Suspension	
	8245R-8295R PowerShift	8245R-8295R AutoPowr™	8245R-8295R PowerShift	8245R-8295R AUTOPOWR	8245R-8295R PowerShift	8245R-8320R and 8345R AUTOPOWR
Front in kg (lb)	4224 (9312)	4450 (9809)	4524 (9974)	4739 (10449)	4869 (10734)	5084 (11209)
Rear in kg (lb)	6134 (13524)	6180 (13624)	6180 (13624)	6225 (13724)	6180 (13624)	6225 (13724)
Total	10358 (22836)	10629 (23433)	10704 (23598)	10964 (24173)	11049 (24358)	11309 (24933)
Front %	41	42	42	43	44	45
Rear %	59	58	58	57	56	55

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OURX935,0000CE8 -19-30NOV09-2/2

Maximum Load Per Wheel

Front Wheels		Rear Wheels	
40 km/h (25 mph)		40 km/h (25 mph)	
Tire Size	Load	Tire Size	Load
Group 42		Group 47	
16.9 R30	2575 kg (5680 lb)	520/85 R42	4125 kg (9100 lb)
480/70 R30	3550 kg (7850 lb)	710/70 R38	5300 kg (11700 lb)
600/65 R28	3075 kg (6800 lb)	620/70 R42	4500 kg (9900 lb)
Group 43		650/65 R42	6000 kg (13200 lb)
480/70 R34	3875 kg (8550 lb)	Group 48	
540/65 R34	3550 kg (7850 lb)	520/85 R46	4250 kg (9350 lb)
600/70 R30	3550 kg (7850 lb)	710/70 R42	5600 kg (12300 lb)
Group 44		620/70 R46	4750 kg (10500 lb)
540/75 R34	4125 kg (9100 lb)	800/70 R38	6500 kg (14300 lb)
620/75 R30	4853 kg (10700 lb)	650/85 R38	6500 kg (14300 lb)

**IMPORTANT: Maximum loads per wheel shown
assume tire is inflated to rated pressure.**

OURX935,00007E6 -19-24DEC08-1/1

Worksheet to Calculate Ballast Changes

IMPORTANT: Ballast should not exceed weight required to result in recommended percent slip at 6.4 km/h (4.0 mph) MINIMUM.

NOTE: Complete this entire worksheet before adding or changing any ballast or air pressures.

1. Determine desired weight split for your operation.
2. Record desired weight of tractor (See Ballasting Guide).
3. Percent of Weight Split from Step No. 1 multiplied by Step No.2 (Desired Weight) results in Total Front Weight. For Rear Weight, subtract front weight from Total Weight.
4. Weight of tractor as determined from the Unballasted Tractor Weight Chart or weight from scale.
5. Ballast needed (subtract tractor weight in Step No. 4 from desired weight in Step No. 3.)
6. Add ballast.
7. Add ballast from Step No. 6 to weights from Step No. 4.
8. Set tire pressure for operating conditions using weights from Step No. 7. (See appropriate inflation pressure table).

NOTE: You are now ready to test for wheel slippage. See Measuring Wheel Slip.

____ % Front

Front	Rear	Total
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

OURX935,00007E7 -19-06APR09-1/1

Controlling Power Hop—MFWD Tractors

Power hop causes tractor bouncing and/or jumping at field working speeds under 16 km/h (10 mph). It can occur when the tractor is pulling towed implements at medium to high draft loads in loose, dry soil on top of a firm base and/or when climbing hills.

Make adjustments **ONLY** after making sure the following performance guidelines have been followed:

- No more than 35% of the tractor weight on the front axle
- If liquid ballast is used in rear tires, it should not exceed 40% (4 o'clock valve stem position)
- Front and rear inflation pressures set correctly based on static loads. See Wheels, Tires, and Treads section.

Then if Power Hop Occurs:

1. Increase front inflation pressures by 40 kPa (0.4 bar; 6 psi).

If Power Hop Still Occurs:

2. Increase front inflation pressures by another 40 kPa (0.4 bar; 6 psi) and operate tractor.
3. Continue to increase front inflation pressures in 10 kPa (0.1 bar; 2 psi) increments up to a maximum of 40 kPa (0.4 bar; 6 psi) ABOVE maximum pressure rating for the tires (imprinted on tire sidewall).

IMPORTANT: Front tire pressure should not exceed 40 kPa (0.4 bar; 6 psi) more than the maximum rated inflation pressure shown on tire side wall.

If Power Hop Still Occurs:

4. Install up to 75% liquid in the front tires and remove an equivalent amount of front cast weight to maintain recommended weight split. Re-inflate the front tires to the maximum pressure rating for the tires and operate the tractor. See Using Liquid Ballast in this section to determine exact amount of weight that will be added.

NOTE: In most cases step 4 will not be required to control power hop.

OURX935,00007E8 -19-24DEC08-1/1

Using QUIK-TATCH Weights

Up to 22 QUIK-TATCH weights can be installed on tractors.

Install QUIK-TATCH weights, balanced on each side of center (C). The first two weights must be installed as a pair.

Run retaining bolts (A) through holes and secure with a nut to hold six weights or fewer in position. Tighten bolts.

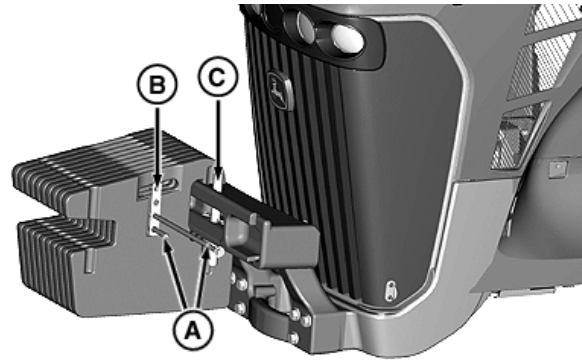
Weight Attaching Bolts—Specification

Bolt—Torque..... 230 N·m (170 lb-ft)

Insert retainers between weights, one with threaded hole upward (B) and the other with threaded hole downward when eight or more weights are installed. Tighten bolts.

Weight Attaching Bolts—Specification

Bolt—Torque..... 230 N·m (170 lb-ft)



A—Retaining Bolts
B—Retainer with Hole Up

C—Center

RXA0080130—UN—06APR05

OURX935,00007E9 -19-06APR09-1/1

Using Rear Wheel Weights

CAUTION: When installing weights, use appropriate equipment or have the job performed by your John Deere™ Dealer.

NOTE: When using 1524 mm (60 in.) tread setting, maximum of two 205 kg (450 lb) or one 635 kg (1400 lb) weight can be installed on inside of wheel.

Install weight (A) on wheel.

Weight Attaching Bolts—Specification

M16-Bolt—Torque..... 310 N·m (230 lb-ft)

M20-Bolt—Torque..... 610 N·m (450 lb-ft)

For additional weights, install bolts in previous weight. Rotate alternate weight to align bolts with weight holes.

Tighten bolts and then retighten after driving approximately 100 meters (100 yd).

Retighten bolts after working **3 HOURS** and again after **10 HOURS**.

Check tightness every 250 hours.

IMPORTANT: Inside wheel weights must have at least 25 mm (1 in.) clearance between weight and tractor components.

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A—Rear Wheel Weight

RXA0056676—UN—06SEP01

OURX935,00007EA -19-06APR09-1/1

Using Liquid Ballast

CAUTION: Installing liquid ballast requires special equipment and training. See your John Deere™ dealer or a tire service store.

IMPORTANT: NEVER fill any tire to more than 90 percent. More solution could damage tires.

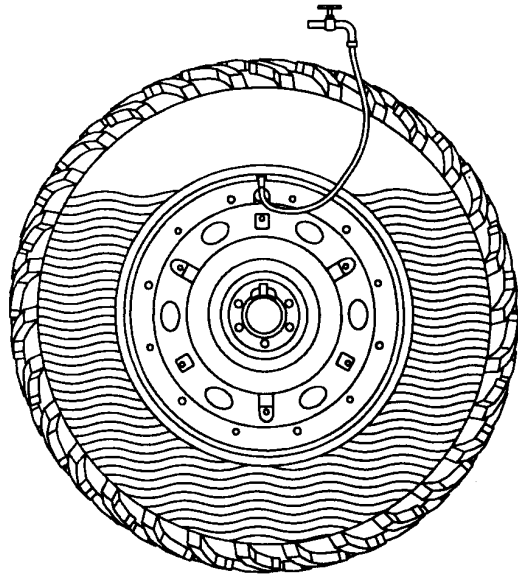
Water or calcium chloride solution can be used to provide economical ballast. Used properly, it will not damage tires, tubes, or rims. However, liquid ballast is not recommended because it results in harsh ride, difficulty in handling, spills if flats occur, and when used in rear tires can result in greater susceptibility to power hop.

Liquid ballast should be avoided in rear tires since it has a stiffening effect that causes the tractor to give a rough ride and generally reduces ability to control power hop. If liquid is used in the rear tires, *all tires on the axle must be filled to the same level* which should not exceed 40 percent.

A calcium chloride mixture of 420 grams per liter (3.5 lb per gal) of water will not freeze solid above -45°C (-50°F) or a mixture of 600 grams per liter (5.0 lb per gal) will not freeze solid above -50°C (-60°F).

NOTE: Use of alcohol as liquid ballast is not recommended.

Up to 75 percent may be used in MFWD front tires for weight or to provide stiffness to assist in power hop control. *Do this as a last alternative.*



RW25003 —UN—07 JUL 93

Fill FRONT tires to 40 or 75 percent for needed ballast. Fill REAR tires to maximum of 40 percent. More solution could result in harsh ride. Chart shows how much each size holds if filled to 40 or 75 percent.

Liquid Ballast Chart

Liquid Ballast PER Front Tire					
Tire Size	40% Fill			75% Fill	
	420 g/L (3.5 lb/gal)	600 g/L (5.0 lb/gal)		420 g/L (3.5 lb/gal)	600 g/L (5.0 lb/gal)
Group 42					
16.9 R30	178 kg (393 lb)	191 kg (420 lb)		335 kg (738 lb)	357 kg (787 lb)
600/65 R28	231 kg (509 lb)	246 kg (543 lb)		433 kg (954 lb)	462 kg (1019 lb)
Group 43					
480/70 R34	203 kg (448 lb)	216 kg (476 lb)		381 kg (840 lb)	405 kg (893 lb)
540/65 R34	226 kg (498 lb)	239 kg (527 lb)		423 kg (933 lb)	448 kg (988 lb)
600/70 R30	307 kg (677 lb)	326 kg (719 lb)		575 kg (1268 lb)	611 kg (1347 lb)
Group 44					
540/75 R34	226 kg (498 lb)	239 kg (527 lb)		424 kg (935 lb)	448 kg (988 lb)
620/75 R30	355 kg (783 lb)	378 kg (833 lb)		666 kg (1469 lb)	708 kg (1561 lb)

Liquid Ballast PER Rear Tire		
Tire Size	40% Fill	
	420 g/L (3.5 lb/gal)	600 g/L (5.0 lb/gal)
Group 47		
620/70 R42	411 kg (905 lb)	439 kg (967 lb)
650/70 R42	400 kg (882 lb)	428 kg (944 lb)
480/80 R46	292 kg (644 lb)	313 kg (690 lb)
710/70 R38	493 kg (1086 lb)	526 kg (1159 lb)
Group 48		
380/90 R54	193 kg (426 lb)	205 kg (453 lb)
520/85 R46	375 kg (827 lb)	400 kg (882 lb)
710/70 R42	523 kg (1154 lb)	558 kg (1230 lb)
620/70 R46	421 kg (929 lb)	451 kg (995 lb)
800/70 R38	663 kg (1462 lb)	707 kg (1559 lb)

Continued on next page

OURX935.00007EB -19-06APR09-1/2

Performance Ballasting

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OURX935,00007EB -19-06APR09-2/2

Implement Codes

IMPORTANT: Use a scale to check static weight, especially with heavy implements. Static weight remaining on the front wheels with the implement lifted should always be at least 50 percent of the weight with the implement resting on the ground.

Determine the following:

- MFWD, or Independent Link Suspension
- Front tires with or without liquid

Find implement code in John Deere™ implement operator's manual.

To find implement code for non-JOHN DEERE implements use the following procedure:

1. Estimate implement center of gravity (find or estimate fore-and-aft balance point)
2. Measure distance from implement hitch point to center of gravity. Record the distance (inches). Add 37 to this figure.

3. Determine the implement weight (fully loaded). Record the weight (pounds).
4. Multiply Step 2 by Step 3. Divide by 1000.
5. Resulting number is the implement code.

Use the prior information and refer to the appropriate chart to determine how many QUIK-TATCH weights are required.

CAUTION: Do not attempt to transport an implement without adequate front ballast. Loss of steering control may result. With maximum front ballast, do not attempt to transport an implement whose code exceeds:

- 650 for MFWD
- 835 for 8245R, 8245R, and 8270R with Independent Link Suspension
- 865 for 8295R and 8320R and 8345R with Independent Link Suspension

NOTE: If no quick coupler is used, add 15 to code.

QUIK-TATCH Weights Required

Tractor Code	8245R-8295R	8245R-8320R and 8345R
	MFWD	Independent Link Suspension
0—320	—	—
321—335	—	—
336—350	—	—
351—365	—	—
366—380	—	—
381—395	0	—
396—410	S	—
411—425	2	—
426—440	4	—
441—455	6	0
456—470	8	S
471—485	10	2
486—500	12	4
501—515	14	6
516—530	16	8
531—545	18	10
546—560	20	12
561—575	22	14
576—590	—	16
591—610	—	18
611—625	—	20
626—640	—	22

Continued on next page

OURX935,00007EC -19-30NOV09-1/2

Performance Ballasting

Tractor Code

641—655

656—670

8245R-8295R

MFWD

—

—

8245R-8320R and 8345R

Independent Link Suspension

—

—

S=Weight Support Only

Add to tractor code when:

.. Fluid is added to front tires

60

60

Maximum obtainable tractor code

650

835

IMPORTANT: Tractor code must be greater than or equal to the implement code.

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OURX935,00007EC -19-30NOV09-2/2

Weight Added to Rear Axle with Hitch Mounted Implements

This chart applies to an implement whose center of gravity is at 610 mm (24 in.) behind the hook points.

code and will require additional weight on the front axle. (See Using Implement Codes in this section for more details.)

NOTE: Implements with a center of gravity greater than 610 mm (24 in.) will have a higher implement

Implement Weight in kg (lb)	907 (2000)	1133 (2500)	1361 (3000)	1588 (3500)	1814 (4000)	2041 (4500)	2268 (5000)	2495 (5500)	2722 (6000)	2948 (6500)	3175 (7000)	3402 (7500)	3629 (8000)
Approximate Implement Code Rating	120	155	185	215	245	275	305	335	365	395	425	460	490
Approximate Weight Added to Rear Axle by Mounted Implement in kg (lb)	1474 (3250)	1837 (4050)	2223 (4900)	2585 (5700)	2948 (6500)	3311 (7300)	3697 (8150)	4060 (8950)	4423 (9750)	4808 (10600)	5171 (11400)	5534 (12200)	5897 (13000)
Implement Weight in kg (lb)	3856 (8500)	4082 (9000)	4309 (9500)	4536 (10000)	4763 (10500)	4990 (11000)	5216 (11500)	5443 (12000)	5670 (12500)	5897 (13000)	6123 (13500)	6350 (14000)	
Approximate Implement Code Rating	520	550	580	610	640	670	700	730	765	795	825	855	
Approximate Weight Added to Rear Axle by Mounted Implement in kg (lb)	6282 (13850)	6645 (14650)	7008 (15450)	7371 (16250)	7756 (17100)	8119 (17900)	8482 (18700)	8868 (19550)	9231 (20350)	9593 (21150)	9956 (21950)	10342 (22800)	

OURX935,00007ED -19-06APR09-1/1

Measuring Wheel Slip—Manually

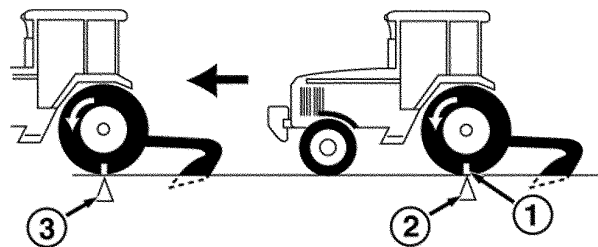
NOTE: Tractors equipped with optional radar unit can automatically determine the percentage of wheel slip. Radar must be calibrated correctly. (See CommandCenter™ section).

1. Mark a rear tire.
2. Mark a starting point on the ground with the tractor moving and implement lowered in the ground.
3. Follow tractor and mark the ground again where marked tire completes 10 full revolutions.
4. Repeat procedure with implement raised at the same working speed. Count revolutions between same two marks.
5. Use second count and chart to determine slippage.

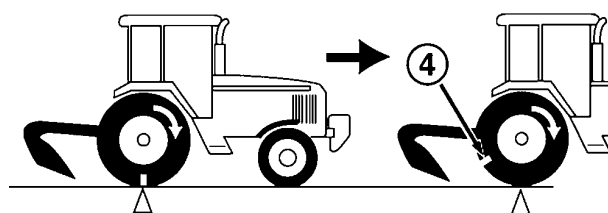
NOTE: 8—12% is ideal for tractors with MFWD engaged (10—15 percent for two-wheel drive tractors).

6. Adjust ballast or load to give correct slippage.

NOTE: Available horsepower is greatly reduced when wheel slip drops below minimum percent.



RW26776 —UN—12JAN00



RW26777 —UN—13JAN00

Wheel Slippage Chart

Wheel Revolutions (Step 4)	% Slip	Result
10	0	Remove Ballast
9-1/2	5	Remove Ballast
9	10	Correct Ballast
8-1/2	15	Add Ballast
8	20	Add Ballast
7-1/2	25	Add Ballast
7	30	Add Ballast

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OURX935,00007EE -19-06APR09-1/1

Front Wheels, Tires, and Treads

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

Wheel tightening Stand—DFR219 or JDG10741

Wheel tightening stand (A) may be used to support the torque wrench (B) when tightening cap screws at different heights.

See your John Deere™ dealer to order.

A—Wheel Tightening Stand **B—Torque Wrench**



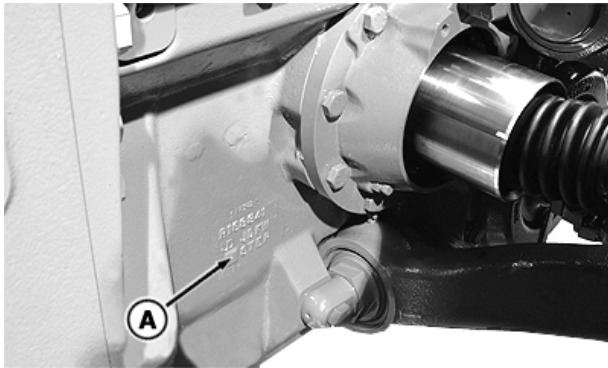
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Wheel Tightening Stand

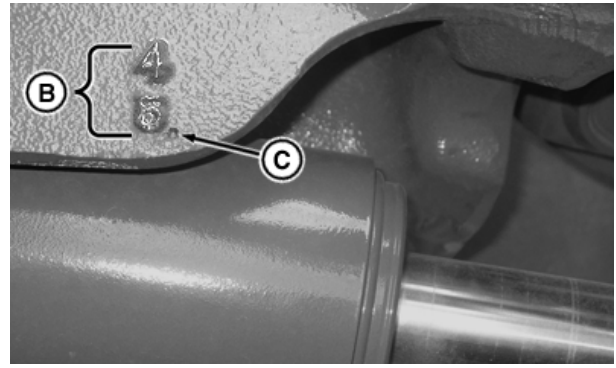
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OURX935,0000A3D -19-11AUG09-1/1

Tire Combinations



Step Identification (Independent Link Suspension)



Step Identification (1500 MFWD Axle)

A—Marking Location,
Independent Link Suspension

B—Marking Location, 1500
MFWD Axle

C—Divot

IMPORTANT: Avoid excessive drive train wear. Do not mix worn and new tires, bias and radial, or tires of different diameters. Do not use R2 tires in combination with R1.

If tire sizes are not correctly matched on AutoPowr equipped tractors, the speed sensor may indicate the front tires are traveling at a higher speed or give an erratic reading while MFWD is disengage resulting in higher travel speeds.

With the tire industry converting to metric designations, there are many new terms which can be confusing. To simplify things, tires are placed into groups by their Rolling Circumference Index (RCI). Rolling circumference is the distance a tire travels in one revolution. Tires within a group, regardless of rim size, are the same or nearly the same height. Knowing and understanding RCI and group sizes makes choosing front and rear tire combinations easier.

RCI is important for proper MFWD and Independent Link Suspension tractor setup. With both types of front axles, front and rear tires do the work. Since front tires are smaller than rear tires, front tires have to rotate faster to cover the same distance as the rear. Therefore it is important to select the correct size to optimize efficiency and ensure longer tire life.

Tractors equipped with 1300 axle MFWD always have front tires that are five group sizes smaller than the rear tire group. Tractors equipped with Independent Link

Suspension have a "4" or "5" marking (A) stamped on the right side of front differential housing. Tractors equipped with 1500 MFWD axle, have a "4" and a "5" marking (B) stamped on the right-hand side of the front axle above the steering cylinder. A divot (C) is stamped beside the appropriate number for that tractor. This marking identifies axle gear ratio and the difference in tire group size required.

If tire sizes are not correctly matched on AutoPowr equipped tractors, the speed sensor may indicate the front tires are traveling at higher speed or give an erratic reading while MFWD is disengage resulting in higher travel speeds.

The front tire must be from a group that is four or five group sizes smaller than the rear tire group. For example, if the rear tires are group 47, and the front differential is stamped with "5", then the front tires must be group 42. The rim size is of no consequence. Different rim-size tires such as 18.4R46 and 20.8R42 have the same rolling circumference, which is 47. Tire sizes for 8030 Series Tractors are found in the table on the following page.

MFWD front tire size combinations must be matched with the rear tires. It is not recommended tire combinations be changed without consulting your dealer. Mismatched tire sizes effect electronic transmission control, which may vary tractor ground speed. Mis-matched tires may also increase wear on tires and drive train components.

If you have any questions or need assistance in choosing the correct combination, see your John Deere dealer.

OURX935,0000619 -19-08JAN08-1/1

Tire Combination Tables

Rear Tire Group Sizes

	Minimum Recommended Row Width								
	508 mm (20 in.)	558.8 mm (22 in.)	660.4 mm (26 in.)	762 mm (30 in.)	812.8 mm (32 in.)	1016+ mm (40+ in.)			
Tire Section Width									
Group Size	320 mm (12.4 in.)	380 mm (14.9 in.)	420 mm (16.9 in.)	480 mm (18.4 in.)	520 mm (20.8 in.)	620 mm (24.5 in.)	710 mm (28 in.)	800 mm (30.5 in.)	900 mm (35.4 in.)
48					520/85R46	620/70R46 650/85R38	710/70R42	800/70R38	
47						650/65R42 650/75R38 620/70R42	710/70R38		

Front Tire Group Sizes

	Minimum Recommended Row Width						
	508 mm (20 in.)	558.8 mm (22 in.)	660.4 mm (26 in.)	762 mm (30 in.)	812.8 mm (32 in.)	1016+ mm (40+ in.)	
Tire Section Width							
Group Size	290 mm (11.2 in.)	320 mm (12.4 in.)	380 mm (14.9 in.)	420 mm (16.9 in.)	480 mm (18.4 in.)	520 mm (20.8 in.)	620 mm (23.1 in.)
44						540/75R34	620/75R30
43				420/85R34	480/70R34	540/65R34	600/70R30
42				16.9R30	480/70R30	540/65R30	600/65R28

OURX935,000069A -19-02APR08-1/1

Tire Inflation Pressure Guidelines

Check tire inflation pressure *at least* every two weeks, while tires are cool, using an accurate dial or stick-type gauge having 10 kPa (0.1 bar) (1 psi) graduations.

NOTE: Use a special air-water gauge and measure with valve stem at bottom if tires contain liquid ballast.

Correctly inflated radial tires will show a deflection of the sidewall. This is normal and will not harm the tire.

Inflation pressures less than 80 kPa (0.8 bar) (12 psi) should be monitored frequently because of the increased risk of low pressure air leaks.

NOTE: Bead slip can be experienced in high-traction conditions. Increasing the inflation pressure will help but will reduce traction.

Maximum tire pressure is specified on tire sidewall.

Determine correct tire pressure by weighing tractor using the following procedure:

Front axle weight with implement lowered

Rear axle weight with implement raised

Set tire inflation pressures according to weight measured. *Ballasting and tire inflation pressure may need to be adjusted when operating conditions change.*

NOTE: If tractor is equipped with front-mounted implement, raise implement when determining front axle weight and lower implement when

determining rear axle weight. If tractor is equipped with both a front and rear-mounted implement, raise both implements.

Managing Tire Inflation Pressures

IMPORTANT: Integral implements transfer significant weight to rear axle. Include this added weight when determining correct inflation pressures.

Tractors operating with a loader should increase front tire pressures 30 kPa (0.3 bar) (4 psi) above the values listed to compensate for weight transfer.

Tractors operating on steep side slopes or furrow plowing should increase rear tire pressures 30 kPa (0.3 bar) (4 psi) above the values listed for base pressures 80 kPa (0.8 bar) (12 psi) and above to compensate for lateral weight transfer. For base pressures below 80 kPa (0.8 bar) (12 psi), pressure should be increased by 30 percent.

Tractors with heavy hitch-mounted implements require increased rear tire inflation pressures to carry the increased weight during transport.

Reduce pressures to correct pressure for towed implement operation.

Tractors with heavy hitch-mounted implements that require additional front cast-weights to maintain steering stability also require increased front tire inflation pressure to carry the increased weight.

OURX935,0000693 -19-23NOV07-1/1

Recommended Pressures—Group 42

	16.9R30	480/70R30	480/70R30	540/65R30	600/65R28
	Single	Single	Single	Single	Single
Axle Load	144A8	141A8	152A8	143A8	147A8
Kg(lb)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)
1814(4000)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)
2041(4500)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)
2268(5000)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)
2495(5500)	60(0.6)(9)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)
2721(6000)	70(0.7)(10)	60(0.6)(9)	60(0.6)(9)	50(0.55)(8)	50(0.55)(8)
2948(6500)	80(0.8)(12)	70(0.7)(10)	70(0.7)(10)	50(0.55)(8)	50(0.55)(8)
3180(7000)	95(0.95)(14)	75(0.75)(11)	75(0.75)(11)	70(0.7)(10)	50(0.55)(8)
3400(7500)	105(1.05)(15)	90(0.9)(13)	90(0.9)(13)	70(0.7)(10)	60(0.6)(9)
3630(8000)	120(1.2)(17)	95(0.95)(14)	95(0.95)(14)	90(0.9)(13)	70(0.7)(10)
3860(8500)	130(1.3)(19)	110(1.1)(16)	110(1.1)(16)	90(0.9)(13)	75(0.75)(11)
4080(9000)	145(1.45)(21)	120(1.2)(17)	120(1.2)(17)	105(1.05)(15)	80(0.8)(12)
4310(9500)	160(1.6)(23)	125(1.25)(18)	125(1.25)(18)	110(1.1)(16)	90(0.9)(13)
4540(10000)	165(1.65)(24)	130(1.3)(19)	130(1.3)(19)	120(1.2)(17)	95(0.95)(14)
4760(10500)	185(1.85)(27)	145(1.45)(21)	145(1.45)(21)	125(1.25)(18)	110(1.1)(16)
4990(11000)	200(2.0)(29)	150(1.5)(22)	150(1.5)(22)	130(1.3)(19)	110(1.1)(16)
5220(11500)	215(2.15)(31)	—	165(1.65)(24)	145(1.45)(21)	120(1.2)(17)
5440(12000)	235(2.35)(35)	—	180(1.8)(26)	160(1.6)(23)	125(1.25)(18)
5670(12500)	—	—	190(1.9)(28)	—	140(1.4)(20)
5900(13000)	—	—	215(2.15)(31)	—	145(1.45)(21)
6120(13500)	—	—	240(2.4)(35)	—	160(1.6)(23)
6350(14000)	—	—	270(2.7)(39)	—	—
6580(14500)	—	—	275(2.75)(40)	—	—
6800(15000)	—	—	295(2.95)(43)	—	—
7030(15500)	—	—	320(3.2)(46)	—	—
7260(16000)	—	—	—	—	—
7480(16500)	—	—	—	—	—
7950(17000)	—	—	—	—	—
8170(17500)	—	—	—	—	—
8400(18000)	—	—	—	—	—

OURX935,0000694 -19-17APR08-1/1

Recommended Pressures—Group 43

	420/85R34	480/70R34	480/70R34	540/65R34	600/70R30	IF600/70R30
	Single	Single	Single	Single	Single	Single
Axle Load	147A8	146A8	155A8	152A8	152A8	159A8
Kg(lb)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)
1814(4000)	55(0.55)(8)	50(0.55)(8)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	85(0.85)(12)
2041(4500)	55(0.55)(8)	50(0.55)(8)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	85(0.85)(12)
2268(5000)	55(0.55)(8)	50(0.55)(8)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	85(0.85)(12)
2495(5500)	55(0.55)(8)	50(0.55)(8)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	85(0.85)(12)
2721(6000)	55(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)	50(0.55)(8)	85(0.85)(12)
2948(6500)	60(0.6)(9)	60(0.6)(9)	60(0.6)(9)	50(0.55)(8)	55(0.55)(8)	85(0.85)(12)
3180(7000)	75(0.75)(11)	70(0.7)(10)	70(0.7)(10)	60(0.6)(9)	55(0.55)(8)	85(0.85)(12)
3400(7500)	90(0.9)(13)	75(0.75)(11)	75(0.75)(11)	70(0.7)(10)	55(0.55)(8)	85(0.85)(12)
3630(8000)	95(0.95)(14)	90(0.9)(13)	90(0.9)(13)	75(0.75)(11)	55(0.55)(8)	85(0.85)(12)
3860(8500)	105(1.05)(15)	95(0.95)(14)	95(0.95)(14)	90(0.9)(13)	60(0.6)(9)	85(0.85)(12)
4080(9000)	110(1.1)(16)	110(1.1)(16)	110(1.1)(16)	90(0.9)(13)	70(0.7)(10)	85(0.85)(12)
4310(9500)	120(1.2)(17)	120(1.2)(17)	120(1.2)(17)	105(1.05)(15)	75(0.75)(11)	85(0.85)(12)
4540(10000)	130(1.3)(19)	125(1.25)(18)	125(1.25)(18)	110(1.1)(16)	80(0.8)(12)	85(0.85)(12)
4760(10500)	140(1.4)(20)	130(1.3)(19)	130(1.3)(19)	120(1.2)(17)	90(0.9)(13)	85(0.85)(12)
4990(11000)	145(1.45)(21)	140(1.4)(20)	140(1.4)(20)	120(1.2)(17)	95(0.95)(14)	85(0.85)(12)
5220(11500)	160(1.6)(23)	150(1.5)(22)	150(1.5)(22)	130(1.3)(19)	105(1.05)(15)	85(0.85)(12)
5440(12000)	160(1.6)(23)	160(1.6)(23)	160(1.6)(23)	140(1.4)(20)	110(1.1)(16)	85(0.85)(12)
5670(12500)	190(1.9)(28)	170(1.7)(25)	170(1.7)(25)	150(1.5)(22)	120(1.2)(17)	85(0.85)(12)
5900(13000)	215(2.15)(31)	190(1.9)(28)	190(1.9)(28)	165(1.65)(24)	120(1.2)(17)	90(0.9)(13)
6120(13500)	230(2.3)(34)	—	215(2.15)(31)	180(1.8)(26)	125(1.25)(18)	95(0.95)(14)
6350(14000)	—	—	225(2.25)(33)	190(1.9)(28)	130(1.3)(19)	100(1.0)(14)
6580(14500)	—	—	255(2.55)(37)	215(2.15)(31)	140(1.4)(20)	105(1.05)(15)
6800(15000)	—	—	270(2.7)(39)	225(2.25)(33)	145(1.45)(21)	110(1.1)(16)
7030(15500)	—	—	280(2.8)(41)	240(2.4)(35)	160(1.6)(23)	115(1.15)(17)
7260(16000)	—	—	300(3.0)(44)	—	—	120(1.2)(17)
7480(16500)	—	—	310(3.1)(45)	—	—	125(1.25)(18)
7950(17000)	—	—	320(3.2)(46)	—	—	—
8170(17500)	—	—	—	—	—	—
8400(18000)	—	—	—	—	—	—
8630(18500)	—	—	—	—	—	—
8640(19000)	—	—	—	—	—	—
8865(19500)	—	—	—	—	—	—
9090(20000)	—	—	—	—	—	—
9298(20500)	—	—	—	—	—	—
9530(21000)	—	—	—	—	—	—
9752(21500)	—	—	—	—	—	—
9990(22000)	—	—	—	—	—	—
10205(22500)	—	—	—	—	—	—
10440(23000)	—	—	—	—	—	—
10659(23500)	—	—	—	—	—	—
10900(24000)	—	—	—	—	—	—

OURX935.0000695 -19-17APR08-1/1

Recommended Pressures—Group 44

Axle Load Kg(lb)	540/75R34	620/75R30
	Single 157A8 kPa(bar)(psi)	Single 163A8 kPa(bar)(psi)
1814(4000)	55(0.55)(8)	55(0.55)(8)
2041(4500)	55(0.55)(8)	55(0.55)(8)
2268(5000)	55(0.55)(8)	55(0.55)(8)
2495(5500)	55(0.55)(8)	55(0.55)(8)
2721(6000)	55(0.55)(8)	55(0.55)(8)
2948(6500)	55(0.55)(8)	55(0.55)(8)
3180(7000)	55(0.55)(8)	55(0.55)(8)
3400(7500)	55(0.55)(8)	55(0.55)(8)
3630(8000)	60(0.6)(9)	55(0.55)(8)
3860(8500)	70(0.7)(10)	55(0.55)(8)
4080(9000)	75(0.75)(11)	55(0.55)(8)
4310(9500)	80(0.8)(12)	60(0.6)(9)
4540(10000)	90(0.9)(13)	70(0.7)(10)
4760(10500)	95(0.95)(14)	75(0.75)(11)
4990(11000)	105(1.05)(15)	75(0.75)(11)
5220(11500)	110(1.1)(16)	80(0.8)(12)
5440(12000)	110(1.1)(16)	90(0.9)(13)
5670(12500)	120(1.2)(17)	95(0.95)(14)
5900(13000)	125(1.25)(18)	105(1.05)(15)
6120(13500)	130(1.3)(19)	110(1.1)(16)
6350(14000)	145(1.45)(21)	110(1.1)(16)
6580(14500)	145(1.45)(21)	120(1.2)(17)
6800(15000)	150(1.5)(22)	125(1.25)(18)
7030(15500)	160(1.6)(23)	130(1.3)(19)
7260(16000)	180(1.8)(26)	140(1.4)(20)
7480(16500)	190(1.9)(28)	140(1.4)(20)
7950(17000)	200(2.)(29)	145(1.45)(21)
8170(17500)	220(2.2)(32)	150(1.5)(22)
8400(18000)	230(2.3)(34)	160(1.6)(23)
8630(18500)	—	165(1.65)(24)
8640(19000)	—	180(1.8)(26)
8865(19500)	—	190(1.9)(28)
9090(20000)	—	210(2.1)(30)
9298(20500)	—	215(2.15)(31)
9530(21000)	—	220(2.2)(32)
9752(21500)	—	240(2.4)(35)
9990(22000)	—	—
10205(22500)	—	—
10440(23000)	—	—
10659(23500)	—	—
10900(24000)	—	—

OURX935,0000696 -19-15AUG08-1/1

MFWD and Independent Link Suspension Front Wheel Bolts Tightening

CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel bolts are critical and require repeated torquing.

NOTE: Both inner and outer bolt patterns of disk have one **tight fit** hole and one **slot fit** hole 180° from each other, for improved wheel centering.

Wheel Disk to Rim

Install bolt in **tight fit** hole (A) and hand tighten bolt.

Install bolt in **slot fit** (B) and hand tighten bolt.

Install and hand tighten remaining wheel disk-to-rim bolts.

Using a star shaped pattern, torque disk to rim bolts as needed to maintain torque.

Specification

Disk To Rim
Bolts—Torque..... 310 N·m (230 lb-ft)

Drive tractor 100 meters (110 yd) and retighten bolts.

Tighten again at **3 HOURS** and **10 HOURS**.

Wheel Disk to Hub

Install cap screw in **tight fit** hole (C) and hand tighten cap screw.

Install cap screw in **slot fit** hole (D) and hand tighten cap screw.

Install and hand tighten remaining wheel disk-to-hub cap screws.

Using a star shaped pattern, torque disk-to-hub cap screws as needed to maintain torque.

Specification

Disk-To-Hub Cap
Screws—Torque..... 600 N·m (445 lb-ft)

Drive tractor 100 meters (110 yd) and retighten cap screws.

Tighten again at **3 HOURS**, **10 HOURS**, and **DAILY** for the first week of operation.



RW26463 —UN—14AUG99



RW26464 —UN—25AUG99

A—Disk-to-Rim Tight Fit Hole
B—Disk-to-Rim Slot Fit Hole

C—Disk-to-Hub Tight Fit Hole
D—Disk-to-Hub Slot Fit Hole

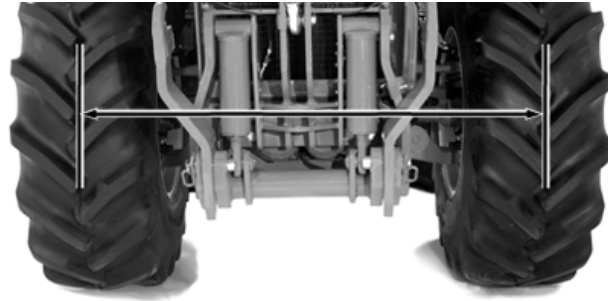
OURX935,0000679 -19-23NOV07-1/1

MFWD and Independent Link Suspension Toe-In Check

NOTE: For Independent Link Suspension tractors in addition to the front wheels being straight, Independent Link Suspension axle must be level.

1. Make sure tires are in the straight forward position by driving tractor in a straight line for at least 15.24 m (50 ft).
2. Verify that equal lengths of the steering cylinder are showing on either side of tractor.
3. Measure distance between center line of tires at the hub level in front of axle. Mark the point that is measured.
4. Drive forward until front tires are rotated 180°.

NOTE: When measuring rear of tire, make sure both front and rear measurements are from same point on tire. If front measurement of tire was from center line, then rear measurement of tire must be taken from tire center line. When performing rear measurement the transmission will be in



RXA0056533 —UN—29AUG01

the way. Make measurement from tire to loader bracket on each side of tractor, then add the width of transmission 512 mm (20.2 in.).

5. Repeat step 3 at rear of tire at same point.
6. Determine the difference between front and rear measurements. The difference may be in either direction (toe-in or toe-out), but should be less than 3 mm (1/8 in.).

OURX935,000067B -19-03JAN08-1/1

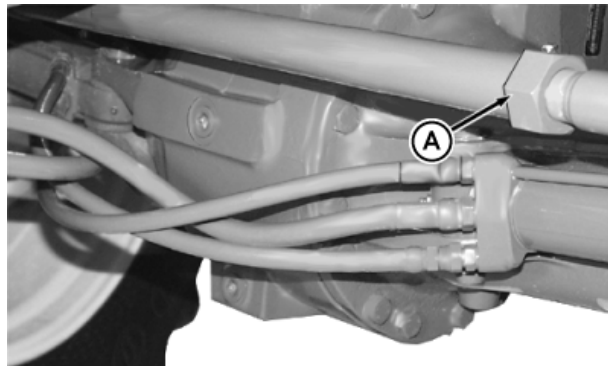
1300 MFWD Axle Toe-In Adjustment

1. Check to make sure axle is centered.
2. Loosen jam nuts (A) on both ends of the tie rod tube.
3. Rotate tube to lengthen or shorten tie rod, as needed to obtain toe-in or toe-out of less than 3 mm (1/8 in.). Each 1/8 turn equals approximately 4 mm (3/16 in.) change.
4. Tighten jam nuts (A) on both ends of tie rod tube.

Jam Nut—Specification

Nut—Torque..... 200 N·m (150 lb-ft)

A—Jam Nut



Loosen Jam Nuts

RW56646A —UN—22OCT99

OURX935,000050E -19-03JAN08-1/1

1500 MFWD Axle Toe-In Adjustment

NOTE: Timing mark (B) on adjustment screw (A) is factory set at zero toe-in.

1. Loosen cap screws (E and F) on the split end (H) of the clamp (G).

NOTE: Turn Adjustment screw a maximum of 90° to adjust the toe-in up to 2 mm (3/32 in.). Considering set screw may be turned either left or right, total toe-in adjustment is a total of 4 mm (3/16 in.).

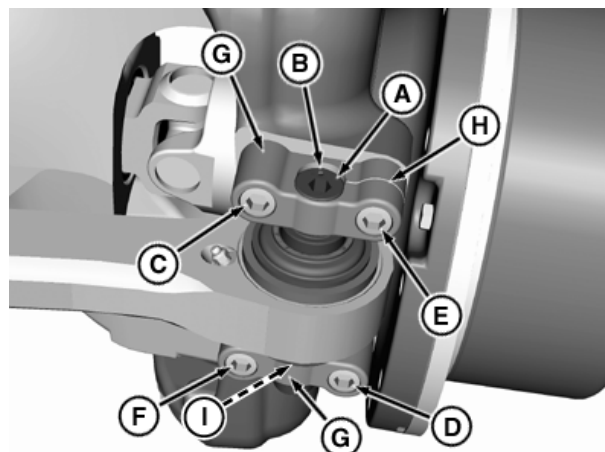
2. Adjust toe-in, then measure wheels as specified in MFWD And Independent Link Suspension Toe-In Check to verify toe-in is correct.
3. Tighten cap screws to torque.

Specification

Cap Screws—Torque..... 310 N·m (229 lb·ft)

NOTE: If all four cap screws are loosened, tie rod may drop down allowing lower boot (I) to rub on the lower clamp. To avoid premature wear on lower boot, tie rod must be centered between the upper and lower clamps. Cap screws on the solid end of the clamp must be tightened before cap screws on the split end of the clamp. Use a crisscross method to tighten cap screws. If all four screws are loosened:

- Tighten clamp solid end cap screws (C and D).



1500 MFWD Axle Toe-In Adjustment

- | | |
|-------------------------------------|-------------------------------------|
| A—Adjustment Screw | F—Lower Clamp Cap Screw (Split End) |
| B—Timing Mark | G—Clamp |
| C—Upper Clamp Cap Screw (Solid End) | H—Split End |
| D—Lower Clamp Cap Screw (Solid End) | I—Lower Boot |
| E—Upper Clamp Cap Screw (Split End) | |

- Tighten clamp split end cap screws (E and F).

OURX935,000050F -19-03JAN08-1/1

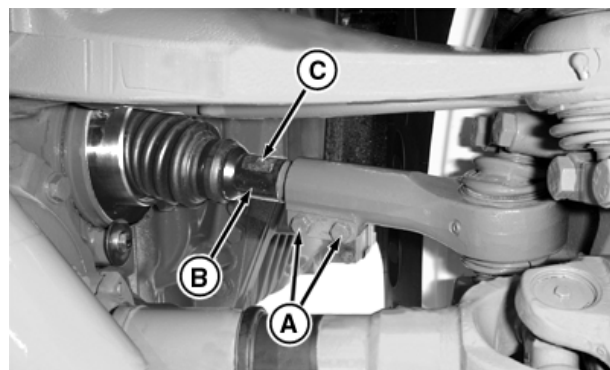
Independent Link Suspension Toe-In Adjustment

CAUTION: For tractors equipped with front hitch, avoid possible personal injury and equipment damage. DO NOT use the front hitch to lift the tractor. Use correct lifting equipment.

1. Make sure axle is centered.
2. Loosen clamp bolts (A) on both tie rods.
3. Rotate inboard pin (B) using the wrench flats (C). One full revolution of both pins changes toe-in approximately 20 mm.
4. Tighten clamp bolts (A) on both tie rods.

Clamp Bolt—Specification

Bolt—Torque..... 125 N·m (90 lb·ft)



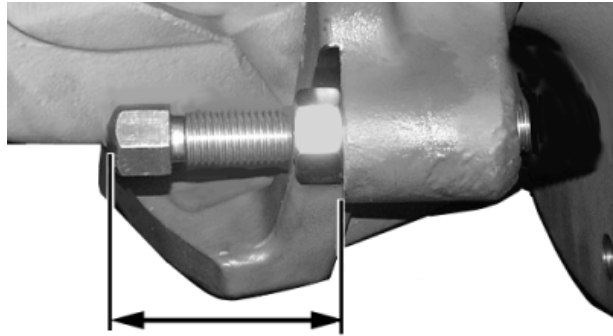
OURX935,0000759 -19-23NOV07-1/1

MFWD Steering Stop Settings

1. Adjust fenders before setting steering stop positions.
2. Select correct steering stop position for tire size and tread setting. See following chart.
3. Set steering stops to correct position as illustrated.
4. Tighten steering stop retaining bolts to 250 N·m (185 lb-ft).
5. Turn wheel fully to the right. Impact knuckle housing to steering stop five times. Repeat for left side.
6. Retighten steering stop retaining bolts to 250 N·m (185 lb-ft).

IMPORTANT: Settings allow 25 mm (1 in.) minimum clearance at maximum turn and full oscillation. Fenders may deflect against side frame during turn. Clearance and interference must be checked under full oscillation and full turn.

7. Verify clearance by turning steering wheel fully to the left and then to the right.



RW56647—UN—06OCT98

1300 MFWD STEERING STOP POSITIONS

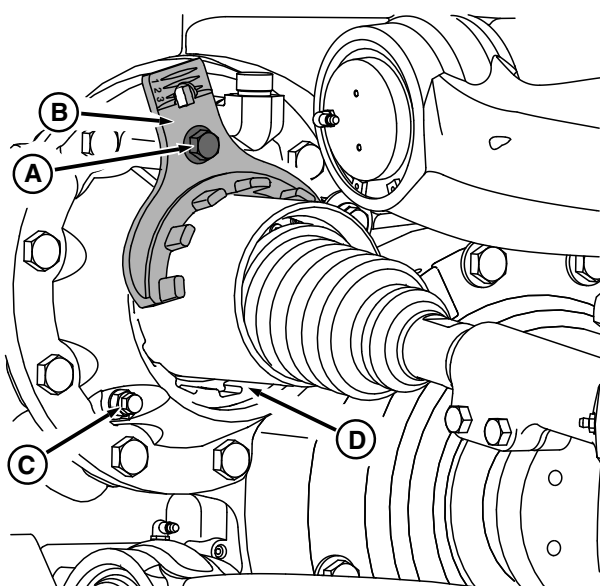
Position	Turn Angle	Bolt Length
0	52°	43.6 mm (1.72 in.)
1	47°	56.6 mm (2.23 in.)
2	42°	69.6 mm (2.74 in.)
3	37°	82.6 mm (3.25 in.)

1500 MFWD STEERING STOP POSITIONS

Position	Turn Angle	Bolt Length
0	48°	42.5 mm (1.67 in.)
1	44°	56.6 mm (2.22 in.)
2	39°	75.0 mm (2.95 in.)
3	35°	89.3 mm (3.51 in.)

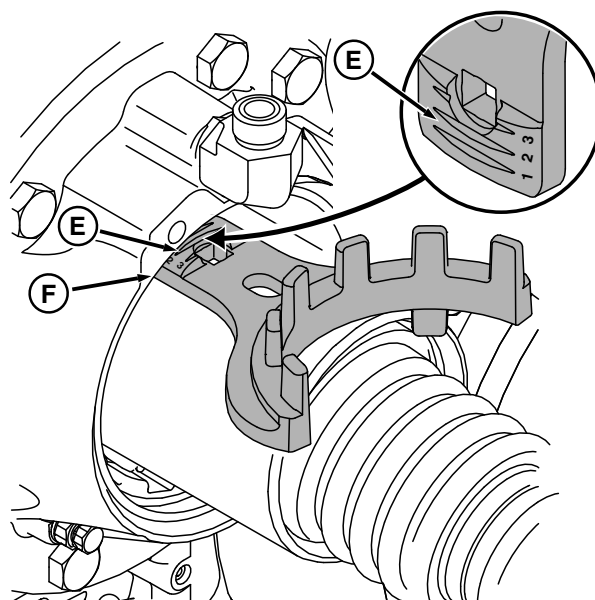
OURX935,0000530 -19-03JAN08-1/1

Independent Link Suspension Steering Stop Settings



A—Retaining Cap Screw
B—Wrench

C—Bleed Screw
D—Rod Guide



E—Steering Stop Position Marks
F—Outer Flange

CAUTION: For tractors equipped with front hitch, avoid possible personal injury and equipment damage. **DO NOT** use the front hitch to lift the tractor. Use correct lifting equipment.

1. Determine correct steering stop position for tire size and tread setting.
2. Remove cap screw (A) and wrench (B) on axle housing.
3. Loosen bleed screw (C) and jam nut.

NOTE: To check a steering stop position of zero, insert wrench as shown in right-hand illustration, the wrench will be flush with outer flange (F).

4. Check current rod guide (D) position using position marks (E) on wrench.
5. Turn rod guide (D) using wrench (B) to adjust distance to correct steering position.
6. Adjust guide minimally to reinstall wrench and retaining cap screw (A).

Specification

Retaining Cap
Screw—Torque..... 125 N·m (90 lb-ft)

7. Tighten bleed screw (C) and jam nut.

Bleed Screw and Jam Nut—Specification

Screw—Torque..... 40 N·m (30 lb-ft)
Jam Nut—Torque..... 15 N·m (12 lb-ft)

8. Repeat procedure on opposite side of axle housing.

IMPORTANT: Settings allow 25 mm (1 in.) minimum clearance at maximum turn and full oscillation. Fenders may deflect against side frame during turn. Clearance and interference must be checked under full oscillation and full turn.

9. Verify clearance by turning fully left then fully right.

OURX935,000067E -19-23NOV07-1/1

Eight Position Wheel Settings

CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel bolts are critical and require repeated torquing.

NOTE: A through H are used for all tires 540 mm (20.8 in.) or less.

NOTE: Tread settings are measured at bottom center line of tire.

Use diagram at the right to adjust rim and disk for desired tread setting.

Using a star shaped pattern, torque disk to rim bolts as needed to maintain torque.

Specification

Disk To Rim
Bolts—Torque..... 310 N·m (230 lb-ft)

Using a star shaped pattern, torque disk to hub nuts as needed to maintain torque.

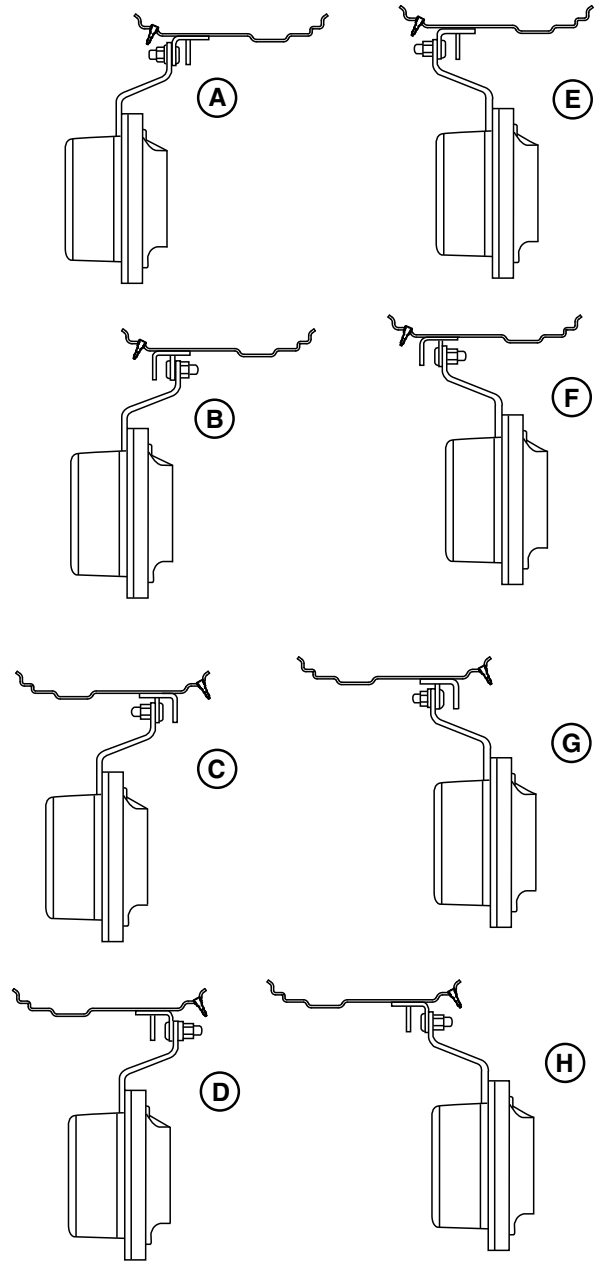
Specification

Disk To Hub Nuts
—Torque..... 600 N·m (450 lb-ft)

Retighten bolts after working 3 hours and again after 10 hours.

Tighten bolts daily for the first week of operation.

Adjust fenders and steering stops as required using the tables and diagrams on the following pages.



Rim Settings

RXA0062856—UN—01OCT02

Continued on next page

OURX935,0000AC8 -19-19AUG09-1/2

CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel bolts are critical and require repeated torquing.

NOTE: I through P are used for 600 and 620 mm tires.

NOTE: Tread settings are measured at bottom center line of tire.

Use diagram at the right to adjust rim and disk for desired tread setting.

Using a star shaped pattern, torque disk to rim bolts as needed to maintain torque.

Specification

Disk To Rim
Bolts—Torque..... 310 N·m (230 lb-ft)

Using a star shaped pattern, torque disk to hub nuts as needed to maintain torque.

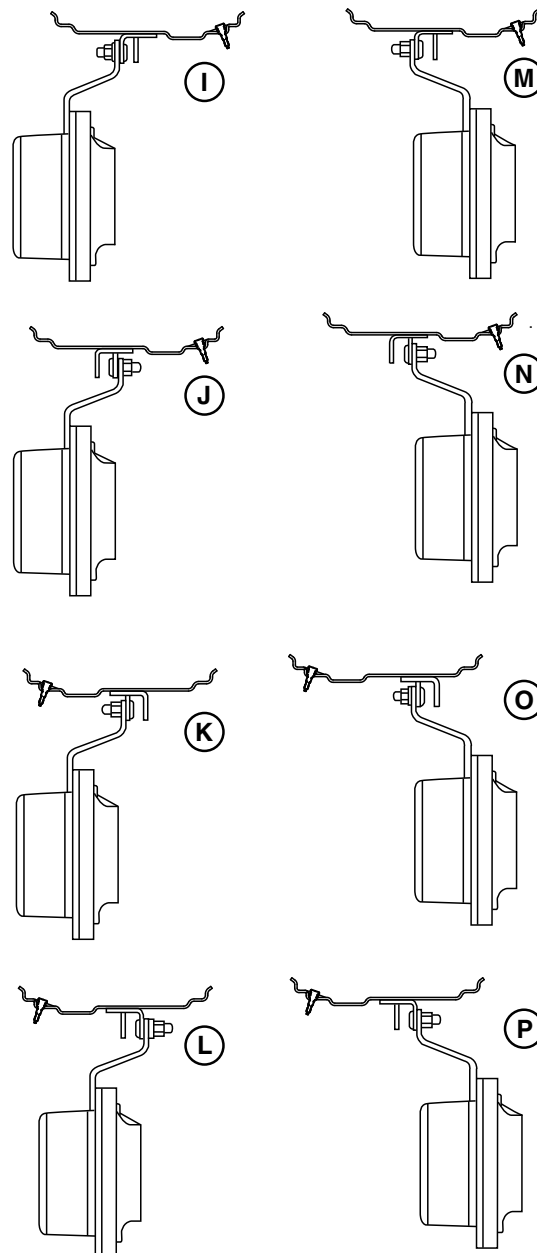
Specification

Disk To Hub Nuts
—Torque..... 600 N·m (450 lb-ft)

Retighten bolts after working 3 hours and again after 10 hours.

Tighten bolts daily for the first week of operation.

Adjust fenders and steering stops as required using the tables and diagrams on the following pages.

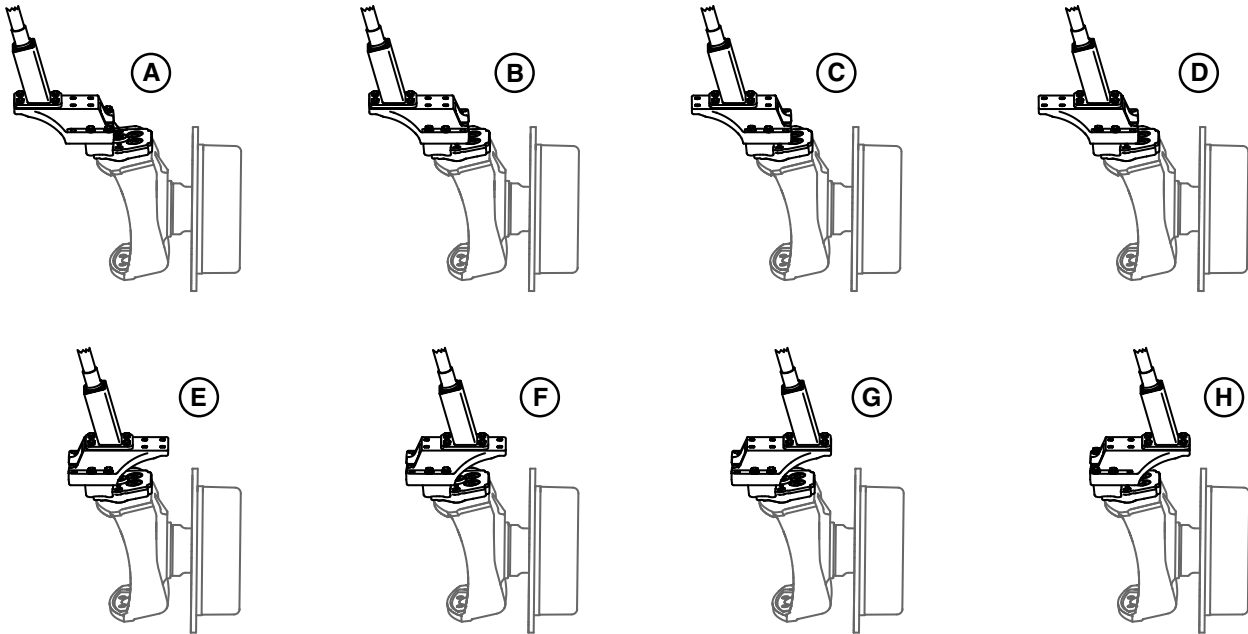


Wide Rim Settings

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OURX935,0000AC8 -19-19AUG09-2/2

1300 MFWD Axle Fender Settings

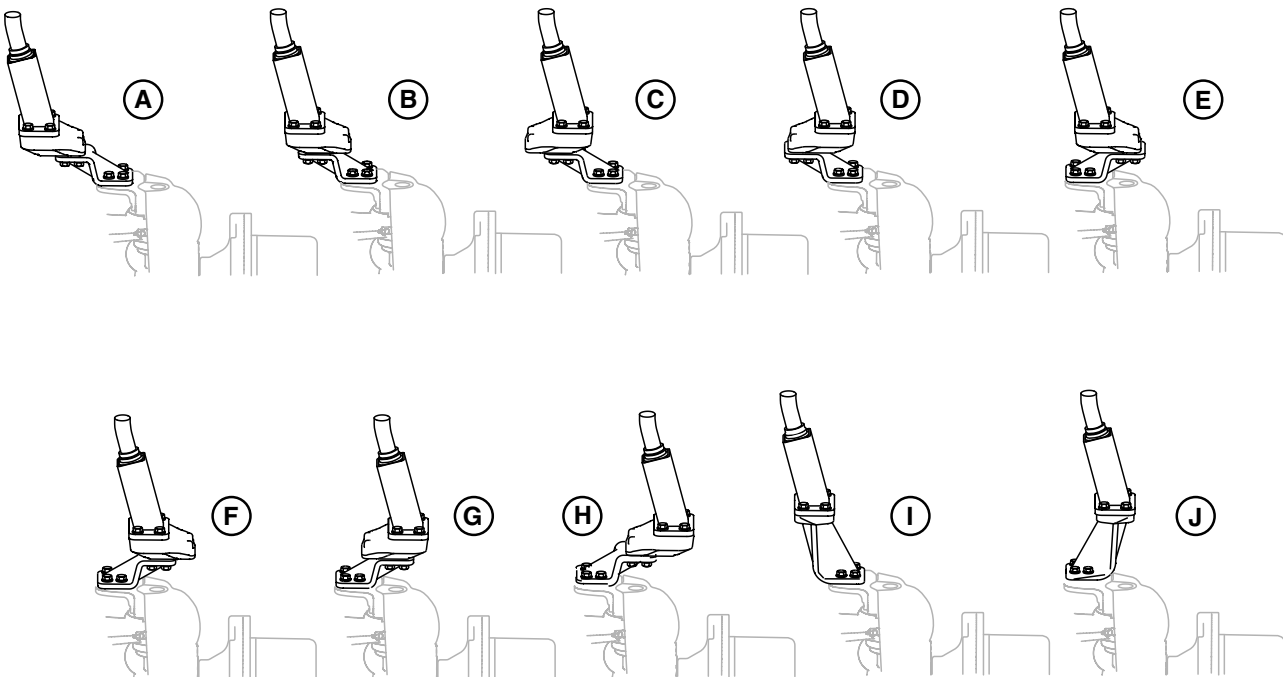


Fender Settings for MFWD

RXA0087302 —UN—09MAR06

OURX935,000037A -19-04AUG08-1/1

1500 MFWD and Independent Link Suspension Fender Settings

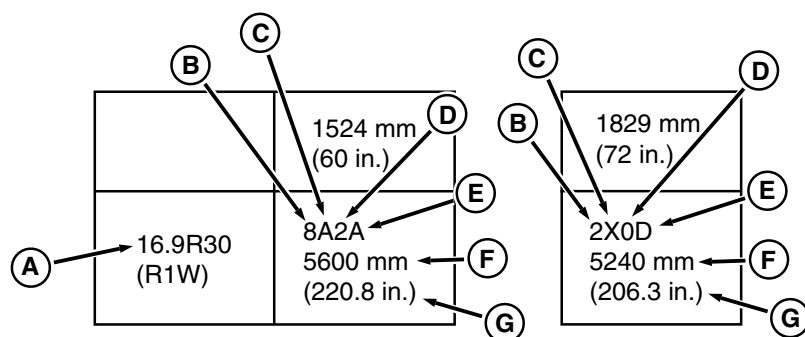


Fender Setting for 1500 MFWD and Independent Link Suspension

RXA0062365 —UN—04SEP02

OURX935,0000451 -19-05AUG08-1/1

MFWD and Independent Link Suspension **Front Tire, Fender and Steering Stop Settings** **Example**



Explanation of Tire Option Tables

A—Tire Size

B—Two or Eight Position Rims

C—Tread Setting

D—Steering Stop Setting

E—Fender Setting

F—Turning Radius in Millimeters

G—Turning Radius in Inches

NOTE: This is an explanation of the tables in the next several pages.

The first row across the top of the page list tread spacing in millimeters and inches.

Column one lists the tire size (A).

The first number (B) in column two identifies either two or eight position rim is used. The first letter (C) indicates which example to follow from the Eight Position

Wheel Settings. There are only two possibilities for the two position rim, either in or out. In this table "X" will represent the in setting and "Z" will represent the out setting. The next number (D) is the correct steering stop position. The last letter (E) is the fender setting, which is taken from either Fender Settings for MFWD or Fender Settings for Independent Link Suspension. Entries (F) and (G) indicates turning radius in millimeters and inches respectively. If the last character is a "w", wide fenders are used for this application.

OURX935,00004AA -19-18NOV10-1/1

RXA0003932—UN—08SEP05

1300 MFWD Front Tire, Fender and Steering Stop Settings

1300 MFWD Axle Front Tire, Fender and Steering Stop Settings							
Size	1577 mm (62 in.)	1679 mm (66 in.) ^a	1780 mm (70 in.)	1829 mm (72 in.)	1877 mm (73.9 in.)	1882 mm (74.1 in.)	1956 mm (77 in.)
16.9R30 R1W	8A2B 6750 mm (265.7 in.)	8B1C 6320 mm (248.8 in.)	8C0D 6080 mm (239.4 in.)	2IN0D 5270 mm (207.5 in.)	8E0E 5950 mm (234.3 in.)	8D0E 5860 mm (230.7 in.)	2Z0F 5310 mm (209.1 in.)
420/85R34	8A3A 6100 mm (240.2 in.)	8B2C 5990 mm (235.8 in.)	8C2C 6040 mm (237.8 in.)	N/A	8E1E 5720 mm (225.2 in.)	8D1E 5720 mm (225.2 in.)	N/A
480/70R30	8A2B 6750 mm (265.7 in.)	8B1C 6320 mm (248.8 in.)	8C0D 6080 mm (239.4 in.)	2X0D 5270 mm (207.5 in.)	8E0E 5950 mm (234.3 in.)	8D0E 5860 mm (230.7 in.)	2Z0F 5310 mm (209.1 in.)
480/70R34	8A3A 6100 mm (240.2 in.)	8B2C 5990 mm (235.8 in.)	8C1D 5670 mm (223.2 in.)	2X1D 5840 mm (229.9 in.)	8E0E 5350 mm (210.6 in.)	8D0E 5350 mm (210.6 in.)	2Z0F 5380 mm (211.8 in.)
540/65R30	N/A	8B1Bw 6450 mm (253.9 in.)	8C0Bw 6070 mm (239 in.)	2X0Cw 5270 mm (207.5 in.)	8E0Cw 5350 mm (210.6 in.)	8D0Cw 5350 mm (210.6 in.)	2Z0Dw 5310 mm (209.1 in.)
540/65R34	N/A	8B3Bw 6450 mm (253.9 in.)	8C1Bw 6040 mm (237.8 in.)	2X1Cw 5720 mm (225.2 in.)	8E0Cw 5720 mm (225.2 in.)	8D0Cw 5720 mm (225.2 in.)	2Z0Dw 5740 mm (226 in.)
600/65R28	N/A	N/A	8K1Bw 6070 mm (239 in.)	2X0Cw 5720 mm (225.2 in.)	N/A	8L0Cw 5720 mm (225.2 in.)	2Z0Dw 5740 mm (226 in.)
600/70R30	N/A	N/A	8K2Bw 6500 mm (255.9 in.)	2X2Cw 6100 mm (240.2 in.)	N/A	8L1Cw 6090 mm (239.8 in.)	2Z1Dw 5740 mm (226 in.)

^aTo achieve a 1676 mm (66 in.) row spacing setting, use 1625 mm (64 in.) row spacing and order one 25.4 mm (1 in.) spacer set per side through your John Deere dealer.

1300 MFWD Axle Front Tire, Fender and Steering Stop Settings							
Size	1979 mm (78 in.)	2080 mm (82 in.)	2182 mm (86 in.)				
16.9R30 R1W	8F0F 6000 mm (236.2 in.)	8G0G 6050 mm (238.2 in.)	8H0H 6110 mm (240.6 in.)				
420/85R34	8F1F 5770 mm (227.2 in.)	8G0G 5460 mm (215 in.)	8H0H 5510 mm (216.9 in.)				
480/70R30	8F0F 6000 mm (236.2 in.)	8G0G 6050 mm (238.2 in.)	8H0H 6110 mm (240.6 in.)				
480/70R34	8F0F 5410 mm (213 in.)	8G0G 5460 mm (215 in.)	8H0H 5510 mm (216.9 in.)				
540/65R30	8F0Dw 5410 mm (213 in.)	8G0Ew 5460 mm (215 in.)	8H0Fw 5510 mm (216.9 in.)				
540/65R34	8F0Dw 5410 mm (213 in.)	8G0Ew 5460 mm (215 in.)	8H0Fw 5510 mm (216.9 in.)				
600/65R28	8N0Dw 5410 mm (213 in.)	8O0Ew 5460 mm (215 in.)	8P0Fw 5510 mm (216.9 in.)				
600/70R30	8N1Dw 5770 mm (227.2 in.)	8O0Ew 5820 mm (229.1 in.)	8P0Fw 5870 mm (231.1 in.)				
To achieve a 1676 mm (66 in.) row spacing setting, use 1625 mm (64 in.) row spacing and order one 25.4 mm (1 in.) spacer set per side through your John Deere dealer.							

OURX935.00004AB -19-25AUG08-1/1

1500 MFWD Front Tire, Fender and Steering Stop Settings

1500 MFWD Axle Front Tire, Fender and Steering Stop Settings							
Size	1575 mm (62 in.)	1676 mm (66 in.) ^a	1780 mm (70 in.)	1829 mm (72 in.)	1877 mm (73.9 in.)	1882 mm (74.1 in.)	1956 mm (77 in.)
420/85R34	N/A	8B3C 5990 mm (235.8 in.)	8C2D 5670 mm (223.2 in.)	N/A	8E1E 5720 mm (225.2 in.)	8D1E 5720 mm (225.2 in.)	N/A
480/70R34	N/A	8B3C 6450 mm (253.9 in.)	8C2D 5670 mm (223.2 in.)	2X1D 5670 mm (223.2 in.)	8E1E 5350 mm (210.6 in.)	8D1E 5350 mm (210.6 in.)	2Z0F* 5400 mm (212.6 in.)
540/65R34	N/A	8B3Bw 6450 mm (253.9 in.)	8C2Bw 6040 mm (237.8 in.)	2X2Cw 6060 mm (238.6 in.)	8E1Cw 5720 mm (225.2 in.)	8D1Cw 5720 mm (225.2 in.)	2Z0Dw* 5400 mm (212.6 in.)
540/75R34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
600/70R30	N/A	N/A	N/A	2X3Cw 6520 mm (256.7 in.)	N/A	8M3Cw 6090 mm (239.8 in.)	2Z2Dw* 6120 mm (240.9 in.)
620/75R30	N/A	N/A	N/A	N/A	N/A	N/A	N/A

^aTo achieve a 1676 mm (66 in.) row spacing setting, use 1625 mm (64 in.) row spacing and order one 25.4 mm (1 in.) spacer set per side through your John Deere dealer.

1500 MFWD Axle Front Tire, Fender and Steering Stop Settings							
Size	1979 mm (78 in.)	2080 mm (82 in.)	2182 mm (86 in.)				
420/85R34	8F1F* 5770 mm (227.2 in.)	8G1G * 5460 mm (215 in.)	8H1H * 5510 mm (216.9 in.)				
480/70R34	8F0F* 5410 mm (213 in.)	8G0G* 5460 mm (215 in.)	8H0H * 5510 mm (216.9 in.)				
540/65R34	8F0Dw* 5410 mm (213 in.)	8G0Ew* 5460 mm (215 in.)	8H0Fw * 5510 mm (216.9 in.)				
540/75R34	N/A	8G3Ew* 6670 mm (262.6 in.)	8H2Fw * 6260 mm (246.5 in.)				
600/70R30	8N1Dw* 5770 mm (227.2 in.)	8O1Ew* 5820 mm (229.1 in.)	8P1Fw * 5870 mm (231.1 in.)				
620/75R30	N/A	N/A	8P3Fw * 6700 mm (263.8 in.)				
To achieve a 1676 mm (66 in.) row spacing setting, use 1625 mm (64 in.) row spacing and order one 25.4 mm (1 in.) spacer set per side through your John Deere dealer. * Tool Box must be removed from factory installed location.							

OURX935,00004A9 -19-25AUG08-1/1

Independent Link Suspension Front Tire, Fender and Steering Stop Settings

Independent Link Suspension Front Tire, Fender and Steering Stop Settings							
Size	1575 mm (62 in.)	1676 mm (66 in.) ^a	1780 mm (70 in.)	1829 mm (72 in.)	1877 mm (73.9 in.)	1882 mm (74.1 in.)	1956 mm (77 in.)
16.9R30 R1W	8A3B 6310 mm (248.4 in.)	8B1C 5700 mm (224.4 in.)	8C0D 5400 mm (212.6 in.)	N/A	8E0E 5400 mm (212.6 in.)	8D0E 5400 mm (212.6 in.)	N/A
420/85R34	8A3B 6310 mm (248.4 in.)	8B2C 5990 mm (235.8 in.)	8C1D 5670 mm (223.2 in.)	N/A	8E1E 5720 mm (225.2 in.)	8D1E 5720 mm (225.2 in.)	N/A
480/70R30	8A3B 6310 mm (248.4 in.)	8B2C 6000 mm (236.2 in.)	8C1D 5670 mm (223.2 in.)	N/A	8E0E 5400 mm (212.6 in.)	8D0E 5400 mm (212.6 in.)	N/A
480/70R34	N/A	8B3C 6450 mm (253.9 in.)	8C1D 5670 mm (223.2 in.)	2X1D 5670 mm (223.2 in.)	8E1E 5350 mm (210.6 in.)	8D1E 5350 mm (210.6 in.)	2Z0F 5400 mm (212.6 in.)
540/65R30	N/A	8B2Bw 6000 mm (236.2 in.)	8C1Bw 5670 mm (223.2 in.)	2X0Cw 5270 mm (207.5 in.)	8E0Cw 5400 mm (212.6 in.)	8D0Cw 5400 mm (212.6 in.)	2Z0Dw 5400 mm (212.6 in.)
540/65R34	N/A	8B3Bw 6450 mm (253.9 in.)	8C2Bw 6040 mm (237.8 in.)	2X1Cw 6060 mm (238.6 in.)	8E0Cw 5720 mm (225.2 in.)	8D0Cw 5720 mm (225.2 in.)	8Z0Dw 5400 mm (212.6 in.)
540/75R34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
600/65R28	N/A	N/A	8K2Bw 6040 mm (237.8 in.)	N/A	N/A	8L1Cw 5720 mm (225.2 in.)	N/A
600/70R30	N/A	N/A	8K3Bw 6500 mm (255.9 in.)	2X2Cw 6520 mm (256.7 in.)	N/A	8L2Cw 6090 mm (239.8 in.)	2Z1Dw 6120 mm (240.9 in.)
620/75R30	N/A	N/A	N/A	N/A	N/A	N/A	N/A

^aTo achieve a 1676 mm (66 in.) row spacing setting, use 1625 mm (64 in.) row spacing and order one 25.4 mm (1 in.) spacer set per side through your John Deere dealer.

Independent Link Suspension Front Tire, Fender and Steering Stop Settings							
Size	1979 mm (78 in.)	2080 mm (82 in.)	2182 mm (86 in.)				
16.9R30 R1W	8F0F 5400 mm (212.6 in.)	8G0G 5400 mm (212.6 in.)	8H0H 5400 mm (212.6 in.)				
420/85R34	8F1F 5770 mm (227.2 in.)	8G1G * 5460 mm (215 in.)	8H1H * 5510 mm (216.9 in.)				
480/70R30	8F0F 5400 mm (212.6 in.)	8G0G 5400 mm (212.6 in.)	8H0H 5400 mm (212.6 in.)				
480/70R34	8F0F 5410 mm (213 in.)	8G0G 5460 mm (215 in.)	8H0H * 5510 mm (216.9 in.)				
540/65R30	8F0Dw 5400 mm (212.6 in.)	8G0Ew 5400 mm (212.6 in.)	8H0Fw 5400 mm (212.6 in.)				
540/65R34	8F0Dw 5410 mm (213 in.)	8G0Ew 5460 mm (215 in.)	8H0Fw * 5510 mm (216.9 in.)				
540/75R34	8F3Dw 6670 mm (262.6 in.)	8G3Ew* 6670 mm (262.6 in.)	8H2Fw * 6260 mm (246.5 in.)				
600/65R28	8N0Dw 5770 mm (227.2 in.)	8O0Ew 5460 mm (215 in.)	8P0Fw * 5510 mm (216.9 in.)				
600/70R30	8N1Dw 5770 mm (227.2 in.)	8O1Ew 5820 mm (229.1 in.)	8P1Fw * 5870 mm (231.1 in.)				

Continued on next page

OURX935,00004A8 -19-25AUG08-1/2

Independent Link Suspension Front Tire, Fender and Steering Stop Settings

Size	1979 mm (78 in.)	2080 mm (82 in.)	2182 mm (86 in.)				
16.9R30 R1W	8F0F 5400 mm (212.6 in.)	8G0G 5400 mm (212.6 in.)	8H0H 5400 mm (212.6 in.)				
620/75R30	N/A	8O3Ew 6670 mm (262.6 in.)	8P2Fw * 6700 mm (263.8 in.)				

To achieve a 1676 mm (66 in.) row spacing setting, use 1625 mm (64 in.) row spacing and order one 25.4 mm (1 in.) spacer set per side through your John Deere dealer.
 * Tool Box must be removed from factory installed location.

OURX935,00004A8 -19-25AUG08-2/2

Independent Link Suspension Bolt On Dual Front Tire, Fender and Steering Stop Settings

Maximum single wheel tread spacing is 2235 mm (88 in.).

Maximum dual outer setting is 3352 mm (132 in.).

Maximum static front axle weight, without liquid ballast or duals, is 10800 kg (23800 lbs).

NOTE: Listed below are instructions for using the Independent Link Suspension Dual Front Tire, Fender and Steering Stop Settings Table.

The first row under heading gives the row spacing in millimeters and inches.

Column one lists the tire size.

The first number in column identifies either an eight or sixteen position rim is used. The first letter indicates which example to follow, either Eight or Sixteen Position Wheel Settings. The next number is the correct steering stop position. The last letter is the fender setting, which is taken from Fender Settings for Independent Link Suspension.

	Row Spacing					
	508 mm (20 in.)		558.8 mm (22 in.)		762 mm (30 in.)	
Tire Size	Inner Tire 2032 mm (80 in.)	Dual Tire 3048 mm (120 in.)	Inner Tire 2235.2 mm (88 in.)	Dual Tire 3352.8 mm (132 in.)	Inner Tire 1524 mm (60 in.) ^a	Dual Tire 3048 mm (120 in.)
420/85R34	N/A	N/A	N/A	N/A	N/A	N/A
480/70R34	N/A	N/A	N/A	N/A	N/A	N/A

^aTo achieve a 1676 mm (66 in.) row spacing setting, use 1625mm (64 in.) row spacing and order one 25.4 mm (1") spacer set per side through your John Deere dealer.

* Tool box must be removed to avoid hitting tires.

	Row Spacing					
	812 mm (32 in.)		914.4 mm (36 in.) Front duals for flotation. Not for row cultivation.		1016 mm (40 in.) Front duals for flotation. Not for row cultivation.	
Tire Size	Inner Tire 2032 mm (64 in.)	Dual Tire 3251.2 mm (128 in.)	Inner Tire 1828.8 mm (72 in.)	Dual Tire 3352.8 mm (132 in.) Tire not in row.	Inner Tire 2032 mm (80 in.)	Dual Tire 3352.8 mm (132 in.) Tire not in row.
420/85R34	8B3B	8G3B	8D2D	8H2D	8F0F	8H0F *
480/70R34	8B3A	8G3A	8D3C	8H3C	8F3F	8H3F

* Tool box must be removed to avoid hitting tires.

OURX935,000023F -19-15APR08-1/1

1500 MFWD Bolt On Dual Front Tire, Fender and Steering Stop Settings

Maximum single wheel tread spacing is 2235 mm (88 in.).

Maximum dual outer setting is 3657 mm (144 in.).

Maximum static front axle weight, without liquid ballast or duals, is 10800 kg (23800 lbs).

Some wheel settings may exceed 2794 mm (110 in.) mean tread spacing. These settings are allowed, but at reduced axle loads as shown in the following table.

NOTE: To determine the mean tread spacing, add tread spacing for inner tire (center to center) and tread spacing for outer tire (center to center). Divide by two.

NOTE: Listed below are instructions for using the 1500 MFWD Dual Front Tire, Fender and Steering Stop Settings Table.

The first row under heading gives the row spacing in millimeters and inches.

Column one lists the tire size.

The first number in column identifies either an eight or sixteen position rim is used. The first letter indicates which example to follow, either Eight or Sixteen Position Wheel Settings. The next number is the correct steering stop position. The last letter is the fender setting, which is taken from 1500 MFWD and Independent Link Suspension Fender Settings block in this OM.

Axle Load Table	
Mean Tread Spacing	Allowable Static Axle Weight
2794 mm (110 in.)	10800 kg (23800 lbs)
2845 mm (112 in.)	10390 kg (22900 lbs)
2895 mm (114 in.)	10020 kg (22090 lbs)
2946 mm (116 in.)	9670 kg (21320 lbs)

Tire Size	Row Spacing					
	508 mm (20 in.)		558.8 mm (22 in.)		762 mm (30 in.)	
	Inner Tire 2032 mm (80 in.)	Dual Tire 3048 mm (120 in.)	Inner Tire 2235.2 mm (88 in.)	Dual Tire 3352.8 mm (132 in.)	Inner Tire 1524 mm (60 in.) ^a	Dual Tire 3048 mm (120 in.)
Mean Tread	2540 mm (100 in.)		2794 mm (110 in.)		2286 mm (90 in.)	
420/85R34	8F0F	8B0F *	8H1H *	8E1H *	N/A	NA *
480/70R34	8F0F	8B0F *	8H1H *	8E1H *	N/A	NA *

^aTo achieve a 1676 mm (66 in.) row spacing setting, use 1625mm (64 in.) row spacing and order one 25.4 mm (1") spacer set per side through your John Deere dealer.

* Tool box must be removed to avoid hitting tires.

Tire Size	Row Spacing					
	812 mm (32 in.)		914.4 mm (36 in.)		1016 mm (40 in.) Front duals for flotation not for row cultivation.	
	Inner Tire 2032 mm (80 in.)	Dual Tire 3251.2 mm (128 in.)	Inner Tire 1828.8 mm (72 in.)	Dual Tire 3657 mm (144 in.)	Inner Tire 2032 mm (80 in.)	Dual Tire 3657 mm (144 in.) Tire not in row.
Mean Tread	2439 mm (96 in.)		2743 mm (108 in.)		2845 mm (112 in.)	
420/85R34	8B3B	8D3B *	8D3D	8H3D *	8F3F *	8H3F *
480/70R34	8B3B	8D3B *	8D3D	8H3D *	8F3F *	8H3F *

* Tool box must be removed to avoid hitting tires.

OURX935,0000240 -19-16APR08-1/1

Independent Link Suspension or 1500 MFWD Clamp On Dual Front Tire, Fender and Steering Stop Settings

Tractors equipped with Independent Link Suspension (ILS) or 1500 MFWD axle are approved for limited use of clamp on front dual wheels. Clamp on duals are limited to two tire sizes, 540/65R34 and 600/70R30. Tread spacings available are in the table below. When using clamp on duals, all tread positions must use steering stop position 3. Tool Box must be moved from factory installed location to alternate right-hand location. See your John Deere dealer for details.

IMPORTANT: Any variance from tread settings listed below may damage fuel tank and/or steps.

NOTE: To determine the mean setting, add tread spacing for inner tire (center to center) and tread spacing for outer tire (center to center). Divide by two.

The mean tread setting cannot exceed 2794 mm (110 in.).

Maximum ILS or 1500 MFWD static front axle weight, without liquid ballast or duals, is 10795 kg (23800 lb).

NOTE: Listed below are instruction to use the Inner Wheel Tread Spacing Table.

IMPORTANT: Do not drive tractors equipped with duals faster than 40 km/h (25 mph).

The first row under the heading identifies tread spacing in millimeters and inches.

Column one provides tire size.

The first number in column identifies an eight position rim is used. The first letter indicates which example to follow from the Eight Position Wheel Settings. The next number is the correct steering stop position. The last capital letter is the fender setting, taken from 1500 MFWD and Independent Link Suspension Fender Settings block in this OM. If there is a "w" in the fifth position, it indicates the setting is for wide fenders.

Tire Size	Inner Wheel Tread Spacing			
	1780 mm (70 in.)	1882 mm (74 in.)	1979 mm (78 in.)	2080 mm (82 in.)
Independent Link Suspension Axle				
540/65R34	8C3B	8D3C	8F3D	8G3E
600/70R30	N/A	8L3C	8N3D	8O3E
1500 MFWD Axle				
540/65R34	8C3Bw	8D3Cw	8F3Dw	8G3Ew
600/70R30	N/A	8M3Cw	8N3Dw	8O3Ew

OURX935,000023E -19-21APR08-1/1

Clamp-On Dual Usage

IMPORTANT: Clamp-on duals should not be used for heavy traction work. They are allowed only for use when the following conditions are met including recommended tire sizes and manufacturers.

IMPORTANT: Do not drive tractors equipped with duals faster than 40 km/h (25 mph).

- Clamp-on dual wheels are used only in low draft or PTO applications.
- Maximum vehicle weight is limited to 16000 kg (35274 lb).
- Rear drive wheel is heavy duty cast center type.
- Current wheel sleeve cap screws and washers are replaced with cap screws and washers contained in kit AR219840 for cast drive wheel.

- Steel wheel-to-cast hub cap screws and washers are replaced with cap screws and washers contained in kit AR217153.
- Use rear wheel bolt tightening procedure (See Tightening Rear Wheel Bolts in this section).
- Inner single wheel tread setting does not exceed 1900 mm (75 in.).
- Outer dual wheel tread setting does not exceed 3400 mm (134 in.).
- Average tread width of dual combination does not exceed 2650 mm (104 in.).
- Outer tire must be of equal or smaller section width tire.
- Drive wheels and clamp-on dual tires should be inflated to the same pressure.

OURX935,00002A1 -19-23NOV07-1/1

Rear Wheels, Tires, and Treads

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

Tire Combination Tables

Rear Tire Group Sizes

	Minimum Recommended Row Width								
	508 mm (20 in.)	558.8 mm (22 in.)	660.4 mm (26 in.)	762 mm (30 in.)	812.8 mm (32 in.)	1016+ mm (40+ in.)			
Tire Section Width									
Group Size	320 mm (12.4 in.)	380 mm (14.9 in.)	420 mm (16.9 in.)	480 mm (18.4 in.)	520 mm (20.8 in.)	620 mm (24.5 in.)	710 mm (28 in.)	800 mm (30.5 in.)	900 mm (35.4 in.)
48					520/85R46	620/70R46 650/85R38	710/70R42	800/70R38	
47						650/65R42 650/75R38 620/70R42	710/70R38		

Front Tire Group Sizes

	Minimum Recommended Row Width						
	508 mm (20 in.)	558.8 mm (22 in.)	660.4 mm (26 in.)	762 mm (30 in.)	812.8 mm (32 in.)	1016+ mm (40+ in.)	
Tire Section Width							
Group Size	290 mm (11.2 in.)	320 mm (12.4 in.)	380 mm (14.9 in.)	420 mm (16.9 in.)	480 mm (18.4 in.)	520 mm (20.8 in.)	620 mm (23.1 in.)
44						540/75R34	620/75R30
43				420/85R34	480/70R34	540/65R34	600/70R30
42				16.9R30	480/70R30	540/65R30	600/65R28

OURX935,0000688 -19-08DEC08-1/1

Recommended Pressures—Group 47

Axle Load Kg(lb)	18.4R46	20.8R42	480/80R46	620/70R42	620/70R42
	Dual	Dual	Dual	Single	Dual
	155A8 kPa(bar)(psi)	155A8 kPa(bar)(psi)	158A8 kPa(bar)(psi)	160A8 kPa(bar)(psi)	160A8 kPa(bar)(psi)
4540(10000)	40(0.4)(6)	40(0.4)(6)	40(0.4)(6)	55(0.55)(8)	40(0.4)(6)
4760(10500)	40(0.4)(6)	40(0.4)(6)	40(0.4)(6)	60(0.6)(9)	40(0.4)(6)
4990(11000)	40(0.4)(6)	40(0.4)(6)	40(0.4)(6)	70(0.7)(10)	40(0.4)(6)
5220(11500)	40(0.4)(6)	40(0.4)(6)	40(0.4)(6)	70(0.7)(10)	40(0.4)(6)
5440(12000)	50(0.5)(7)	40(0.4)(6)	40(0.4)(6)	75(0.75)(11)	40(0.4)(6)
5670(12500)	50(0.5)(7)	40(0.4)(6)	40(0.4)(6)	80(0.8)(12)	40(0.4)(6)
5900(13000)	55(0.55)(8)	40(0.4)(6)	50(0.5)(7)	90(0.9)(13)	40(0.4)(6)
6120(13500)	55(0.55)(8)	50(0.5)(7)	50(0.5)(7)	90(0.9)(13)	40(0.4)(6)
6350(14000)	60(0.6)(9)	50(0.5)(7)	55(0.55)(8)	100(1.0)(15)	40(0.4)(6)
6580(14500)	60(0.6)(9)	50(0.5)(7)	55(0.55)(8)	110(1.1)(16)	40(0.4)(6)
6800(15000)	70(0.7)(10)	55(0.55)(8)	60(0.6)(9)	110(1.1)(16)	40(0.4)(6)
7030(15500)	70(0.7)(10)	55(0.55)(8)	70(0.7)(10)	120(1.2)(17)	40(0.4)(6)
7260(16000)	75(0.75)(11)	60(0.6)(9)	70(0.7)(10)	120(1.2)(17)	40(0.4)(6)
7480(16500)	80(0.8)(12)	60(0.6)(9)	75(0.75)(11)	125(1.25)(18)	50(0.5)(7)
7720(17000)	80(0.8)(12)	70(0.7)(10)	75(0.75)(11)	130(1.3)(19)	50(0.5)(7)
7950(17500)	90(0.9)(13)	70(0.7)(10)	80(0.8)(12)	130(1.3)(19)	55(0.55)(8)
8170(18000)	90(0.9)(13)	75(0.75)(11)	90(0.9)(13)	140(1.4)(20)	55(0.55)(8)
8400(18500)	95(0.95)(14)	75(0.75)(11)	90(0.9)(13)	145(1.45)(21)	60(0.6)(9)
8630(19000)	105(1.05)(15)	80(0.8)(12)	95(0.95)(14)	150(1.5)(22)	70(0.7)(10)
8850(19500)	105(1.05)(15)	80(0.8)(12)	105(1.05)(15)	160(1.6)(23)	70(0.7)(10)
9080(20000)	110(1.1)(16)	90(0.9)(13)	105(1.05)(15)	—	70(0.7)(10)
9530(21000)	120(1.2)(17)	95(0.95)(14)	110(1.1)(16)	—	75(0.75)(11)
9990(22000)	130(1.3)(19)	105(1.05)(15)	120(1.2)(17)	—	80(0.8)(12)
10440(23000)	140(1.4)(20)	110(1.1)(16)	125(1.25)(18)	—	90(0.9)(13)
10900(24000)	150(1.5)(22)	120(1.2)(17)	130(1.3)(19)	—	95(0.95)(14)
11350(25000)	160(1.6)(23)	125(1.25)(18)	140(1.4)(20)	—	105(1.05)(15)
11800(26000)	165(1.65)(24)	140(1.4)(20)	145(1.45)(21)	—	110(1.1)(16)
12260(27000)	180(1.8)(26)	145(1.45)(21)	145(1.45)(21)	—	120(1.2)(17)
12710(28000)	190(1.9)(28)	150(1.5)(22)	165(1.65)(24)	—	120(1.2)(17)
13170(29000)	200(2.0)(29)	160(1.6)(23)	180(1.8)(26)	—	125(1.25)(18)
13605(30000)	210(2.1)(30)	165(1.65)(24)	200(2.0)(29)	—	130(1.3)(19)
14060(31000)	—	—	215 (2.15)(31)	—	140(1.4)(20)
14510(32000)	—	—	220(2.2)(32)	—	140(1.4)(20)
14970(33000)	—	—	235(2.35)(35)	—	150(1.5)(22)
15420(34000)	—	—	—	—	160(1.6)(23)
15875(35000)	—	—	—	—	—
16330(36000)	—	—	—	—	—
16783(37000)	—	—	—	—	—
17236(38000)	—	—	—	—	—
17690(39000)	—	—	—	—	—
18143(40000)	—	—	—	—	—

OURX935,0000689 -19-08DEC08-1/1

Recommended Pressures—Group 47—Continued

Axle Load Kg(lb)	650/65R42 Single 158A8	650/65R42 Single 170A8	650/75R38 Single 169A8 or 169B	710/70R38 Single 166A8	710/70R38 Dual 166A8
	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)
4540(10000)	55(0.55)(8)	55(0.55)(8)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)
4760(10500)	60(0.6)(9)	60(0.6)(9)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)
4990(11000)	70(0.7)(10)	70(0.7)(10)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)
5220(11500)	70(0.7)(10)	70(0.7)(10)	60(0.6)(9)	55(0.55)(8)	40(0.4)(6)
5440(12000)	80(0.8)(12)	80(0.8)(12)	60(0.6)(9)	55(0.55)(8)	40(0.4)(6)
5670(12500)	90(0.9)(13)	90(0.9)(13)	70(0.7)(10)	60(0.6)(9)	40(0.4)(6)
5900(13000)	90(0.9)(13)	90(0.9)(13)	75(0.75)(11)	70(0.7)(10)	40(0.4)(6)
6120(13500)	95(0.95)(14)	95(0.95)(14)	80(0.8)(12)	70(0.7)(10)	40(0.4)(6)
6350(14000)	100(1.0)(15)	100(1.0)(15)	90(0.9)(13)	75(0.75)(11)	40(0.4)(6)
6580(14500)	110(1.1)(16)	110(1.1)(16)	90(0.9)(13)	80(0.8)(12)	40(0.4)(6)
6800(15000)	110(1.1)(16)	110(1.1)(16)	95(0.95)(14)	90(0.9)(13)	40(0.4)(6)
7030(15500)	120(1.2)(17)	120(1.2)(17)	105(1.05)(15)	90(0.9)(13)	40(0.4)(6)
7260(16000)	120(1.2)(17)	120(1.2)(17)	110(1.1)(16)	90(0.9)(13)	40(0.4)(6)
7480(16500)	125(1.25)(18)	125(1.25)(18)	110(1.1)(16)	95(0.95)(14)	40(0.4)(6)
7720(17000)	130(1.3)(19)	130(1.3)(19)	120(1.2)(17)	105(1.05)(15)	40(0.4)(6)
7950(17500)	140(1.4)(20)	140(1.4)(20)	120(1.2)(17)	110(1.1)(16)	40(0.4)(6)
8170(18000)	150(1.5)(22)	150(1.5)(22)	125(1.25)(18)	110(1.1)(16)	40(0.4)(6)
8400(18500)	160(1.6)(23)	160(1.6)(23)	130(1.3)(19)	120(1.2)(17)	40(0.4)(6)
8630(19000)	—	165(1.65)(24)	130(1.3)(19)	120(1.2)(17)	50(0.5)(7)
8850(19500)	—	180(1.8)(26)	140(1.4)(20)	125(1.25)(18)	50(0.5)(7)
9080(20000)	—	185(1.85)(27)	145(1.45)(21)	125(1.25)(18)	50(0.5)(7)
9530(21000)	—	200(2.0)(29)	160(1.6)(23)	140(1.4)(20)	55(0.55)(8)
9990(22000)	—	225(2.25)(33)	172(1.7)(25)	145(1.45)(21)	60(0.6)(9)
10440(23000)	—	250(2.5)(36)	186(1.9)(27)	160(1.6)(23)	70(0.7)(10)
10900(24000)	—	270(2.7)(39)	199(2.0)(29)	—	70(0.7)(10)
11350(25000)	—	295(2.95)(43)	234(2.3)(34)	—	75(0.75)(11)
11800(26000)	—	310(3.1)(45)	—	—	80(0.8)(12)
12260(27000)	—	—	—	—	90(0.9)(13)
12710(28000)	—	—	—	—	90(0.9)(13)
13170(29000)	—	—	—	—	95(0.95)(14)
13605(30000)	—	—	—	—	105(1.05)(15)
14060(31000)	—	—	—	—	110(1.1)(16)
14510(32000)	—	—	—	—	110(1.1)(16)
14970(33000)	—	—	—	—	120(1.2)(17)
15420(34000)	—	—	—	—	120(1.2)(17)
15875(35000)	—	—	—	—	125(1.25)(18)
16330(36000)	—	—	—	—	130(1.3)(19)
16783(37000)	—	—	—	—	140(1.4)(20)
17236(38000)	—	—	—	—	145(1.45)(21)
17690(39000)	—	—	—	—	150(1.5)(22)
18143 (40000)	—	—	—	—	150(1.5)(22)

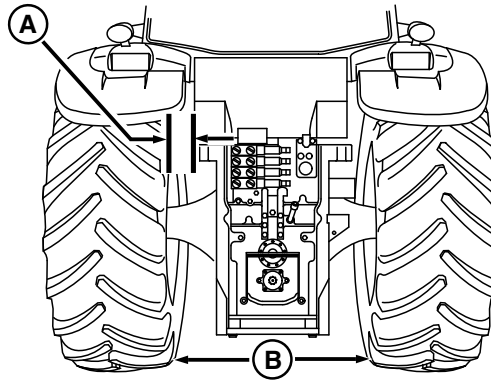
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Recommended Pressures—Group 48

	520/85R46	620/70R46	650/85R38	IF650/85R38	710/70R42	710/70R42	710/70R42	800/70R38
	Single	Single	Single	Single	Single	Single	Dual	Single
Axle Load	158A8	162A8	173A8	179A8 or 179B	168AB	173A8 or 173B	173A8 or 173B	173A8
Kg(lb)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)	kPa(bar)(psi)
4540(10000)	60(0.6)(9)	55(0.55)(8)	55(0.55)(8)	120(1.2)(17)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)	55(0.55)(8)
4760(10500)	70(0.7)(10)	55(0.55)(8)	55(0.55)(8)	120(1.2)(17)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)	55(0.55)(8)
4990(11000)	75(0.75)(11)	60(0.6)(9)	55(0.55)(8)	120(1.2)(17)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)	55(0.55)(8)
5220(11500)	80(0.8)(12)	70(0.7)(10)	55(0.55)(8)	120(1.2)(17)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)	55(0.55)(8)
5440(12000)	80(0.8)(12)	70(0.7)(10)	55(0.55)(8)	120(1.2)(17)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)	55(0.55)(8)
5670(12500)	90(0.9)(13)	75(0.75)(11)	55(0.55)(8)	120(1.2)(17)	55(0.55)(8)	55(0.55)(8)	40(0.4)(6)	55(0.55)(8)
5900(13000)	95(0.95)(14)	80(0.8)(12)	60(0.6)(9)	120(1.2)(17)	60(0.6)(9)	60(0.6)(9)	40(0.4)(6)	55(0.55)(8)
6120(13500)	105(1.05)(15)	90(0.9)(13)	70(0.7)(10)	120(1.2)(17)	70(0.7)(10)	70(0.7)(10)	40(0.4)(6)	55(0.55)(8)
6350(14000)	110(1.1)(16)	90(0.9)(13)	70(0.7)(10)	120(1.2)(17)	70(0.7)(10)	70(0.7)(10)	40(0.4)(6)	55(0.55)(8)
6580(14500)	120(1.2)(17)	95(0.95)(14)	75(0.75)(11)	120(1.2)(17)	70(0.7)(10)	75(0.75)(11)	40(0.4)(6)	55(0.55)(8)
6800(15000)	120(1.2)(17)	105(1.05)(15)	75(0.75)(11)	120(1.2)(17)	75(0.75)(11)	75(0.75)(11)	40(0.4)(6)	60(0.6)(9)
7030(15500)	125(1.25)(18)	110(1.1)(16)	80(0.8)(12)	120(1.2)(17)	80(0.8)(12)	80(0.8)(12)	40(0.4)(6)	70(0.7)(10)
7260(16000)	130(1.3)(19)	110(1.1)(16)	90(0.9)(13)	120(1.2)(17)	90(0.9)(13)	90(0.9)(13)	40(0.4)(6)	70(0.7)(10)
7480(16500)	140(1.4)(20)	120(1.2)(17)	95(0.95)(14)	120(1.2)(17)	90(0.9)(13)	90(0.9)(13)	40(0.4)(6)	70(0.7)(10)
7720(17000)	140(1.4)(20)	120(1.2)(17)	105(1.05)(15)	120(1.2)(17)	95(0.95)(14)	95(0.95)(14)	40(0.4)(6)	75(0.75)(11)
7950(17500)	145(1.45)(21)	125(1.25)(18)	105(1.05)(15)	120(1.2)(17)	105(1.05)(15)	105(1.05)(15)	40(0.4)(6)	80(0.8)(12)
8170(18000)	150(1.5)(22)	130(1.3)(19)	110(1.1)(16)	120(1.2)(17)	110(1.1)(16)	110(1.1)(16)	40(0.4)(6)	80(0.8)(12)
8400(18500)	160(1.6)(23)	140(1.4)(20)	110(1.1)(16)	120(1.2)(17)	110(1.1)(16)	110(1.1)(16)	40(0.4)(6)	90(0.9)(13)
8630(19000)	—	145(1.45)(21)	120(1.2)(17)	120(1.2)(17)	120(1.2)(17)	120(1.2)(17)	40(0.4)(6)	90(0.9)(13)
8850(19500)	—	150(1.5)(22)	120(1.2)(17)	120(1.2)(17)	120(1.2)(17)	120(1.2)(17)	50(0.5)(7)	95(0.95)(14)
9080(20000)	—	150(1.5)(22)	125(1.25)(18)	120(1.2)(17)	125(1.25)(18)	125(1.25)(18)	50(0.5)(7)	105(1.05)(15)
9530(21000)	—	160(1.6)(23)	130(1.3)(19)	120(1.2)(17)	130(1.3)(19)	130(1.3)(19)	50(0.5)(7)	110(1.1)(16)
9990(22000)	—	—	140(1.4)(20)	120(1.2)(17)	140(1.4)(20)	140(1.4)(20)	55(0.55)(8)	120(1.2)(17)
10440(23000)	—	—	150(1.5)(22)	120(1.2)(17)	150(1.5)(22)	150(1.5)(22)	60(0.6)(9)	120(1.2)(17)
10900(24000)	—	—	160(1.6)(23)	120(1.2)(17)	160(1.6)(23)	160(1.6)(23)	70(0.7)(10)	125(1.25)(18)
11350(25000)	—	—	170(1.70)(25)	125(1.25)(18)	—	170(1.70)(25)	70(0.7)(10)	140(1.4)(20)
11800(26000)	—	—	190(1.9)(28)	130(1.3)(19)	—	185(1.85)(27)	75(0.75)(11)	145(1.45)(21)
12260(27000)	—	—	215(2.15)(31)	140(1.4)(20)	—	200(2.)(29)	80(0.8)(12)	150(1.5)(22)
12710(28000)	—	—	225(2.25)(33)	150(1.5)(22)	—	225(2.25)(33)	90(0.9)(13)	160(1.6)(23)
13170(29000)	—	—	—	160(1.6)(23)	—	—	90(0.9)(13)	—
13605(30000)	—	—	—	170(1.70)(25)	—	—	95(0.95)(14)	—
14060(31000)	—	—	—	185(1.85)(27)	—	—	105(1.05)(15)	—
14510(32000)	—	—	—	200(2.)(29)	—	—	110(1.1)(16)	—
14970(33000)	—	—	—	220(2.2)(32)	—	—	120(1.2)(17)	—
15420(34000)	—	—	—	240 (2.4)(35)	—	—	120(1.2)(17)	—
15875(35000)	—	—	—	—	—	—	125(1.25)(18)	—
16330(36000)	—	—	—	—	—	—	125(1.25)(18)	—
16783(37000)	—	—	—	—	—	—	130(1.3)(19)	—
17236(38000)	—	—	—	—	—	—	140(1.4)(20)	—
17690(39000)	—	—	—	—	—	—	145(1.45)(21)	—
18143 (40000)	—	—	—	—	—	—	145(1.45)(21)	—

OURX935,000068B -19-08DEC08-1/1

Rear Wheel, Tire and Tread Guidelines



A—Fenders

B—Centerline

To provide a wider range of tread settings, wheels may be switched side to side. This provides either dished in or dished out condition. Always maintain correct direction of tire rotation.

CAUTION: Prevent personal injury and tractor instability. Never operate with single tires having tread width less than 1520 mm (60 in.).

IMPORTANT: Tires must have at least 25 mm (1 in.) clearance with fenders (A). Distance between tires must be at least 1015 mm (40 in.) with tires equal distances from tractor centerline (B).

With sway blocks in upper position (sway allowed), minimum distance between tires must be 1090 mm (43 in.) to prevent interference.

Do not exceed 2800 mm (110 in.) between single tires for pulling heavy loads.

Check for adequate clearance between implement and rear tires.

Over inflating a radial tire reduces machine performance. Using the correct inflation pressures will result in optimum tractive performance.

OURX935,000068C -19-08DEC08-1/1

RXA0056703 —UN—29AUG01

Rear Drive Wheel — Installing

CAUTION: Avoid the possibility of personal injury. Never operate tractor with loose wheel bolts.

NOTE: The wheel rim (A) has one **tight fit** hole smaller than the other holes. One **slot fit** hole is 180° from the tight fit hole, for improved wheel centering.

Install and hand tighten bolt in the **tight fit** hole (B).

Install and hand tighten bolt in the **slot fit** hole (C).

Install and hand tighten remaining bolts.

Tighten all bolts to torque.

Specification

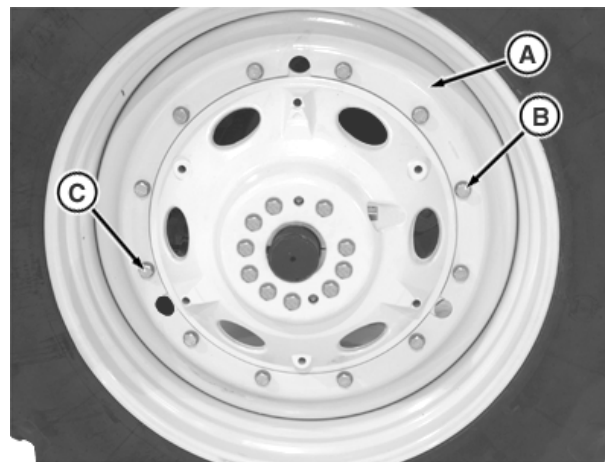
Sleeve Bolts—Final

Torque..... 600 N·m (445 lb-ft)

Tighten all bolts to torque again.

Drive tractor 100 meters (100 yd) and torque bolts.

Tighten again at **3 HOURS**, **10 HOURS**, and **DAILY** for the first week of operation.



Heavy Duty Cast Wheel Shown

A—Wheel Rim
B—Tight Fit Hole

C—Slot Fit Hole

OURX935,000068D -19-08DEC08-1/1

RXA0056891 —UN—11SEP01

Rear Drive Wheel — Adjusting and Tightening

CAUTION: Avoid personal injury. Never run the engine with transmission in gear and rear wheels off the ground. MFWD wheels could pull rear wheels off support. Disengage MFWD and put transmission in NEUTRAL to rotate axle. Never operate tractor with a loose rim, wheel, or hub.

IMPORTANT: Carefully follow procedure. Failure to do so could lead to wheel hub damage.

1. Raise the tractor on level ground with rack upward on the axle.
2. Loosen (without removing) sleeve bolts (1—10) just enough to move wheel.

IMPORTANT: Do not loosen or remove the two allen head screws. Doing so could result in wheel jamming or damage.

Failure to follow proper torquing sequence may result in damage to wheel sleeves.

3. Turn pinion gear (A) to move wheel to desired position.

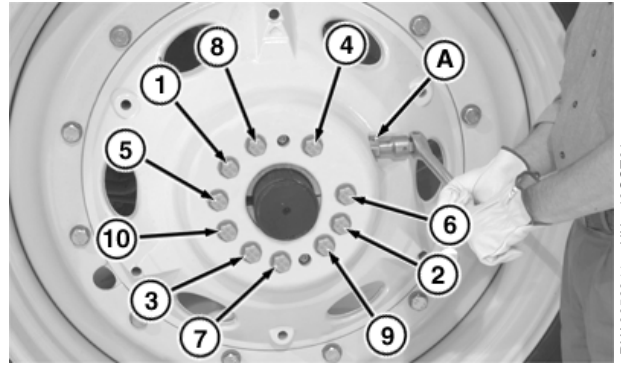
NOTE: Dual hub does not have pinion gear.

CAUTION: Avoid the possibility of personal injury. Failure to follow torquing sequence and procedure will result in damage to equipment and may result in personal injury. Wheel bolts are critical and require repeated torquing.

4. Tighten sleeve bolts in numerical order (1—10) to initial torque and then in numerical order (1—10) tighten to intermediate torque.

Specification

Sleeve Bolts—Initial
Torque..... 204 N·m (150 lb-ft)



Drive Wheel Shown

A—Pinion Gear

Sleeve Bolts—Intermediate Torque..... 410 N·m (300 lb-ft)

IMPORTANT: Some sleeve bolts may loosen as sleeve is tightened. Repeat star shaped torquing pattern until ALL sleeve bolts maintain the proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

5. Drive tractor a minimum of 100 meters (110 yd) and using previously described method tighten to final torque.

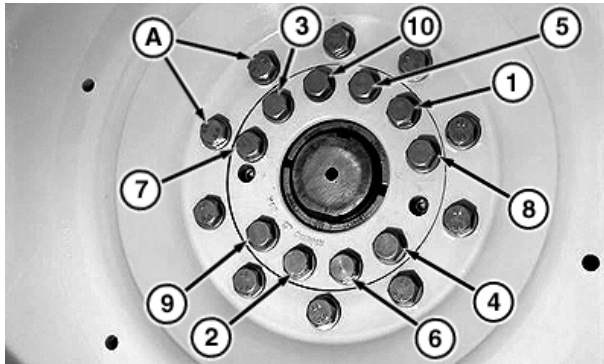
Specification

Sleeve Bolts—Final
Torque..... 600 N·m (445 lb-ft)

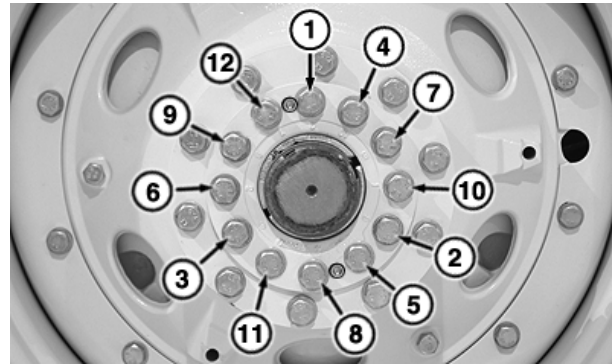
6. Torque bolts after working **3 HOURS, 10 HOURS, and DAILY** during the first week of operation.

OURX935,000068E -19-08DEC08-1/1

Adjusting and Tightening—Heavy-Duty Dual Wheels (10 or 12 Bolt Hubs)



Heavy-Duty Hub-10 Bolt (120 mm Axle)



Heavy-Duty Hub 12 Bolt (120 mm Axle)

A—Cap Screws

CAUTION: Avoid personal injury. Never run the engine with transmission in gear when adjusting wheels. Wheels on the ground could pull supported wheels off jackstands.

Never operate tractor with a loose rim, wheel, or hub.

IMPORTANT: Tractors are equipped with 12 bolt heavy-duty wheels and 10 or 12 bolt hubs. Numbers indicating proper torquing sequence are cast into wheel hub.

Carefully follow procedure. Failure to do so could lead to wheel hub damage.

IMPORTANT: Clean any paint, grease, film, rust or debris from axle shafts prior to positioning and installing wheel hubs and sleeves. **DO NOT** apply any lubricant to cap screws or threads.

1. Raise the tractor on level ground and support tractor with jackstands.
2. Loosen (without removing) sleeve bolts (1—10) or (1—12) just enough to move wheel.

IMPORTANT: Do not loosen or remove the two allen head screws. Doing so could result in wheel jamming or damage.

NOTE: Adjusting tool is not compatible with heavy-duty wheel hub.

3. Move wheel to desired position.
4. While making sure wheel is perpendicular to axle, tighten bolts (1-10) or (1—12) in numerical order to torque initial specification.

Specification

Cap Screws (A)—Initial	
Torque.....	405 N·m 300 lb·ft

5. Tighten bolts (1—10) or (1—12) in numerical order to final torque specification.

Specification

Cap Screws (A)—Final	
Torque.....	610 N·m 450 lb·ft

IMPORTANT: Repeat torquing pattern until ALL bolts maintain the proper torque. Failure to follow procedure could result in damage to equipment and may result in personal injury.

6. Using a star shaped pattern, torque all wheel to hub cap screws (A) as needed to maintain torque.

Specification

Cap Screws (A) Initial	
Torque—Initial Torque.....	405 N·m 300 lb·ft
Cap Screws (A) Final	
Torque—Final Torque.....	610 N·m 450 lb·ft

7. Drive tractor a minimum of 100 meters (110 yd) and tighten bolts in numerical order until bolts maintain torque of 610 N·m (450 lb·ft).

IMPORTANT: If tractor is operated with wheel sleeve loose for 4-5 hours, it is necessary to replace sleeves.

8. Torque bolts after working **3 HOURS, 10 HOURS, and DAILY** during the first week of operation.

OURX935,000068F -19-12APR09-1/1

Wheel tightening Stand—DFR219 or JDG10741

Wheel tightening stand (A) may be used to support the torque wrench (B) when tightening cap screws at different heights.

See your John Deere™ dealer to order.

A—Wheel Tightening Stand B—Torque Wrench



Wheel Tightening Stand

RXA0104284 —UN—11AUG09

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OURX935,0000A3D -19-11AUG09-1/1

Rear Drive Wheel Tread Settings for Single Wheels

520 or 20.8 Tire			
Single Tire			
Position	Minimum	2438 mm (96 in.) Axle Maximum	3015 mm (118.5 in.) Axle Maximum
IN	1555 mm (61.2 in.)	1875 mm (73.8 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.7 in.)	2180 mm (85.8 in.)	2754 mm (108.4 in.)
620 Tire			
Single Tire			
Position	Minimum	2438 mm (96 in.) Axle Maximum	3015 mm (118.5 in.) Axle Maximum
IN	1659 mm (65.3 in.)	1875 mm (73.8 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.7 in.)	2180 mm (85.8 in.)	2754 mm (108.4 in.)
650 Tire			
Single Tire			
Position	Minimum	2438 mm (96 in.) Axle Maximum	3015 mm (118.5 in.) Axle Maximum
IN	1690 mm (65.31 in.)	1875 mm (73.8 in.)	2449 mm (96.4 in.)
OUT	1821 mm (71.1 in.)	2180 mm (85.8 in.)	2754 mm (108.4 in.)
710 Tire			
Single Tire			
Position	Minimum	2438 mm (96 in.) Axle Maximum	3015 mm (118.5 in.) Axle Maximum
IN	1752 mm (69 in.)	1875 mm (73.8 in.)	2449 mm (96.4 in.)
OUT	1821 mm (81.7 in.)	2180 mm (85.8 in.)	2754 mm (108.4 in.)
800 Tire			
Single Tire			
Position	Minimum	2438 mm (96 in.) Axle	3015 mm (118.5 in.) Axle Maximum
IN	1846 mm (72.7 in.)	2028 (79.8 in.)	2602 mm (102.4 in.)
OUT	N/A	N/A	N/A

OURX935,0000690 -19-08DEC08-1/1

Rear Dual Wheel Tread Settings—320, 480 and 520 Tires

320 Tire on 3015 mm (118.5 in.) Axle						
	Single Tire				Dual Tire	
Position	Minimum	Maximum	Maximum ^a	Position	Minimum	Maximum
IN	1524 mm (60 in.)	1896 mm (74.6 in.)	1978 mm (77.9 in.)	D	2290 mm (90.2 in.)	2662 mm (104.8 in.)
OUT	1810 mm (71.3 in.)	1896 mm (74.6 in.)	2078 mm (88.3 in.)	D	2952 mm (116.2 in.) ^a	2662 mm (104.8 in.)
OUT	1810 mm (71.3 in.)	1896 mm (74.6 in.)	2078 mm (88.3 in.)	D	2576 mm (101.4 in.)	2662 mm (104.8 in.)
IN	1524 mm (60 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	G	2462 mm (96.9 in.)	2915 mm (114.8 in.)
OUT	1810 mm (71.3 in.)	2150 mm (84.6 in.)	2282 mm (89.8 in.)	G	2576 mm (101.4 in.)	2915 mm (114.8 in.)
IN	1524 mm (60 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	L	2614 mm (102.9 in.)	3068 mm (120.8 in.)
OUT	1810 mm (71.3 in.)	2282 mm (89.8 in.)	2282 mm (89.8 in.)	L	2596 mm (102.2 in.)	3068 mm (120.8 in.)
IN	1524 mm (60 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	O	2868 mm (112.9 in.)	3322 mm (130.8 in.)
OUT	1810 mm (71.3 in.)	2282 mm (89.8 in.)	2282 mm (89.8 in.)	O	2850 mm (112.2 in.)	3322 mm (130.8 in.)
IN	1524 mm (60 in.)	1978 mm (77.9 in.)	1978 mm (77.9 in.)	P	2920 mm (115 in.)	3372 mm (132.8 in.)
OUT	1810 mm (71.3 in.)	2282 mm (89.8 in.)	2282 mm (89.8 in.)	P	2900 mm (114.2 in.)	3372 mm (132.8 in.)

^awith 15 in. extension

480 Tire on 3015 mm (118.5 in.) Axle						
	Single Tire				Dual Tire	
Position	Minimum	Maximum	Maximum ^a	Position	Minimum	Maximum
IN	1524 mm (60 in.)	1508 mm (59.4 in.)	1974 mm (77.7 in.)	IN	2918 mm (114.9 in.) ^a	2606 mm (102.6 in.)
IN	1524 mm (60 in.)	1508 mm (59.4 in.)	1974 mm (77.7 in.)	IN	2622 mm (103.2 in.)	2606 mm (102.6 in.)
OUT	1806 mm (71.18 in.)	N/A	2270 mm (89.4 in.)	IN	2622 mm (103.2 in.)	3368 mm (132.6 in.) ^a
IN	1524 mm (60 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	2822 mm (111.1 in.)	3272 mm (128.9 in.)
OUT	1806 mm (71.18 in.)	2174 mm (85.6 in.)	2278 mm (89.7 in.)	OUT	2906 mm (114.4 in.)	3272 mm (128.9 in.)

^awith 15 in. extension

520 Tire on 3015 mm (118.5 in.) Axle						
	Single Tire				Dual Tire	
Position	Minimum	Maximum	Maximum ^a	Position	Minimum	Maximum
IN	1535 mm (60 in.)	N/A	1974 mm (77.7 in.)	IN	2826 mm (111.3 in.) ^a	3266 mm (128.6 in.) ^a
OUT	1806 mm (71.1 in.)	N/A	2084 mm (82 in.)	IN	2988 mm (117.6 in.) ^a	3266 mm (128.6 in.) ^a
IN	1534 mm (60.4 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	2935 mm (115.6 in.)	3374 mm (132.8 in.)
OUT	1806 mm (71.1 in.)	2192 mm (86.3 in.)	2278 mm (89.7 in.)	OUT	2988 mm (117.6 in.)	3374 mm (132.8 in.)

^awith 15 in. extension

OURX935,0000691 -19-08DEC08-1/1

Rear Dual Wheel Row Crop Settings—620 And 650 Tires

620/70R46 Tire on 3015 mm (118.5 in.) Axle						
Position	Single Tire			Position	Dual Tire	
	Minimum	Maximum	Maximum ^a		Minimum	Maximum
IN	1638 mm (64.5 in.)	N/A	1774 mm (69.8 in.)	IN	3028 mm (119.2 in.) ^a	3148 mm (123.9 in.) ^a
OUT	1806 mm (71.1 in.)	N/A	1758 mm (69.2 in.)	IN	3196 mm (125.8 in.) ^a	3148 mm (123.9 in.) ^a
IN	1638 mm (64.5 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	3170 mm (124.8 in.)	3506 mm (138 in.)
OUT	1806 mm (71.1 in.)	2116 mm (83.3 in.)	2278 mm (89.7 in.)	OUT	3196 mm (125.8 in.)	3506 mm (138 in.)

^awith 15 in. extension

620/70R42 Tire on 3015 mm (118.5 in.) Axle						
Position	Single Tire			Position	Dual Tire	
	Minimum	Maximum	Maximum ^a		Minimum	Maximum
IN	1638 mm (64.5 in.)	N/A	1718 mm (67.6 in.)	IN	3028 mm (119.2 in.)	3108 mm (122.3 in.) ^a
OUT	N/A	N/A	N/A	IN	N/A	N/A
IN	1638 mm (64.5 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	3210 mm (126.4 in.)	3545 mm (139.6 in.)
OUT	1806 mm (71.1 in.)	2156 mm (84.9 in.)	2278 mm (89.7 in.)	OUT	3196 mm (125.8 in.)	3545 mm (139.6 in.)

^awith 15 in. extension

650/85R38 and 650/65R42 Tire on 3015 mm (118.5 in.) Axle						
Position	Single Tire			Position	Dual Tire	
	Minimum	Maximum	Maximum ^a		Minimum	Maximum
IN	N/A	N/A	N/A	IN	N/A	N/A
OUT	N/A	N/A	N/A	IN	N/A	N/A
IN	1670 mm (65.8 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	3242 mm (127.6 in.)	3545 mm (139.6 in.)
OUT	1806 mm (71.1 in.)	2094 mm (82.4 in.)	2278 mm (89.7 in.)	OUT	3258 mm (128.3 in.)	3545 mm (139.6 in.)

^awith 15 in. extension

OURX935,0000692 -19-08DEC08-1/1

Rear Dual Wheel Row Crop Settings

320 mm, 14.9 inch or 380 mm Section Dual Rear Tire and Hub Extensions								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	80	88	60	64	68	72	76	80
Dual Wheels - inch	120	132	120	128	136	144	152	160
Dual Ext. ^a (110.5 in. Axle)	N/R	N/A	N/R	5"	10"	10"	15"	N/A
Dual Ext. ^a (118.5 in. Axle)	N/R	N/R	N/R	N/R	5"	10"	10"	15"
420 mm, 18.4 in. or 480 mm Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	N/A	N/A	60	64	68	72	76	80
Dual Wheels - inch	N/A	N/A	120	128	136	144	152	160
Dual Ext. ^a (110.5 in. Axle)	N/A	N/A	N/R	5"	10"	10"	15"	N/A
Dual Ext. ^a (118.5 in. Axle)	N/A	N/A	N/R	N/R	5"	10"	10"	15"
For 18.4R42 Rear Dual use a 13 inch Extension For 18.4R42 Rear Dual 40 inch row spacing is NOT available								
520mm and 20.8 in. Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	N/A	N/A	N/A	64	68	72	76	80
Dual Wheels - inch	N/A	N/A	N/A	128	136	144	152	160
Dual Ext. ^a (110.5 in. Axle)	N/A	N/A	N/A	5"	10"	10"	15"	N/A
Dual Ext. ^a (118.5 in. Axle)	N/A	N/A	N/A	N/A	5"	10"	10"	15"
620 mm, 650 mm, and 710mm Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80
Dual Wheels - inch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	160
Dual Ext. ^a (110.5 in. Axle)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15"
Dual Ext. ^a (118.5 in. Axle)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13"
800 mm Section Dual Rear Tire and Hub Extension								
Row Spacing - inch	20	22	30	32	34	36	38	40
Drive Wheel - inch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80
Dual Wheels - inch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	160
Dual Ext. ^a (110.5 in. Axle)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dual Ext. ^a (118.5 in. Axle)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13"

^aExt is abbreviation for Extension in this table

OURX935,0000693 -19-08DEC08-1/1

Rear Dual Wheel Tread Settings—710 and 800 Tires

710/70R42 Tire on 3015 mm (118.5 in.) Axle						
Single Tire				Dual Tire		
Position	Minimum	Maximum	Maximum ^a	Position	Minimum	Maximum
IN	N/A	N/A	N/A	IN	N/A	N/A
OUT	N/A	N/A	N/A	IN	N/A	N/A
IN	1732 mm (68.2 in.)	1974 mm (77.7 in.)	1974 mm (77.7 in.)	OUT	3380 mm (133.1 in.)	3621 mm (142.6 in.)
OUT	1806 mm (71.18 in.)	2044 mm (80.5 in.)	2278 mm (89.7 in.)	OUT	3384 mm (133.2 in.)	3621 mm (142.6 in.)

^awith 15 in. extension

710/70R38 Tire on 3015 mm (118.5 in.) Axle						
Single Tire				Dual Tire		
Position	Minimum	Maximum	Maximum ^a	Position	Minimum	Maximum
IN	N/A	N/A	N/A	IN	N/A	N/A
OUT	N/A	N/A	N/A	IN	N/A	N/A
IN	1732 mm (68.1 in.)	1968 mm (77.5 in.)	1974 mm (77.7 in.)	OUT	3310 mm (130.3 in.)	3342 mm (139.6 in.)
OUT	1806 mm (71.18 in.)	1968 mm (77.5 in.)	2278 mm (89.7 in.)	OUT	3384 mm (133.2 in.)	3342 mm (139.6 in.)

^awith 15 in. extension

800 Tire on 3015 mm (118.5 in.) Axle						
Single Tire				Dual Tire		
Position	Minimum	Maximum	Maximum ^a	Position	Minimum	Maximum
IN	N/A	N/A	N/A	IN	N/A	N/A
OUT	N/A	N/A	N/A	IN	N/A	N/A
IN	1826 mm (71.9 in.)	N/A	2126 mm (83.7 in.)	OUT	3958 mm (155.8 in.) ^a	4260 mm (167.7 in.) ^a
OUT	N/A	N/A	N/A	OUT	N/A	N/A

^awith 15 in. extension

OURX935,0000694 -19-08DEC08-1/1

Clamp-On Dual Usage

IMPORTANT: Clamp-on duals should not be used for heavy traction work. They are allowed only for use when the following conditions are met including recommended tire sizes and manufacturers.

IMPORTANT: Do not drive tractors equipped with duals faster than 40 km/h (25 mph).

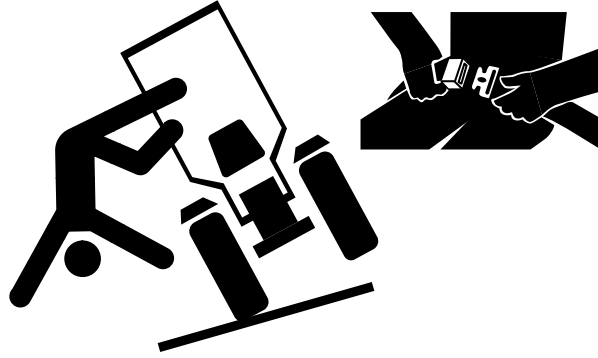
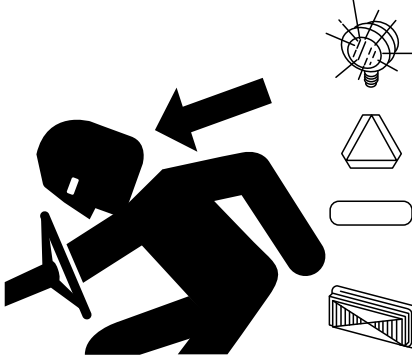
- Clamp-on dual wheels are used only in low draft or PTO applications.
- Maximum vehicle weight is limited to 16000 kg (35274 lb).
- Rear drive wheel is heavy duty cast center type.
- Current wheel sleeve cap screws and washers are replaced with cap screws and washers contained in kit AR219840 for cast drive wheel.

- Steel wheel-to-cast hub cap screws and washers are replaced with cap screws and washers contained in kit AR217153.
- Use rear wheel bolt tightening procedure (See Tightening Rear Wheel Bolts in this section).
- Inner single wheel tread setting does not exceed 1900 mm (75 in.).
- Outer dual wheel tread setting does not exceed 3400 mm (134 in.).
- Average tread width of dual combination does not exceed 2650 mm (104 in.).
- Outer tire must be of equal or smaller section width tire.
- Drive wheels and clamp-on dual tires should be inflated to the same pressure.

OURX935,0000695 -19-08DEC08-1/1

Transport

Driving Tractor on Roads



RXA0086597 —UN—09FEB06

CAUTION: Avoid personal injury or death from losing control of tractor. When driving tractor on roads:

- Wear Seat belts
- Couple brake pedals together
- If equipped, use foot throttle instead of hand throttle
- Reduce speed when driving on icy, wet, or graveled surfaces
- Ballast tractor correctly (See Performance Ballasting section)
- Prevent wheels from locking and skidding on tractors equipped with AutoPowr™ transmission. (See Downhill Operation In Slippery Conditions, in Operating AutoPowr Transmission section.)
- Avoid holes, ditches, sharp turns, hill sides and obstructions which may cause tractor to roll over.
- Frequently check for traffic from the rear, especially in turns, and use turn signal lights.
- Always operate flashing lights when traveling on a highway or public roads, except where prohibited by law.

*AutoPowr is a trademark of Deere & Company
John Deere is a trademark of Deere & Company
TouchSet is a trademark of Deere & Company*

Lights—Use headlights and turn signals day and night. Follow local regulations for equipment lighting and marking. Keep lighting and marking visible and in good working order. Replace or repair lighting and marking that has been damaged or lost. An implement safety lighting kit is available from your John Deere™ dealer.

Brakes—Tap brake pedal to ensure differential lock is NOT engaged. **Couple brake pedals together before driving on a road.** Avoid hard application of brakes.

MFWD—Disengage front wheel drive when transporting tractor. When driving on roads, engage AUTO or BRAKE ASSIST position of MFWD switch to provide four wheel braking.

Remote Cylinders—Position transport lock switch(es) to eliminate possibility of lowering an implement during transport by inadvertently bumping the extend/retract lever(s). (See procedure in Hydraulics and Selective Control Valves or TouchSet™ Depth Control section.)

Front or Rear Hitch—Position or lock hitch in transport position to eliminate possibility of lowering an implement during transport by inadvertently bumping the raise/lower lever. (See procedure in Hitch section.)

Transporting with Ballast

CAUTION: Avoid possible injury or equipment damage when transporting heavy rear-mounted implements.

- Drive slowly over rough ground, regardless of how much ballast is used.
- Add weight to front end if needed to maintain stability and steering control. Heavy

pulling and heavy rear-mounted implements tend to lift front wheels.

Use implement code in implement operator's manual to determine the minimum number of front weights required.

OURX935,0000AD6 -19-25AUG09-1/1

OURX935,0000ACE -19-25AUG09-1/1

Towing Loads

⚠ CAUTION: Avoid possible injury from losing control while towing a load. Stopping distance increases with speed and weight of towed loads, and on slopes.

Tractor wheels may lock and skid on slippery downhill slopes on tractors equipped with AutoPowr™ transmission. (See Downhill Operation In Slippery Conditions, in Operating AutoPowr Transmission section.)

Never transport at speeds exceeding the implement's maximum transport speed. Before transporting a towed implement, refer to the implement operator's manual and implement decals to determine the maximum transport speed. This tractor is capable of operating at transport speeds exceeding the maximum allowable transport speed for most towed implements. Use implement code in implement operator's manual to determine the minimum number of front weights required. Failure to adhere to the implement's maximum transport speed or to have correct ballast can result in:

- Loss of control of the tractor/implement combination
- Reduced or no ability to stop during braking
- Implement tire failure
- Damage to the implement structure or components

Guidelines for Towing Equipment without Brakes:

- Do not transport at speeds greater than 32 km/h (20 mph).
- Must weigh less than 1.5 times the tractor weight or less than 1.5 t (3300 lb) when fully loaded.

Guidelines for Towing Equipment with Brakes:

- If manufacturer does not specify a maximum transport speed, do not transport at speeds above 40 km/h (25 mph).
- When transporting at speeds up to 40 km/h (25 mph) the fully loaded implement must weigh less than 4.5 times the tractor weight.
- When transporting at speeds between 40 km/h (25 mph) to 50 km/h (31 mph), the fully loaded implement must weigh less than 3 times the tractor weight.

The tractor must be heavy and powerful enough with adequate braking power for the towed load. Add ballast to tractor or lighten the implement load.

Drive slowly enough to maintain safe control. Be alert for skids. Shift to a lower gear for hillsides, rough ground, and sharp turns, especially when transporting heavy equipment.

Never operate with transmission in neutral position or with clutch disengaged.

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OURX935,0000AD7 -19-25AUG09-1/1

Using a Safety Chain

CAUTION: Avoid possible accident and injury by using a safety chain on drawn equipment. Use a safety chain with a strength rating equal to or greater than the gross weight of equipment. Provide only enough slack in the chain to permit turning.

Attach the safety chain (A) to the drawbar support or other specified anchor locations.

IMPORTANT: DO NOT use safety chain for towing or possible damage to tractor, implement, and drawbar may result. Safety chain is provided only for transport.

Do not use intermediate support (B) as an attaching point, load may break free. As shown, intermediate support is used to keep safety chain from dragging.

Attach and check operation of trailer brakes if equipped.

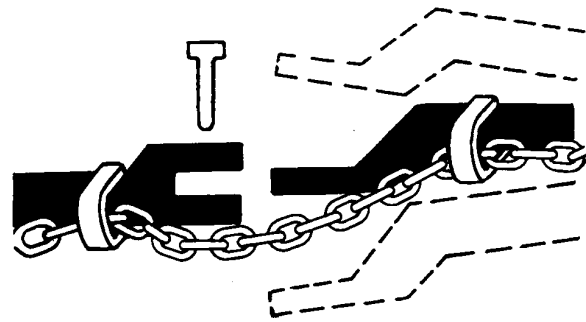
IMPORTANT: SLOW DOWN when transporting heavy implements.

Drive slowly enough to maintain safe control. Shift to a lower gear for hillsides, rough ground, and sharp turns, especially when transporting heavy equipment.

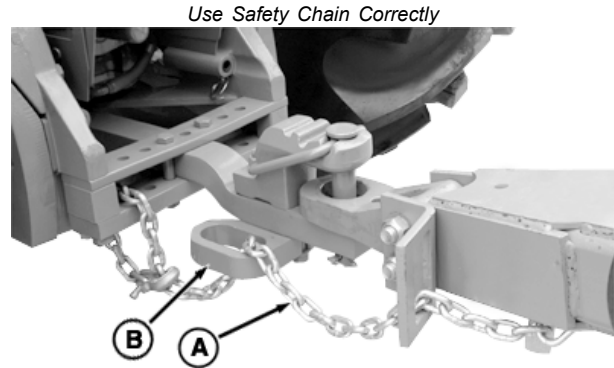
On icy or graveled grades, be alert for skids which could result in loss of steering control.

Never coast down hill.

Use caution when operating tractor at transport speeds. Reduce speed if towing heavy loads. Heavy towed



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Use Safety Chain Correctly

Correct Safety Chain Connection

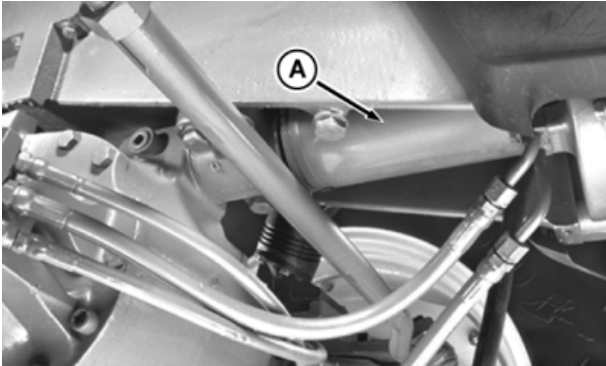
A—Safety Chain

B—Intermediate Support

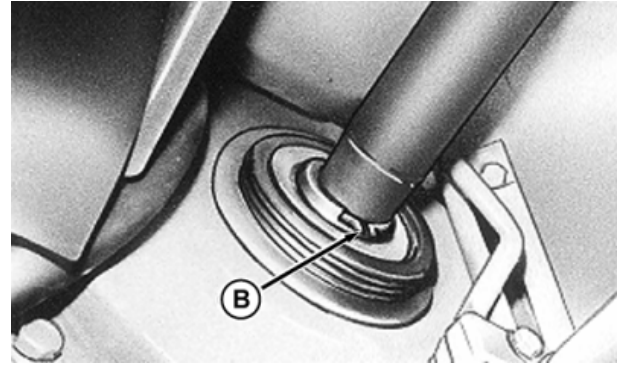
or rear mounted implements may start swaying in transport. Consult towed equipment operator's manual for recommended transport speeds.

OURX935,0000AD0 -19-25AUG09-1/1

Towing Tractor



RW55349A—UN—22OCT99



RW55350A—UN—22OCT99

Standard MFWD

A—Drive Shaft Shield

B—Snap Ring

CAUTION: Avoid personal injury or death. Disconnect MFWD or ILS™ (Independent Link Suspension) drive shaft(s) if towing tractor with front wheels on a carrier. Loss of electrical power or transmission-hydraulic system pressure will engage the MFWD and pull tractor off carrier, even with switch in the DISENGAGED position.

IMPORTANT: Avoid transmission and drive train component damage:

- Never attempt to start tractor by towing. Engine will not start.
- If possible, operate engine above 1250 rpm to provide lubrication, power steering and power brakes.
- Do not tow a tractor faster than 8 km/h (5 mph). Do not exceed 3 km/h (2 mph) for the first ten minutes in below freezing temperatures.

ILS (Independent Link Suspension) is a trademark of Deere & Company

- Check transmission-hydraulic oil level. Add 4 L (1 gal) for each 152 mm (6 in.) front wheels are raised off the ground. Do not raise wheels more than 305 mm (12 in.). Drain excess oil after transporting.

Towing Tractor with Front Wheels on a Carrier

IMPORTANT: Check transmission-hydraulic oil level. Add 4 L (1 gal) for each 152 mm (6 in.) front wheels are raised off the ground. Do not raise wheels more than 305 mm (12 in.). Drain excess oil after transporting.

MFWD AXLE:

- Remove drive shaft shield (A). Spread snap ring (B) and slide shaft forward from clutch.
- Install cap plug in clutch housing to protect from dirt.

OURX935,0000AD1 -19-25AUG09-1/2

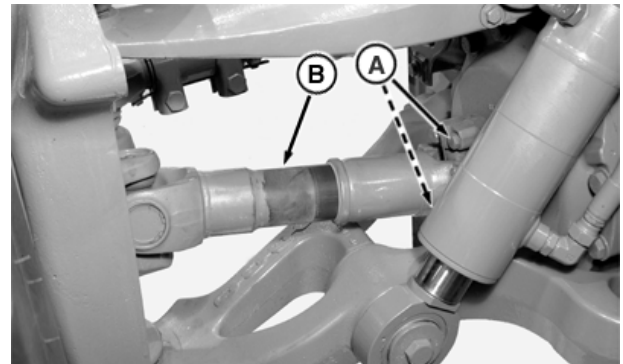
INDEPENDENT LINK SUSPENSION:

- Remove top and bottom cap screws (A) from each side of the drive shaft yoke.
- Collapse each drive shaft (B) to minimum length.
- Suspend each drive shaft using a sling.

Momentarily depress brake pedals to make sure differential lock is not engaged.

A—Cap Screws

B—Drive Shaft



RXA0087519—UN—10MAR06

OURX935,0000AD1 -19-25AUG09-2/2

Releasing Park Brake (Powershift Transmission)

The park brake must be released to tow tractor. With tractor on level surface (or block wheels to prevent motion), move gear shift lever to PARK position. Open battery compartment to expose park brake valve (A) and push it down with your hand.

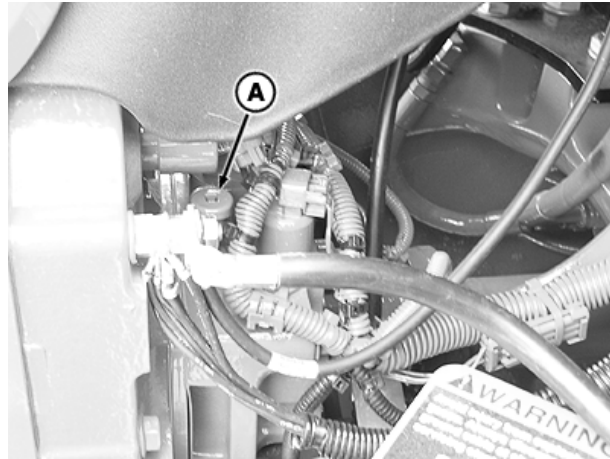
NOTE: To disengage the park brake, pump clutch pedal approximately 20 times or until clutch pedal no longer fully returns. In cold temperatures pumping the clutch pedal may not work. A hydraulic hand pump can be used. See your John Deere™ dealer.

Move gear shift lever to NEUTRAL position when towing.

After towing, pull up park brake release valve from the tow position. Move shift lever from NEUTRAL to PARK position and start engine.

⚠ CAUTION: Clutch pedal will return quickly with a strong force when shift lever is moved from the PARK position. Depress clutch pedal and release slowly to avoid injury.

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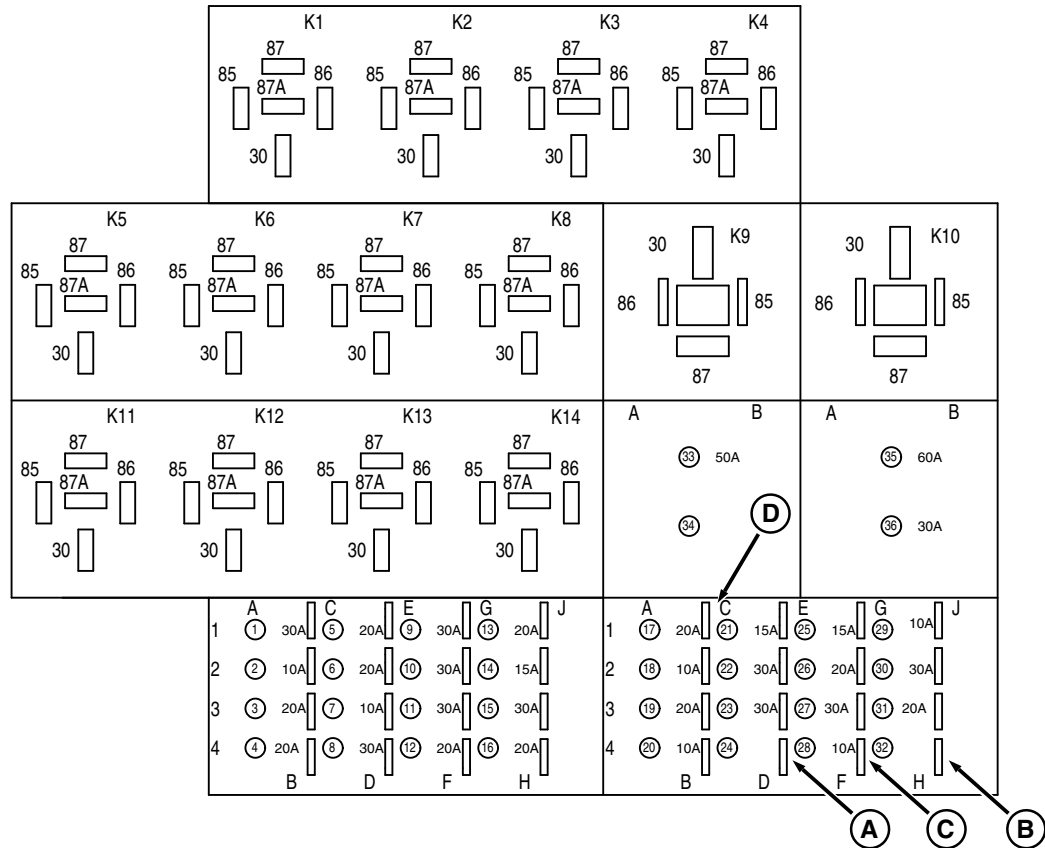


A—Park Brake Valve

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OURX935,0000AD2 -19-25AUG09-1/1

Releasing Park Brake AutoPowr™ Transmission)



A—Fuse 24 (Location)

B—Fuse 32 (Location)

C—Fuse 28 (Location)

D—Fuse 17 (Location)

CAUTION: Avoid possible injury if tractor moves. Block tires to prevent tractor from moving when park brake releases. Procedure requires an operator seated in the tractor to monitor park brake release procedure.

1. Block tractor tires.
2. Make sure key switch is in **OFF** position.

NOTE: Moving fuses allows engine to be cranked without starting.

Load center is behind seat.

3. Remove cover to access fuses. (See Accessing Fuses And Relays in Maintenance—Electrical System section.)
4. Remove plastic keeper from fuse location 24 and 28.
5. Remove 10 amp fuse # 32 (B) move to fuse location 28 (C).
6. Move fuse # 17 (D) to fuse # 24 (A) location.

7. Turn key to "Run" (not "Start") position. SERVICE ALERT indicator light will flash. After five seconds, STOP indicator light will also flash.
8. Turn key to "**START**" position and crank engine 10 — 15 seconds. Release key and make sure it is in **RUN** position.
9. If STOP indicator light flashes instead, there is not enough hydraulic pressure to release park brake. Repeat Step 6 up to two more times. If SERVICE ALERT light does not flash, contact your John Deere™ dealer.

CAUTION: Minimize chance of possible injury from an accident. Always use seat belts when operating the tractor.

Turning key switch to the "OFF" position while towing tractor will cause sudden engagement of the park brake, locking the rear wheels. Avoid serious personal injury by making sure the key switch remains in the RUN position anytime tractor is towed, unless emergency stop is required.

Continued on next page

OURX935,0000AD8 -19-25AUG09-1/2

RXA009153—UN—25SEP08

10. Depress brake pedals while an assistant removes tire blocks. Proceed with towing, observing towing precautions stated in Towing Tractor, in this section.

⚠ CAUTION: Avoid possible injury. If park brake starts to drag repeatedly even after performing Step 8, system is unable to maintain sufficient pressure to keep park brake released. Signal tow vehicle driver to stop immediately, as park brake may engage suddenly. Person in towed tractor should apply wheel brakes at the same time.

11. Every 30 minutes, or if STOP light starts flashing and warning horn sounds continuously and an associated

message appears on the CommandCenter™ display, or if park brake drag is felt, signal tow vehicle driver to stop immediately. Person in towed tractor should apply wheel brakes at the same time as tow vehicle. Turn key switch to "START position", cranking engine for 10-15 seconds, then release to "RUN" position.

12. After tractor has reached service area, depress brake pedals to bring tractor to a complete stop before switching key to "OFF" position.
13. Move fuses from fuse # 24 location (A) back to fuse #17 location (D) and from fuse #28 location (C) back to fuse # 32 location (B).

*AutoPowr is a trademark of Deere & Company
John Deere is a trademark of Deere & Company
CommandCenter is a trademark of Deere & Company*

OURX935,0000AD8 -19-25AUG09-2/2

Freeing a Mired Machine

CAUTION: Attempting to free a mired machine can involve safety hazards such as the mired tractor tipping rearward, the towing tractor overturning, and the tow chain or tow bar (a cable is not recommended) failing and recoiling from its stretched condition.

Back tractor out if it gets mired down in mud. Unhitch any towed implements. Dig mud from behind the rear wheels. Place boards behind the wheels to provide a solid base and try to back out slowly. If necessary, dig mud from the front of all wheels and drive slowly ahead.

If necessary to tow with another unit, use a tow bar or long chain (a cable is not recommended). Inspect the chain for flaws. Make sure all parts of towing devices are of adequate size and strong enough to handle the load.

Always hitch to the drawbar of the towing unit. Before moving, clear the area of people. Apply power smoothly to take up the slack: a sudden pull could snap any towing device causing it to whip or recoil dangerously.

If mired tractor must be pulled from the front;

- For 1300 and 1500 MFWD axles, connect chain to both loops (A) when pulling horizontally.
- For ILS™ (Independent Link Suspension) axles, connect chain to both lower A arms (B).
- For all tractors, an alternate option is to place chain around the cross member (C) of the front weight support bracket.

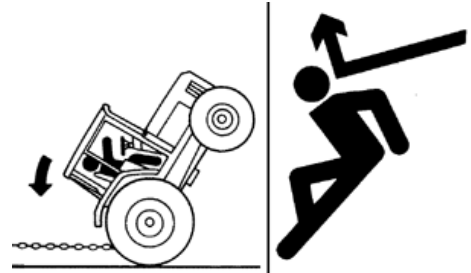
IMPORTANT: Avoid damage to steering cylinders or tie rods. Attach chain to front axle housing. Pull tractor straight forward. Use drawbar to tow tractor out of mired condition if pulling tractor from the rear.

A—Loops, MFWD Axle

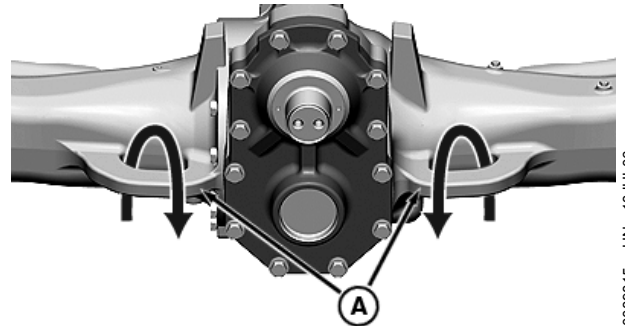
B—Lower A Arms, Independent Link Suspension

C—Cross Member, Front

Weight Support Bracket

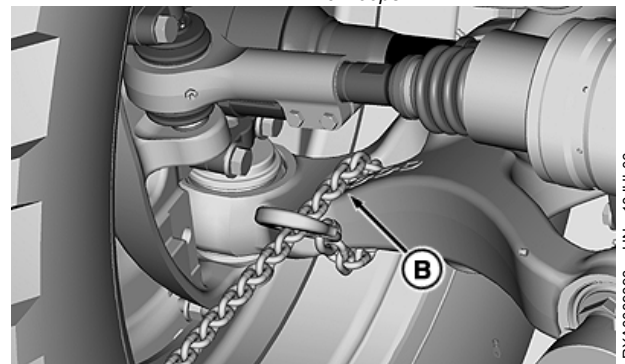


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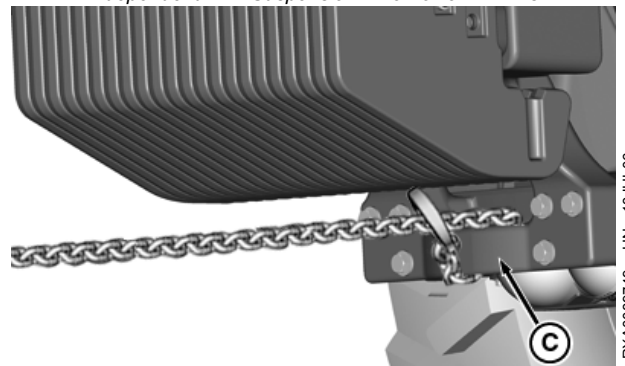
RXA0089815 —UN—13JUL06

MFWD Axle Loops



RXA0089893 —UN—18JUL06

Independent Link Suspension Axle Lower A Arms



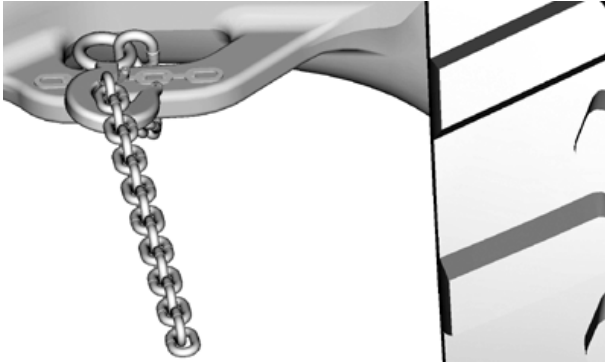
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Front Weight Support Bracket Cross Member

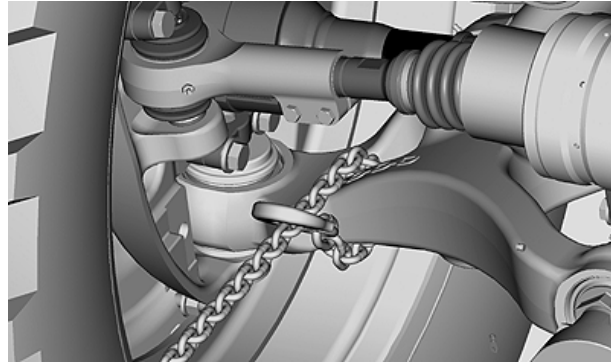
ILS (Independent Link Suspension) is a trademark of Deere & Company

OURX935,0000AD4 -19-25AUG09-1/1

Transporting on Flat-Bed Carrier



Standard MFWD Axle



Independent Link Suspension Axle

CAUTION: To avoid accident or injury, securely chain the tractor to carrier. **DO NOT** chain to tractor components other than those areas listed. **DRIVE CAREFULLY.**

IMPORTANT: A disabled tractor should be hauled on a flat-bed carrier.

Engage PARK position.

NOTE: If park brake has been disengaged, engage park brake. See Towing Tractor in this section.

Two-Wheel Drive Tractors:

Wrap chain around front axle bottom support and secure to carrier.

ILS (Independent Link Suspension) is a trademark of Deere & Company

MFWD Axle:

Attach chain to tie-down loops on each side of the axle and secure to carrier.

ILS™ (Independent Link Suspension) Axle:

IMPORTANT: Attach chain to lower support arm only. Attaching chain at any other point could cause component damage.

NOTE: Suspension does NOT have to be collapsed for transporting tractor.

Attach chain to the outer lower support arm on each side of the axle and secure to carrier.

OURX935,0000AD5 -19-25AUG09-1/1

Fuels, Lubricants, and Coolant

Diesel Fuel

To confirm which engine your tractor is equipped with, See Section 145 Record Engine Serial Number in this Operator's Manual.

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 or ASTM D975 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 43 minimum. Cetane number greater than 47 is preferred, especially for temperatures below -20°C (-4°F) or elevations above 1500 m (5000 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 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

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 1000–5000 mg/kg (1000–5000 ppm) REDUCES oil and filter change intervals.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur content for Tier 2 and Stage II engines

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is RECOMMENDED
- Use of diesel fuel with sulfur content 500–5000 mg/kg (500–5000 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. •

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

IMPORTANT: Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

OURX935,000017E -19-26NOV10-1/1

Fill Fuel Tank

CAUTION: 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.

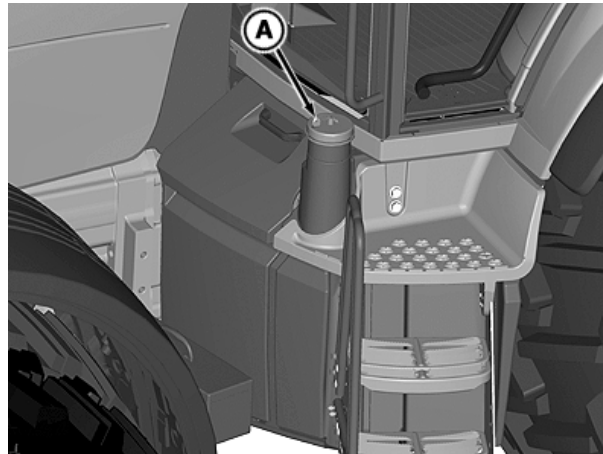
NOTE: Fuel indicator will flash when approximately 60 L (16 gal) of fuel remains.

Fill fuel tank (A) at end of each day. This prevents condensation in tank as moist air cools.

A—Fill Fuel Tank



TS202—UN—23AUG88



RXA0086601—UN—09FEB06

OURX935,000008E -19-11JAN08-1/1

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 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

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.

OURX935,00000E2 -19-19OCT10-1/1

John Deere Break-In™ Plus Engine Oil

To confirm which engine your tractor is equipped with, See Section 145 Record Engine Serial Number in this Operator's Manual.

Initial Service Intervals

The initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval is the same as the service interval recommendations for Plus-50 II.

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.

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

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

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

IMPORTANT: Do not use any other engine oils during the initial break-in of a new or rebuilt engine.

John Deere Break-In Plus Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50™ II or other diesel engine oil as recommended in this manual

OURX935,0000182 -19-26NOV10-1/1

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.

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.

Consult your John Deere dealer for approved biodiesel fuel conditioners to improve storage and performance with biodiesel fuels.

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.

DX,FUEL7 -19-04OCT07-1/1

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.

OURX935,00000E5 -19-19OCT10-1/1

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 information below 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 will begin to form in the fuel and 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.

OURX935,00000E6 -19-19OCT10-1/1

Diesel Engine Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ II oil is preferred.

John Deere Plus-50™ is also recommended.

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
- API Service Category CH-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4
- ACEA Oil Sequence E3

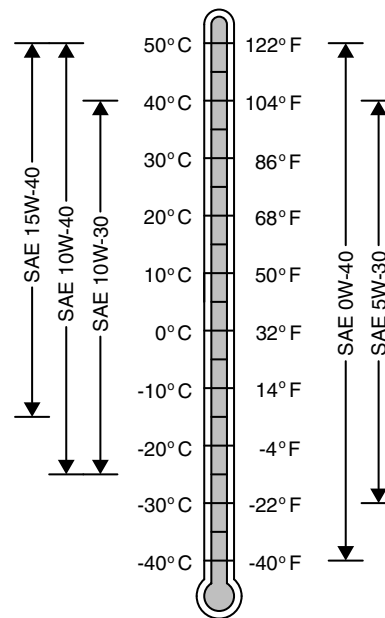
Multi-viscosity diesel engine oils are preferred.

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% (10 000 mg/kg).

Plus-50 is a trademark of Deere & Company

Torq-Gard Supreme is a trademark of Deere & Company



Oil Viscosities for Air Temperature Ranges

TS1689 —UN—18JUL07

DX,ENOIL7 -19-03AUG09-1/1

Engine Oil and Filter Service Intervals—Tier 2 and Stage II Engines

To confirm which engine your tractor is equipped with, See Section 145 Record Engine Serial Number in this Operator's Manual.

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.

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is **RECOMMENDED**.
- Use of diesel fuel with sulfur content 500—5000 mg/kg (500—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.

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.**

Approved Oil Types:

- "Plus-50 Oils" include John Deere Plus-50™ II and John Deere Plus-50.
- "Other Oils" include John Deere Torq-Gard™, API CJ-4, API CI-4 PLUS, API CI-4, API CH-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, ACEA E4, and ACEA E3.

Engine Oil and Filter Service Intervals	
Fuel Sulfur	Less than and equal to 15 mg/kg (15 ppm)
Plus-50 Oils	500 hours
Fuel Sulfur	Less than 500 mg/kg (500 ppm)
Plus-50 Oils	375 hours
Other Oils	250 hours
Fuel Sulfur	500—5000 mg/kg (500—5000 ppm)
Plus-50 Oils	275 hours
Other Oils	150 hours
Fuel Sulfur	5000—10 000 mg/kg (5000—10 000 ppm)
Plus-50 Oils	187 hours
Other Oils	125 hours
Oil analysis may extend the service interval of "Other Oils", to a maximum not to exceed the interval for Plus-50 Oils.	

*Plus-50 is a trademark of Deere & Company
Torq-Gard is a trademark of Deere & Company*

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Engine Oil and Filter Service Intervals—Tier 3 and Stage III A Engines

To confirm which engine your tractor is equipped with, See Section 145 Record Engine Serial Number in this Operator's Manual.

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.

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—5000 mg/kg (1000—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.

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.**

Approved Oil Types:

- “Plus-50 Oils” include John Deere Plus-50™ II and John Deere Plus-50.
- “Other Oils” include John Deere Torq-Gard™, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, and ACEA E4.

NOTE: Extended oil and filter change interval is only allowed if all of the following conditions are met:

- Use of John Deere Plus-50™ II or John Deere Plus-50 oil.
- Use of an approved John Deere oil filter.

Engine Oil and Filter Service Intervals	
Fuel Sulfur	Less than 1000 mg/kg (1000 ppm)
Plus-50 Oils	500 hours
Other Oils	250 hours
Fuel Sulfur	1000—2000 mg/kg (1000—2000 ppm)
Plus-50 Oils	300 hours
Other Oils	200 hours
Fuel Sulfur	2000—5000 mg/kg (2000—5000 ppm)
Plus-50 Oils	250 hours
Other Oils	150 hours
Fuel Sulfur	5000—10 000 mg/kg (5000—10 000 ppm)
Plus-50 Oils	Contact John Deere dealer
Other Oils	Contact John Deere dealer
Oil analysis may extend the service interval of “Other Oils”, to a maximum not to exceed the interval of Plus-50 Oils.	

Plus-50 is a trademark of Deere & Company
Torq-Gard is a trademark of Deere & Company

OURX935,0000180 -19-01DEC10-1/1

Heavy Duty Diesel Engine Coolant

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

The following engine coolants are preferred:

- John Deere COOL-GARD™ II Premix
- John Deere COOL-GARD II PG Premix

Use John Deere COOL-GARD II PG Premix 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.

John Deere COOL-GARD II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate coolants do not require use of supplemental coolant additives.

Other coolants

John Deere COOL-GARD II and COOL-GARD II PG coolants might not be available in the geographical area where service is performed.

If these coolants are unavailable, use a coolant concentrate or prediluted coolant intended for use with

heavy duty diesel engines and with a minimum of the following chemical and physical properties:

- Is formulated with a quality nitrite-free additive package.
- 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.
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion.

The additive package must be part of one of the following coolant mixtures:

- ethylene glycol or propylene glycol base prediluted (40–60%) heavy duty coolant
- ethylene glycol or propylene glycol base heavy duty coolant concentrate in a 40–60% mixture of concentrate with quality water

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.

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

OURX935,00000E7 -19-19OCT10-1/1

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 6 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 4 years or 4000 hours of operation. This drain interval only applies to COOL-GARD II coolants that have been maintained within a 40% to 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 2 years or 2000 hours of operation.

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John Deere COOL-GARD™ II Coolant Extender

Some coolant additives will gradually deplete during engine operation. For John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate, replenish coolant additives between drain intervals by adding John Deere COOL-GARD II Coolant Extender.

John Deere COOL-GARD II Coolant Extender should not be added unless indicated by coolant testing.

John Deere COOL-GARD II Coolant Extender is a chemically matched additive system for use with all John Deere COOL-GARD II coolants. John Deere

COOL-GARD™ II Coolant Extender is not intended for use with nitrite-containing coolants.

IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:

- John Deere COOL-GARD II
- John Deere COOL-GARD II PG

The use of non-recommended supplemental coolant additives may result in additive drop-out, gelation of the coolant, or corrosion of cooling system components.

Add the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

OURX935,00000E9 -19-19OCT10-1/1

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 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.

OURX935,00000EA -19-19OCT10-1/1

Operating in Warm Temperature Climates

John Deere engines are designed to operate using glycol base engine coolants.

Always use a recommended glycol base engine coolant, even when operating in geographical areas where freeze protection is not required.

John Deere COOL-GARD™ II Premix is available in a concentration of 50% ethylene glycol. However, there are situations in warm temperature climates where a coolant with lower glycol concentration (approximately 20% ethylene glycol) has been approved. In these cases, the low glycol formulation has been modified to provide the same level of corrosion inhibitor as John Deere COOL-GARD II Premix (50/50).

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IMPORTANT: Water may be used as coolant in emergency situations only.

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation will occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended glycol base engine coolant as soon as possible.

DX,COOL6 -19-03NOV08-1/1

Additional Information About Diesel Engine Coolants and John Deere COOL-GARD™ II COOLANT EXTENDER

Engine coolants are a combination of three chemical components: ethylene glycol or propylene glycol antifreeze, inhibiting coolant additives, and quality water.

Coolant Specifications

John Deere COOL-GARD™ II Premix is a fully formulated coolant that contains all three components in their correct concentrations. DO NOT add an initial charge of John Deere COOL-GARD II COOLANT EXTENDER to COOL-GARD II Premix. DO NOT add any other supplemental coolant additive or water to COOL-GARD II Premix.

John Deere COOL-GARD II Concentrate contains both ethylene glycol and inhibiting coolant additives. Mix this product with quality water, but DO NOT add an initial charge of John Deere COOL-GARD II COOLANT EXTENDER or any other supplemental coolant additive.

Replenish Coolant Additives

Some coolant additives will gradually deplete during engine operation. Periodic replenishment of inhibitors is required, even when John Deere COOL-GARD II Premix or COOL-GARD II Concentrate is used. Follow the recommendations in this manual for the use of John Deere COOL-GARD II COOLANT EXTENDER.

Why use John Deere COOL-GARD II COOLANT EXTENDER?

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 COOL-GARD II COOLANT EXTENDER is a chemically matched additive system designed to fortify the proprietary additives used in John Deere COOL-GARD II Premix and COOL-GARD II Concentrate and to provide optimum protection for up to 6 years or 6000 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. Do not treat an automotive engine coolant with supplemental coolant additives 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.

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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 6 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.

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.

OURX935,00000EE -19-19OCT10-1/1

Transmission and Hydraulic Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

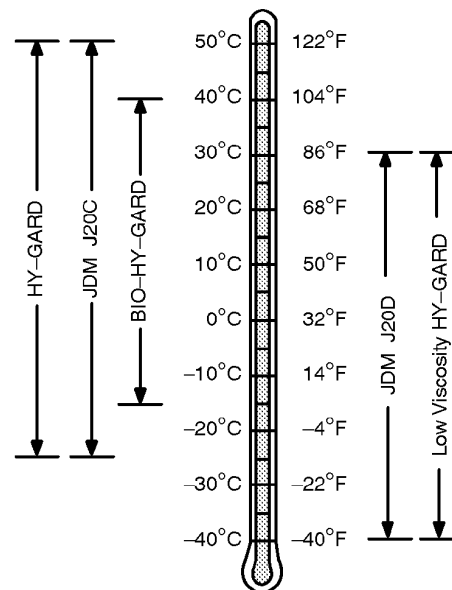
The following oils are preferred:

- 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

Use John Deere BIO-HY-GARD™ oil when a biodegradable fluid is required.¹



TS1660—UN—10OCT97

HY-GARD is a trademark of Deere & Company
BIO-HY-GARD is a trademark of Deere & Company

¹ BIO-HY-GARD meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

DX,ANTI -19-11JAN08-1/1

Powershift Transmission Recalibration

Your tractor's transmission is factory filled with John Deere HY-GARD® oil.

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When changing transmission-hydraulic oil from one viscosity to another, powershift control unit must be recalibrated in order to maintain smooth shifting characteristics. See your John Deere Dealer.

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Independent Link Suspension Differential Case Oil

NOTE: The Independent Link Suspension differential case is connected to the transmission case and operates using the same oil. There is no fill location.

OURX935,000042F -19-11JAN08-1/1

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 -19-11JAN08-1/1

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Whenever possible, 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 -19-11JAN08-1/1

Transmission, Hydraulic, and Gear Case Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

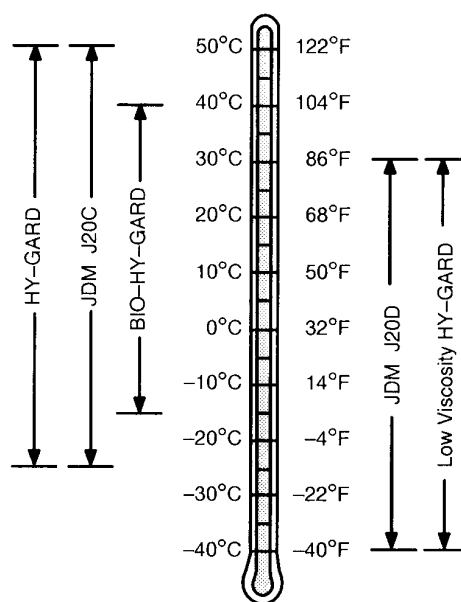
The following oils are preferred:

- 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

Use John Deere BIO-HY-GARD™ oil when a biodegradable fluid is required.¹



HY-GARD is a trademark of Deere & Company.

BIO-HY-GARD is a trademark of Deere & Company

¹BIO-HY-GARD meets or exceeds the minimum biodegradability of 80% within 21 days according to CEC-L-33-T-82 test method. BIO-HY-GARD should not be mixed with mineral oils, because this reduces the biodegradability and makes proper oil recycling impossible.

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DX,OIL1 -19-07NOV03-1/1

Maintenance and Service Intervals

Observe Service Intervals

IMPORTANT: Recommended service intervals are for average conditions. Service **MORE OFTEN** if tractor is operated under adverse conditions.

When looking for details on any service listed in this section, go to either the Table of Contents or the Index of this Operator's Manual. Look for the same title that is listed in the left hand column of the tables on the following pages.

Perform all services at the hourly intervals indicated on the following pages. Record the service performed in Lubrication and Maintenance Records section.

The procedure for services can be found in the following sections of this Operator's Manual:

Service Interval	Section
10 Hour or Daily	100
50 Hour	101
100 Hour (Initial)	102
250 Hour	103
500 Hour	104
1000 Hour	105
Annual	106
1500 Hour	107
5000 Hour	109
6000 Hour	110
General Services (As Needed)	115
Electrical Services (As Needed)	120

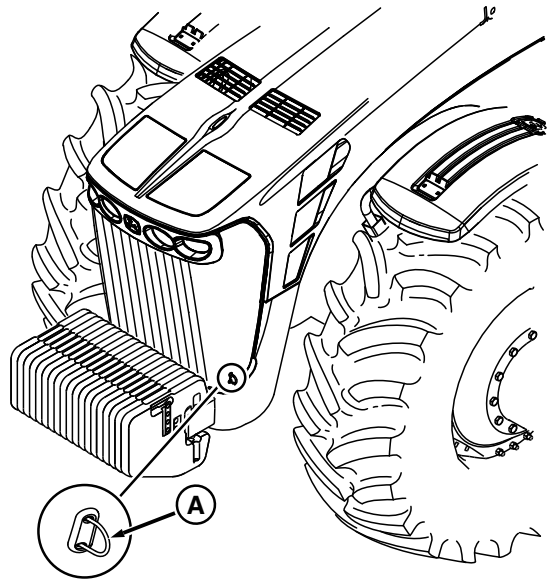
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Raising the Hood

Stop engine before raising hood.

Pull out on hood release (A) and tilt hood back to open.

A—Hood Release



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OURX935,00006B9 -19-08DEC08-1/1

Service Interval Chart—Daily or 10 Hours—100 Hours (Initial)—250 Hours—500 Hours—750 Hours

Item	Daily or 10 Hours	100 Hours (Initial)	250 Hours	500 Hours	750 Hours
Checking Engine Oil	•				
Checking Tires	•				
Checking Transmission/Hydraulic Oil Level	•				
Draining Air Brake Tank (If Equipped)	•				
Lubricating Hitch Components	•				
Checking Coolant Level (Coolant Recovery Tank)	•				
Draining Water Separator (Both Fuel Filters)	•				
Checking Coolant Level (De-aeration Tank)		•			
Changing Engine Oil and Filter *		•	•		
Checking Neutral Start System (PST or AutoPowr™ Transmissions)			•		
Checking Transmission PARK Position			•		
Checking Wheel and Wheel Weight Bolts			•		
Lubricating MFWD Axle And MFWD Axle U-Joints ***			•		
Lubricating Independent Link Suspension External Fittings *** And Axle U-Joints			•		
Checking MFWD Differential Case Oil Level			•		
Checking Manual Brakes			•		
Lubricating Front Hitch (If Equipped)			•		
Draining Fuel Tank Sump			•		
Checking Dual beam Radar Sensor			•		
Checking MFWD or Independent Link Suspension Wheel Hub Oil Level			•		
Replacing Fuel Filter Elements (Both Fuel Filters) ****				•	
Cleaning MFWD Axle Vent Filter					•
Cleaning Fuel Tank Vent Filter **					•
Checking Air Intake System					•
Testing Coolant					•
* Perform oil change in accordance with Changing Engine Oil and Filter in section 102 of this Operator's Manual.					
** Interval can vary according to operating conditions					
*** Daily or 10 Hours when operating in extremely wet and muddy conditions or where AutoTrac is used.					
**** Replace at 500 hours or annually whichever comes first.					

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Service Interval Chart—Annual, 1500 Hours, 2000 Hours and 4500 Hours

Item	Annually	1500 Hours	2000 Hours	4500 Hours
Cleaning or Replacing Primary and Secondary Engine Air Filters **	•			
Replacing Cab Air Filter and Recirculation Filter	•			
Servicing Batteries ****	•			
Checking Auxiliary Drive Belt	•			
Checking Seat Belts	•			
Checking Independent Link Suspension Upper and Lower Rod and Head End Accumulator Charge Pressure *	•			
Draining Clean Oil Reservoir		•		
Changing Transmission/Hydraulic Oil And Cleaning Transmission Filter Screen		•		
Cleaning Transmission Filter Screen (AutoPowr™ Only)		•		
Replacing Transmission/Hydraulic Filters (Both Filters)		•		
Cleaning Hydraulic Oil Suction Screen		•		
Changing MFWD Differential Case Oil		•		
Lubricating Independent Link Suspension Axle Internal Tie Rod Ball Joints*		•		
Changing MFWD Or Independent Link Suspension Wheel Hub Oil		•		
Lubricating Draft Link Support Shaft Bushing		•		
Adjusting Engine Valve Clearance *			•	
Draining, Flushing, and Refilling Engine Cooling System ***			•	
Replacing Engine Crankshaft Damper *				•
* See your John Deere Dealer for questions				
** Interval can vary according to operating conditions				
*** 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, the SCHEDULED interval (2 years or 2000 hours) can be extended up to 6 years or 6000 hours depending on coolant used and if coolant is tested at recommended intervals (Reference "Drain Intervals for Diesel Engine Coolant" in Fuels, Lubricants and Coolant section of Operator Manual).				
**** For replacement batteries, follow manufacturer's recommendations.				

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Daily or 10 Hour Service

Checking Engine Oil

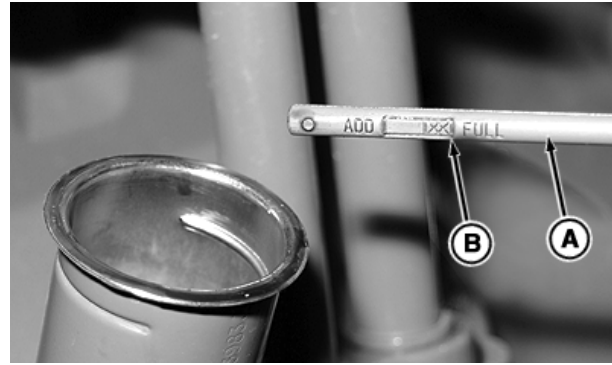
Remove dipstick and check oil level with tractor on level ground before starting tractor. Oil level should be between the "ADD" and the top of the cross-hatch area (B) on dipstick (A).

NOTE: Tighten dipstick to check oil. Cross-hatch area is considered FULL.

IMPORTANT: Do not operate engine with oil level below the "ADD" mark on dipstick.

A—Dip Stick

B—Cross Hatch Area



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Checking Tires

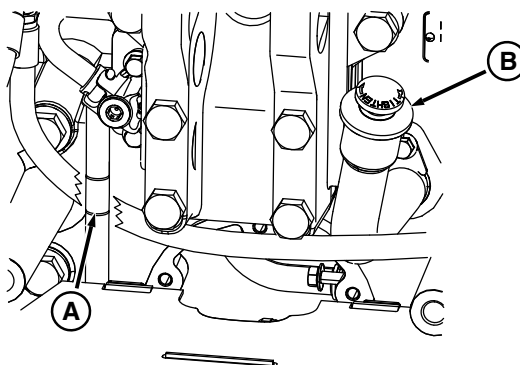
IMPORTANT: Keep tires at maximum allowable pressure to insure maximum performance.

Inspect tires daily for cuts or breaks and repair. If tires contain liquid ballast, use a special air-water gauge, and

measure with valve stem positioned at bottom. Check pressure of each tire at least once a week.

OURX935,0000332 -19-19JUN08-1/1

Checking Transmission/Hydraulic Oil Level



A—Sight Glass

B—Filler Cap

Park tractor on level ground.

Operate engine at approximately 1000 rpm for at least one minute. Before checking oil level, stop engine and wait an additional three minutes for oil to settle back into differential case.

IMPORTANT: Change oil in clean oil reservoir immediately if oil is contaminated with water.

NOTE: Oil temperature should be approximately 45° C. See *Changing Display Functions in the CommandCenter* section to determine oil temperature.

Tractor should be on level ground with hitch in the lowered position and engine stopped when checking oil level.

Sight glass observations will be significantly higher with hotter oil temperatures and lower with colder oil or if engine has not run long enough.

Observe oil level in sight glass (A). Oil level should be between the marks on the glass. Optimum level is at the top mark.

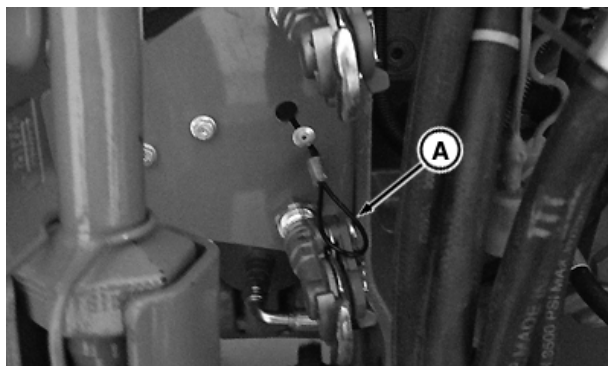
IMPORTANT: Oil level above the top mark on sight glass can result in power loss and heat generation during transport.

If oil level is below the lower mark, remove filler cap (B) and add hydraulic oil.

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Draining Air Brake Tank



A—Air Tank Drain Cable

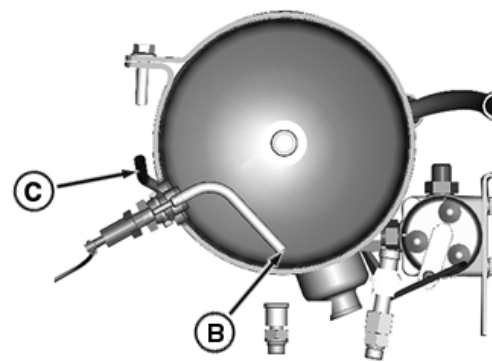
B—Tube

C—Lever

NOTE: Air brake tank should be drained before beginning daily operations. Air tank is designed in such a way that when air tank drain cable is pulled, lever (C) opens valve allowing water to drain.

Tank is designed with tube (B) near the bottom of tank to collect water that accumulates

Pull Air Tank Drain Cable (A) at the back of tractor to drain air brake tank.



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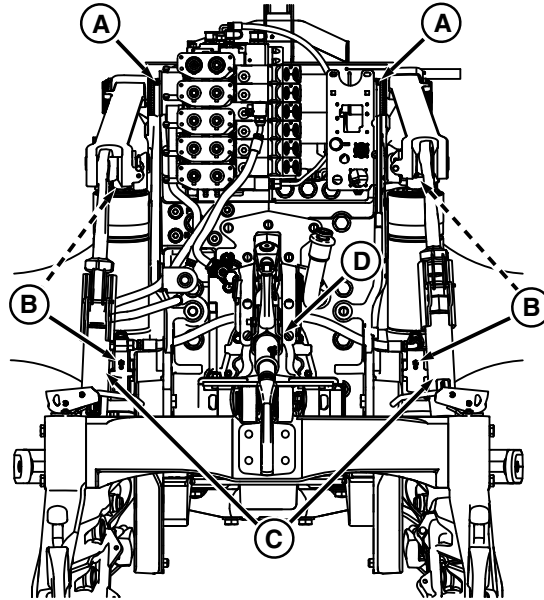
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Lubricating Hitch Components

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section.

Lubricate hitch components (A—D).

- | | |
|------------------|---------------|
| A—Rockshaft | C—Lift Links |
| B—Lift Cylinders | D—Center Link |



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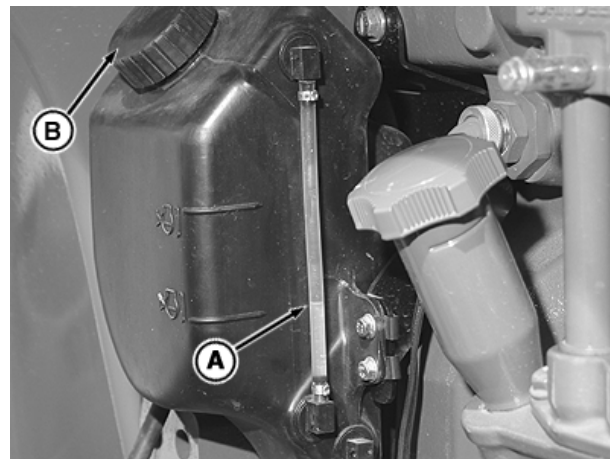
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Checking Coolant Level (Coolant Recovery Tank)

1. Check coolant level at sight tube (A), BEFORE starting tractor. Level should be above lower mark when engine is cold.
2. If coolant level is low:
 - a. Raise hood.
 - b. Check for any signs of leakage. Repair if necessary.

NOTE: If coolant recovery tank still needs coolant and there is no sign of an external leak, this may indicate an internal coolant leak. Contact your John Deere dealer for service.

- c. Remove coolant recovery tank cap (B) and add coolant, as specified in Fuel, Lubricants and Coolant section.
- d. Lower hood.



Left-Hand Side

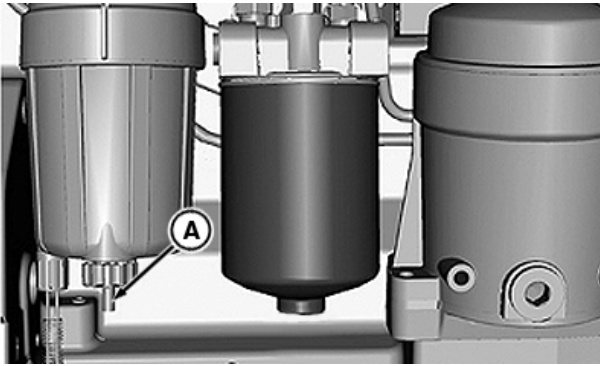
A—Sight Tube

B—Coolant Recovery Tank Cap

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OURX935,00002B2 -19-19JUN08-1/1

Draining Water Separator



Water Separator

A—Drain Valve Nut

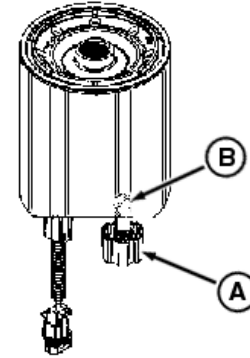
B—Tabs

IMPORTANT: Tractor warranty is void if power level is changed from factory specifications.

Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. See your John Deere™ dealer.

NOTE: When separator sensor identifies water in the fuel system, the service alert indicator will flash on the cornerpost display. An alarm will sound

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Water Separator

for five seconds and a corresponding message appears on the CommandCenter display.

NOTE: Water in fuel collects in the bottom of the fuel filters. Loosening drain valve nut (A) causes tabs (B) to drop down allowing water to drain.

Turn drain valve nut counterclockwise all the way open to drain water.

OURX935,00004C9 -19-08SEP09-1/1

Initial 100 Hour Service

Checking Coolant Level (Coolant De-aeration Tank)



Pressurized Cooling System can Cause Serious Burns

A—De-aeration Tank Cap

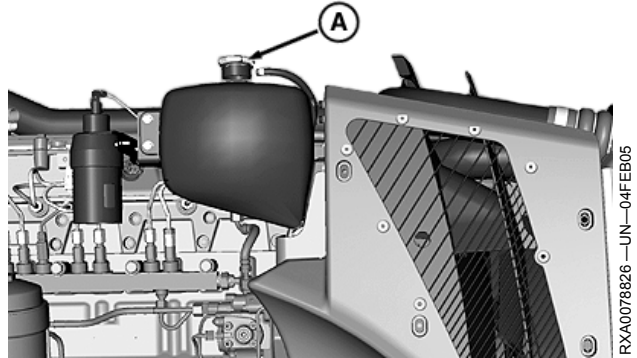
CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns.

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

1. Raise hood.
2. Slowly turn de-aeration tank cap (A) to relieve pressure. Remove cap.

NOTE: When inspecting tank, if it is at least half full, do not add additional coolant.

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RXA0078826—UN—04FEB05

If tank is empty and recovery tank has been kept at least full cold, this indicates a leak that prevents system from recovering coolant from recovery tank.

If recovery tank level does not change when engine is being warmed up, this is a sign of a leak or of a very low coolant level in the pressurized circuit.

3. Check de-aeration tank level. Tank will not be full of coolant when cap is removed.
4. Add coolant, as specified in Fuel, Lubricants and Coolant section.
5. Reinstall de-aeration tank cap.

OURX935,0000334 -19-19JUN08-1/1

Changing Engine Oil and Filter

NOTE: The initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval is the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals for your engine. To confirm which engine your tractor

is equipped with, see Section 145 Record Engine Serial Number in this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in section 90 of this Operator's Manual.

See Changing Engine Oil and Filter in the 250 Hour Service Section.

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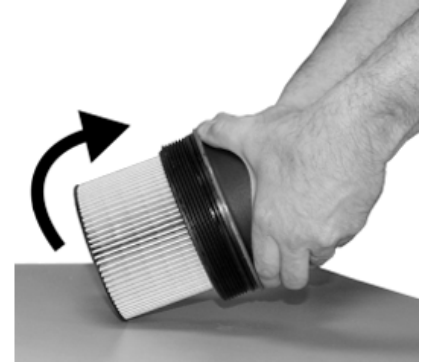
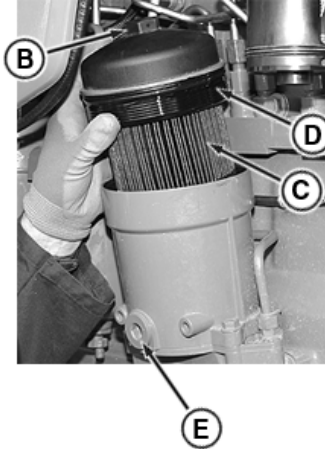
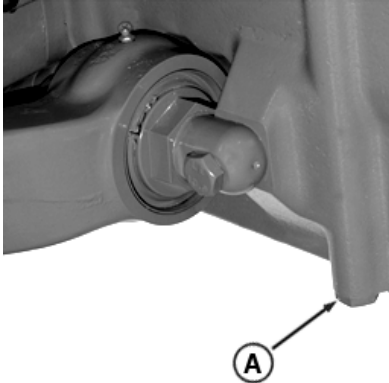
250 Hour Service

Changing Engine Oil and Filter

NOTE: The initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval is the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals for

your engine. To confirm which engine your tractor is equipped with, see Section 145 Record Engine Serial Number in this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in section 90 of this Operator's Manual.



Drain Oil and Replace Filter

A—Engine Oil Drain Plug
B—Filter Cover

C—Filter
D—O-Ring

E—Plug

IMPORTANT: Use of diesel fuel with sulfur content less than 0.10% (1000 ppm) is strongly recommended. Refer to Fuel, Lubricants and Coolant section for more information on oil change intervals.

NOTE: **INITIAL** oil and filter change is 100 hours maximum of operation.

***SCHEDULED** interval (250 hours) can be extended to 375 hours if John Deere™ Plus-50™ or Plus-50 II™ oil and John Deere filter are used.

If fuel sulfur level is 0.20 — 0.50% (2000 to 5000 PPM), regular interval of 250 hours between oil changes should be reduced to 150 hours.

1. Operate engine approximately 5 minutes to warm oil, then stop engine.
2. Remove engine fill cap (at dipstick).

NOTE: Drain plug location may vary slightly depending on application.

3. Remove engine oil drain plug (A), Independent Link Suspension crankcase shown, and drain crankcase oil while engine is warm.

NOTE: Do not remove plug (E). Oil will automatically drain back into crankcase when filter is removed.

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Plus-50 is a trademark of Deere & Company

4. Using a 32 mm wrench, unscrew oil filter cover (B) and lift as shown to allow filter to drain into crankcase.
5. Remove filter cover with filter (C) attached.
6. While holding cover, strike filter against solid surface to remove. Discard used filter.
7. Remove old O-ring (D), and replace with new O-ring provided with new filter element.
8. Press new filter into cover until it snaps into place.
9. Insert cover and filter into oil filter housing, then tighten cover to torque specification.

Oil Filter Cover—Specification

Cover—Torque..... 40 N·m (30 lb-ft)

10. Install drain plug after oil has been drained from crankcase.
11. Refill crankcase with seasonal viscosity grade oil.

Crankcase Fill Capacity			
	8225R, 8245R, 8270R	8295R	8320R and 8345R
1300 Axle	25L (26.4 Qt.)	25L (26.4 Qt.)	—
1500 and MFWD Axle	25L (26.4 Qt.)	28L (29.5 Qt.)	28L (29.5 Qt.)

12. Start engine and check for leaks.
13. Stop engine. Recheck oil level.

Continued on next page

OURX935,000018A -19-01DEC10-1/2

RXA0098558 —UN—16JUN08

Plus-50 II is a trademark of Deere & Company

OURX935,000018A -19-01DEC10-2/2

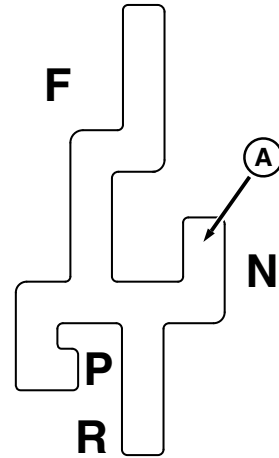
Checking Neutral Start System—AutoPowr™ Transmission

1. Make sure that everyone is clear of tractor.
2. Fully depress clutch and brake pedals.
3. Move left-hand reverser to any position except NEUTRAL or PARK position.
4. Start engine. If engine starts in any of these positions, neutral start system should be repaired. See your John Deere™ dealer **immediately**.

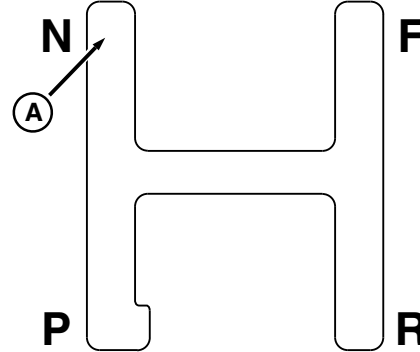
For AutoPowr tractors equipped with left-hand reverser, engine will start in NEUTRAL or PARK positions.

For AutoPowr tractors equipped with right-hand shift controls, engine will only start in PARK.

A—Shift Lever in Neutral



AutoPowr Transmission Right-Hand Reverser in Neutral



AutoPowr Transmission Left-Hand Reverser in Neutral

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John Deere is a trademark of Deere & Company

OURX935,0000B57 -19-08SEP09-1/1

Checking Neutral Start System—PowerShift Transmission

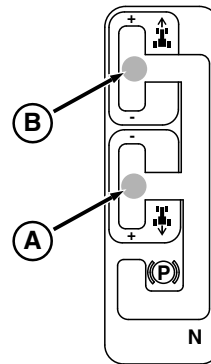
Fully depress clutch and brake pedals. Move shift lever (B) from PARK to a forward gear. Attempt to start engine. Starter should NOT engage.

If starter engages, neutral start system should be repaired by your John Deere™ dealer **immediately**.

Repeat this step by placing shift lever (A) into a reverse gear.

A—Shift Lever (In Reverse Gear)

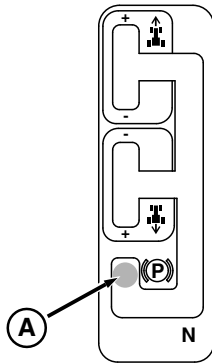
B—Shift Lever (In Forward Gear)



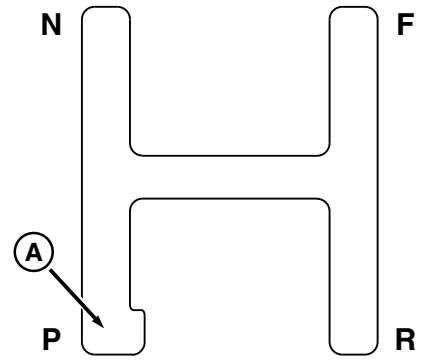
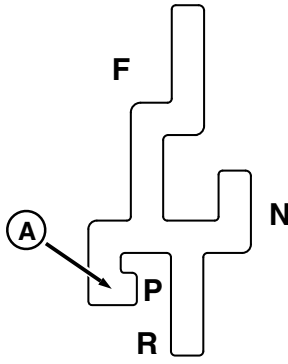
John Deere is a trademark of Deere & Company

OURX935,0000B23 -19-02SEP09-1/1

Checking Transmission PARK Position



PowerShift Transmission, AutoPowr™ Left-Hand and AutoPowr Right-Hand Reverser In Park Position



A—Shift Lever in PARK

Position tractor on a 30% incline (1 m (3.3 ft) vertically for every 3 m (9.8 ft) horizontally) with front of tractor facing downward.

Move shift lever (A) to PARK position.

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John Deere is a trademark of Deere & Company*

Transmission should be repaired **immediately** by your John Deere™ dealer, if tractor does not hold on incline with shift lever in PARK position.

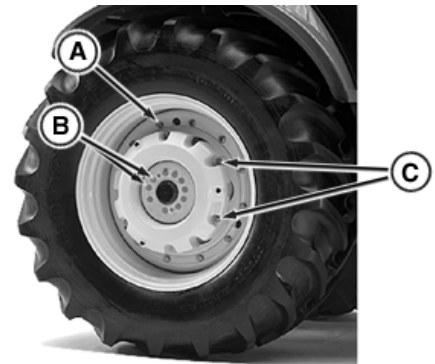
OURX935,0000B59 -19-08SEP09-1/1

Checking Wheel and Wheel Weight Bolts

Torque rim to wheel bolts (A) and hub bolts (B) per torquing procedure listed in the Wheels, Tires and Treads section. Torque weight bolts (C) per torquing procedure listed in the Performance Ballasting section.

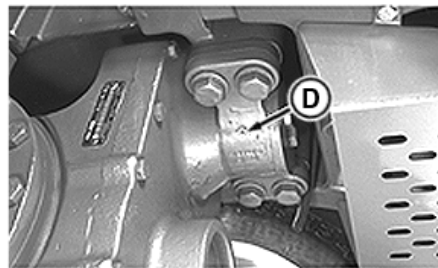
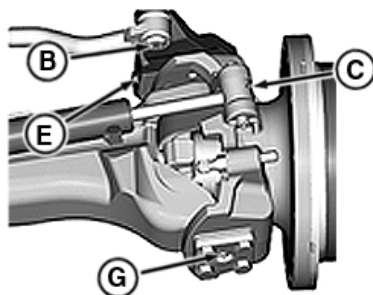
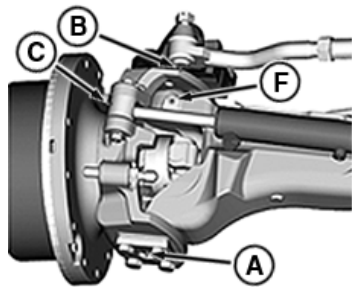
A—Rim to Wheel Bolts
B—Hub Bolts

C—Weight Bolts



OURX935,00002B8 -19-19JUN08-1/1

Lubricating MFWD Axle



RXA0098557-UN-16JUN08

Kingpins, Tie Rods and Steering Cylinder

A—Kingpin Fittings, Bottom
B—Tie Rod Fittings

C—Steering Cylinder Fittings
D—Axle Pivot Fittings

E—Kingpin Fitting, Top, Right Side
F—Kingpin Fittings, Top, Left Side

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section. *In extremely wet conditions or where ac is used, service daily or every 10 Hours.*

Kingpins—Lubricate fittings (A, E, and F) until grease appears at orifice on bottom end of each kingpin bearing.

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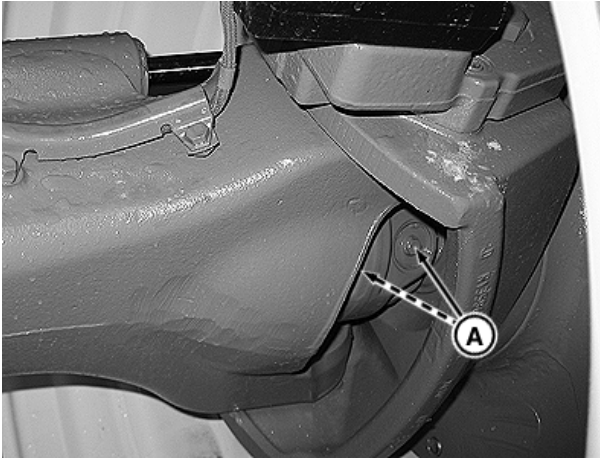
Tie Rods—Lubricate fittings (B).

Steering Cylinder—Lubricate fittings (C).

Axle Pivot—Lubricate front and rear fittings (D).

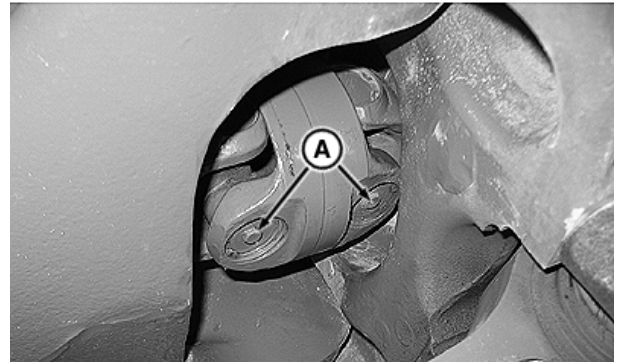
OURX935,0000B27 -19-02SEP09-1/1

Lubricating MFWD U-Joints



1300 MFWD Axle

RXA0095783 —UN—21AUG07



1500 MFWD Axle

RXA0095780 —UN—21AUG07

A—Plug

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section. *In extremely wet conditions service daily or every 10 Hours.*

Apply grease to both U-joints, using fitting (A).

Drilled passages in the cross allow grease to reach all four bearings from a single grease fitting.

For normal operations, outboard U-joints are sealed and not equipped with grease fittings. For extremely wet conditions:

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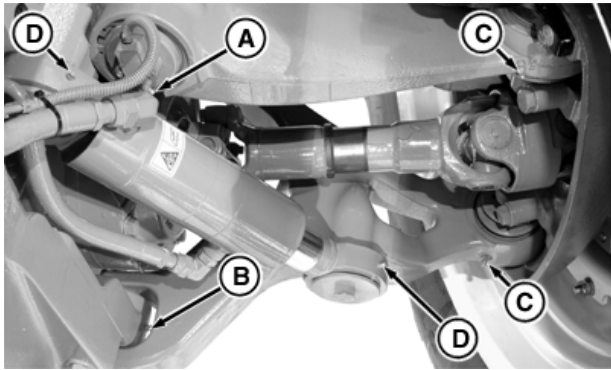
1. Replace plugs (A) with M10 thread 90° grease fittings, part number 58M5580.
2. Lubricate U-joints.
3. Replace grease fitting with plug and tighten to torque specification.

Specification

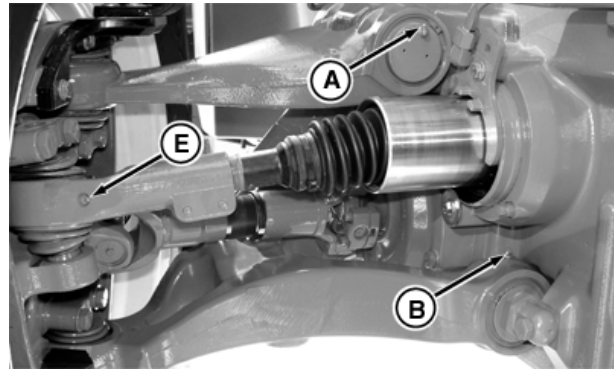
Plug—Torque..... 0.904 N·m (8 lb-in)

OURX935,0000B28 -19-02SEP09-1/1

Lubricating Independent Link Suspension Axle—External Fittings



RXA0056573 —UN—30AUG01



RXA0056575 —UN—30AUG01

A—Upper Control Arm Fittings
B—Lower Control Arm Fittings

C—Kingpin Fittings
D—Suspension Cylinder Fittings

E—Tie Rod Fittings

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section.

Upper Control Arms—Lubricate fittings (A) on each side of suspension.

Lower Control Arms—Lubricate fittings (B) on each side of suspension.

Kingpins—Lubricate fittings* (C) for each kingpin bearing.

*John Deere is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company*

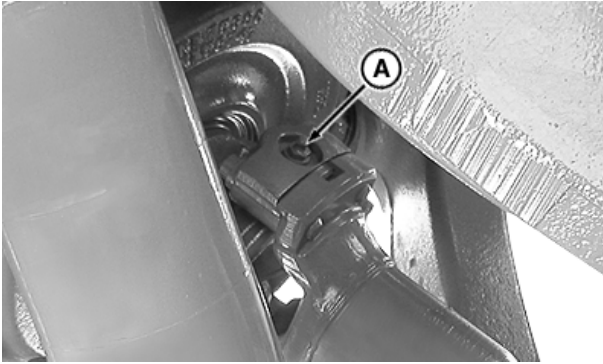
Suspension Cylinders—Lubricate fittings (D) for both ends of each suspension cylinder.

Tie Rods—Lubricate fittings* (E) for each tie rod.

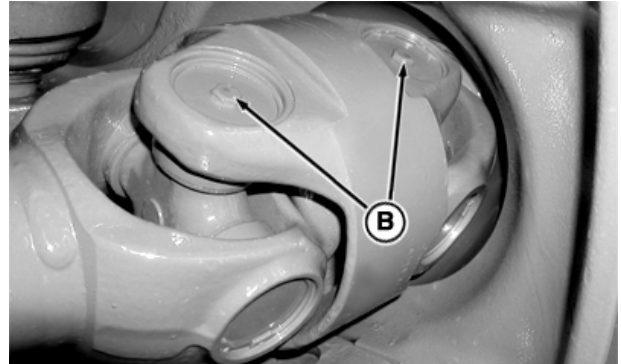
* Daily or 10 Hours in extremely wet conditions or where AutoTrac™ is used

OURX935,0000B29 -19-12SEP09-1/1

Lubricating Independent Link Suspension Axle U-Joints



Inboard U-joint



Outboard U-joint

A—Grease Fitting

B—Plug

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section. *Daily or 10 Hours in extremely wet conditions or where AutoTrac™ is used.*

Apply grease to both inboard U-joints, using fitting* (A).

Drilled passages in the cross allow grease to reach all four bearings from a single grease fitting.

For normal operations, outboard U-joints are sealed and not equipped with grease fittings. For extremely wet conditions:

1. Replace plugs (B) with M10 thread 90° grease fittings, part number 58M5580.
2. Lubricate U-joints.
3. Replace grease fitting with plug and tighten to torque specification.

Item	Measurement	Specification
Plug	Torque	0.904 N·m (8 lb-in)

*John Deere is a trademark of Deere & Company
AutoTrac is a trademark of Deere & Company*

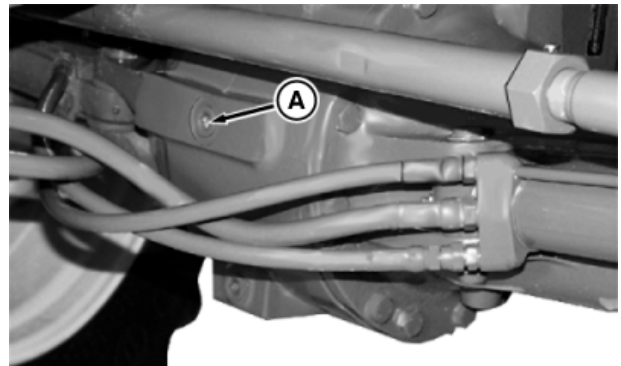
OURX935,0000B2A -19-02SEP09-1/1

Checking MFWD Differential Case Oil Level

Check differential case oil level. Oil level should be just below plug hole (A). If low, add through same hole.

John Deere™ Hy-Gard™ HY-GARD oil is recommended.

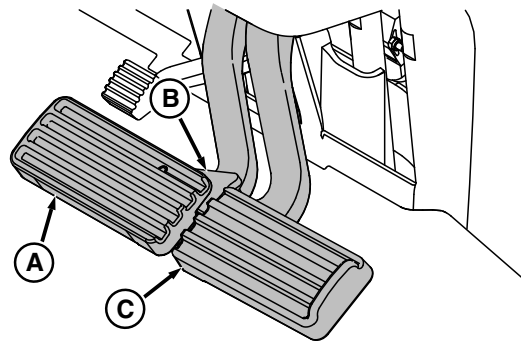
A—Plug Hole



*John Deere is a trademark of Deere & Company
Hy-Gard is a trademark of Deere & Company*

OURX935,0000B2B -19-02SEP09-1/1

Checking Manual Brakes



A—Left Brake

B—Latch Bar

C—Right Brake

With engine stopped, check manual brakes for correct function:

1. Pump individually the left brake (A) and right brake (C). If pedals have no resistance, see your John Deere™ dealer.
2. Check to make sure that the pedals do not settle to the end of stroke within 10 seconds after being applied. If leakage exceeds this rate or if one pedal settles faster than the other, see your John Deere dealer.
3. Press both pedals simultaneously. Resistance should be felt on both pedals at approximately the same pedal

height. If height varies more than 51 mm (2 in.), see your John Deere dealer.

IMPORTANT: Any noticeable pedal drift downward from the point of resistance indicates brake leakage. See your John Deere dealer.

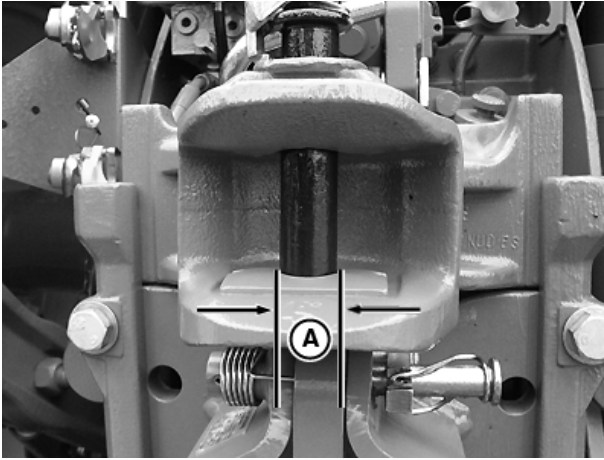
A solid pedal and balance between the left and right pedals are important for emergency braking conditions when the latch bar (B) is used.

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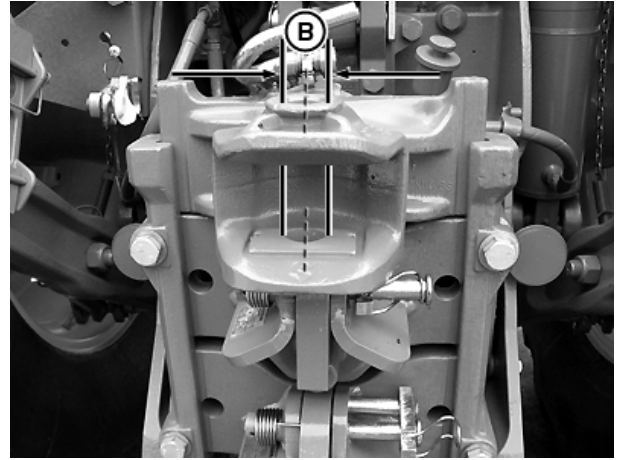
OURX935,00002C1 -19-12SEP09-1/1

RXA0098561 —UN—16JUN08

Checking the Manually-Operated Hitch for Wear



RXA0095855 —UN—29AUG07



RXA0095855 —UN—29AUG07

A—Diameter (A)

B—Diameter (B)

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

Check diameter (A) of the hitch pin.

Specification

Hitch pin—Wear limit or minimum diameter.....	29.0 mm
	1.14 in.

Check diameter (B) of the receiver hole.

Specification

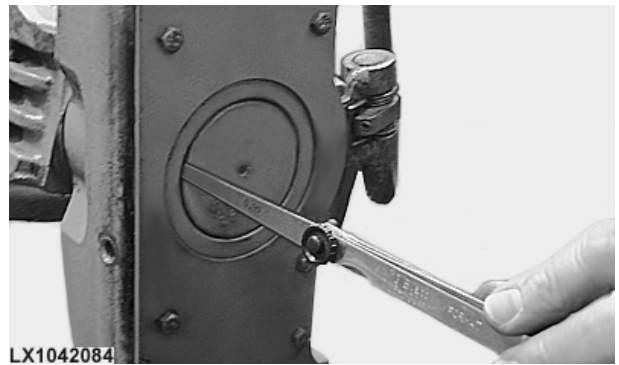
Top and bottom receiver holes (measured in direction of travel)—Wear limit or maximum permitted diameter.....	35.0 mm (oval)
	1.38 in. (oval)

OURX935,0000824 -19-12SEP09-1/2



LX1042085 —UN—26FEB07

Gap "X"



LX1042084 —UN—26FEB07

Bearing Play "Y"

Replace retaining wire if:
Gap (X) is greater than 3 mm (0.118 in.)

IMPORTANT: If bearing play (Y) is greater than 1.5 mm (0.059 in.) the entire trailer hitch must be replaced with a new hitch.

OURX935,0000824 -19-12SEP09-2/2

Check Remote Controlled Hitch for Wear

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

Check diameters (A and B) of the hitch pin

Specification

Ball-shaped hitch pin—Wear limit or minimum diameter (B)..... 36 mm
1.42 in.

Ball-shaped hitch pin—Wear limit or minimum diameter (C)..... 27 mm
1.06 in.

Check diameter (C) of the receiver hole.

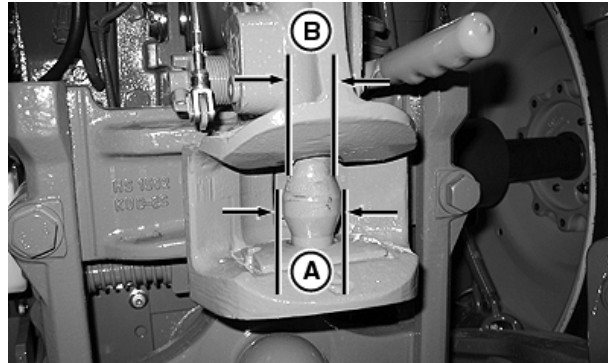
Specification

Bottom receiver hole (in direction of travel)—Wear limit or maximum permitted diameter..... 34 mm (oval)
1.33 in. (oval)

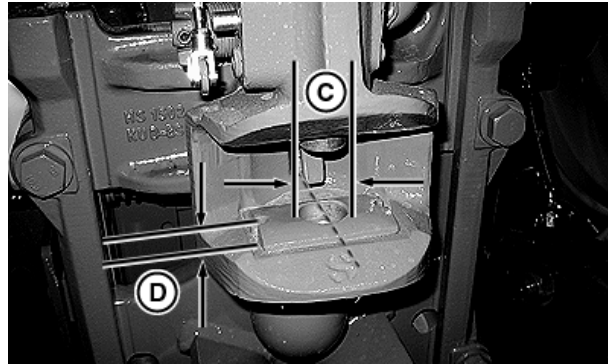
Check thickness (D) of wear plate.

Specification

Wear plate—Wear limit or maximum permitted thickness (E)..... 6 mm
0.24 in.



RXA0095843 —UN—29AUG07



RXA0095844 —UN—29AUG07

A—Hitch Pin Diameter (A)
B—Hitch Pin Diameter (B)

C—Receiver Diameter (C)
D—Wear Plate Thickness (D)

OURX935,0000825 -19-12SEP09-1/2



LX1042085 —UN—26FEB07

Gap "X"



LX1042084 —UN—26FEB07

Bearing Play "Y"

Replace retaining wire if:
Gap (X) is greater than 3 mm (0.118 in.)

IMPORTANT: If bearing play (Y) is greater than 1.5 mm (0.059 in.) the entire trailer hitch must be replaced with a new hitch.

OURX935,0000825 -19-12SEP09-2/2

Check for Wear at Tow Hitch (Piton Fix)

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

Check gap (B) at catch.

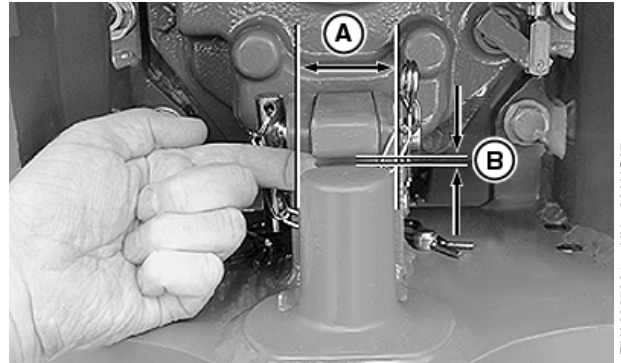
Specification

Gap at catch—Maximum permissible clearance..... 10.0 mm
0.39 in.

Check diameter (A) of the pin.

Specification

Pin—Wear limit or minimum diameter..... 41.5 mm
1.63 in.



RXA0095864 —UN—29AUG07

A—Pin Diameter

B—Gap

OURX935,0000826 -19-12SEP09-1/1

Check for Wear at Ball-Type Tow Hitch

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

Check gap (A) at catch.

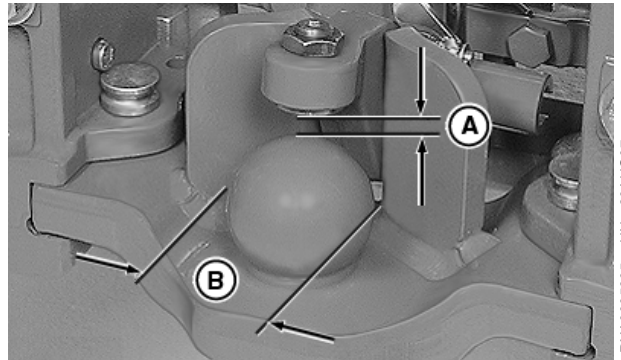
Specification

Gap at catch—Maximum permissible clearance..... 4.0 mm
0.16 in.

Check diameter (B) of the ball.

Specification

Ball diameter—Wear limit or minimum diameter..... 78.0 mm
3.07 in.



RXA0095865 —UN—29AUG07

A—Gap

B—Ball Diameter

OURX935,0000827 -19-12SEP09-1/1

Check Tow-Hook on Pick-Up Hitch for Wear

CAUTION: Parts that have reached or exceeded their wear limit must be replaced with new parts.

Check gap (A) at catch.

Specification

Gap at catch—Maximum permissible clearance.....	10.0 mm 0.39 in.
---	---------------------

Read the "D"-value (unit of measurement = kN) from pick-up hitch type plate.

If the "D"-value indicated on the type plate is 65 or less, observe the following wear tolerances (A).

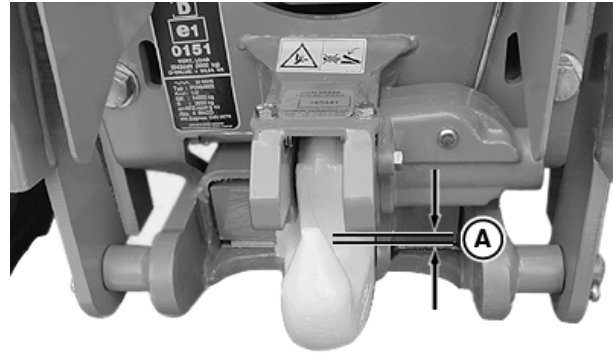
Specification

Tow hook, diameter (D = 65 or less)—Minimum value (A), diameter 1.....	43.5 mm 1.71 in.
Minimum value (A), diameter 2.....	42.0 mm 1.65 in.
Minimum value (A), diameter 3.....	40.5 mm 1.59 in.

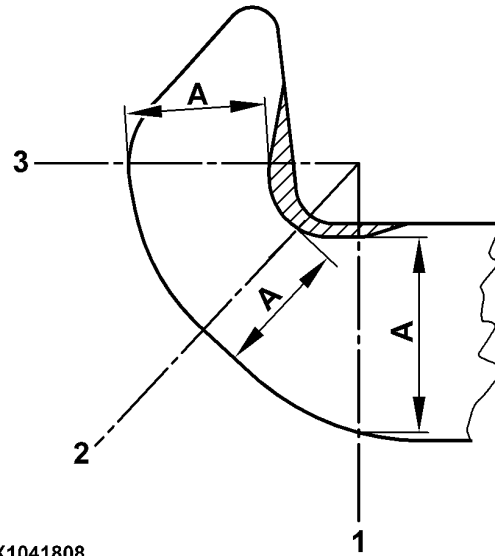
If the "D"-value indicated on the type plate is greater than 65, observe the following wear tolerances (A).

Specification

Tow hook, diameter (D = more than 65)—Minimum value (A), diameter 1.....	45.0 mm 1.77 in.
Minimum value (A), diameter 2.....	43.5 mm 1.71 in.
Minimum value (A), diameter 3.....	42.0 mm 1.65 in.



RXA0095866 —UN—29AUG07



LX1041808

A—Gap

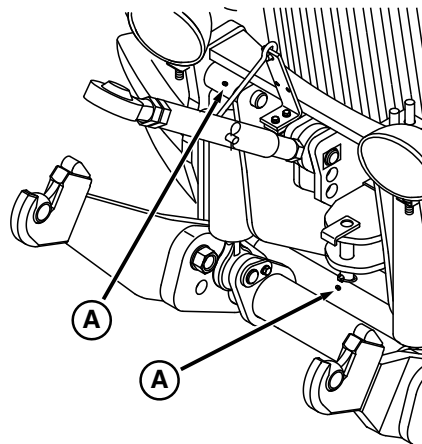
LX1041808 —UN—27NOV06

OURX935,0000829 -19-12SEP09-1/1

Lubricating Front Hitch (If Equipped)

Use John Deere SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section to lubricate front hitch fittings (A). Daily or 10 Hours in extremely wet conditions.

A—Front Hitch Fittings



RXA0085964 —UN—10MAR06

OURX935,00002C2 -19-12SEP09-1/1

Draining Fuel Tank Sump

IMPORTANT: Use wrench to hold drain fitting before opening tee or damage to tank threads can occur.

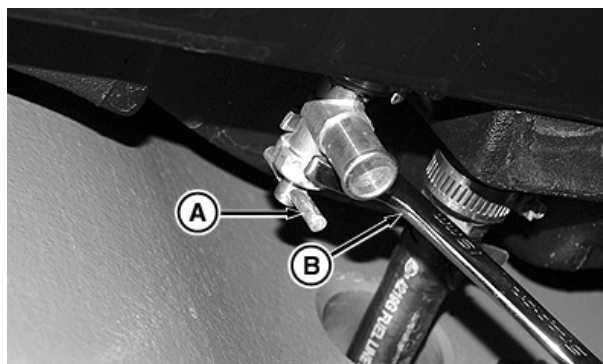
Open drain tee (A) while holding drain fitting with wrench (B).

Drain fuel from tanks until clean fuel appears from tank.

Hold fitting with wrench to close drain tee.

A—Drain Tee

B—Wrench



RXA0078828 —UN—04FEB05

OURX935,00002C3 -19-19JUN08-1/1

Checking Dual Beam Radar Sensor

Check and clean radar sensor depending on operating conditions.

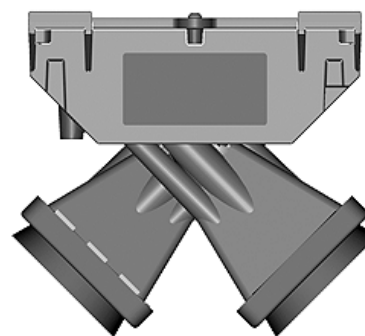
IMPORTANT: Inspect radar sensor horns for dirt or debris build up, which may affect accuracy performance.

Avoid use of high pressure washer nozzle pointed directly at radar.

Avoid damage to radar and wiring harness when using sharp tools to remove dirt or packed mud around radar.

Clean radar sensor horns with warm water and mild soap.

Dry with clean soft cloth.



Dual Beam Radar

RXA0093527 —UN—24APR07

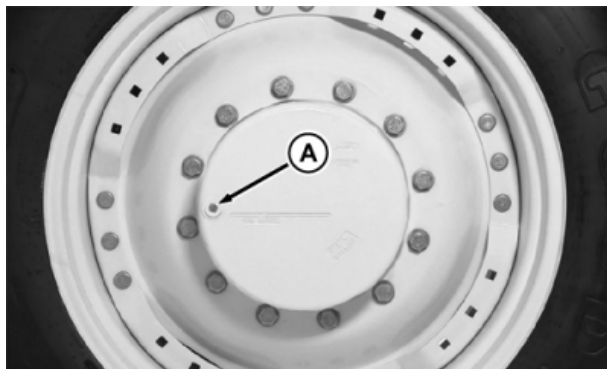
OURX935,00005D0 -19-15SEP09-1/1

Checking MFWD or Independent Link Suspension Wheel Hub Oil Level

Put the tractor on level ground. Turn wheel hubs until the words OIL LEVEL are horizontal. Remove plug (A). Oil level should be just below plug hole. If low, add oil through same hole.

John Deere™ GL-5 Gear Lubricant is recommended.

A—Plug



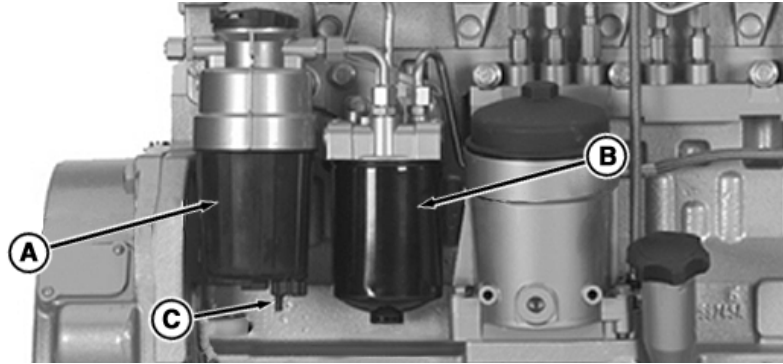
RW26335—UN—25JUN99

John Deere is a trademark of Deere & Company

OURX935,0000B2D -19-02SEP09-1/1

500 Hour Service

Replacing Fuel Filter Elements



Fuel Filters

A—Primary Fuel Filter

B—Final Fuel Filter

C—Drain Valves

IMPORTANT: Replace fuel filter elements anytime audible alarm sounds and diagnostic trouble codes indicate plugged fuel filters (low fuel pressure). If no alarm sounds during the 12 month service interval, replace elements at that time, or after 500 hours operation, whichever comes first.

1. Thoroughly clean exterior of fuel filters and surrounding area.
2. Drain water and contaminants from primary fuel filter (A) into suitable container by opening drain valves (C) on bottom of filter.
3. Disconnect the water-in-fuel (WIF) sensor connector from primary filter.

IMPORTANT: Always replace both filters at the same time.

4. Remove the final fuel filter (B) first, for clearance, using a suitable filter wrench. Then remove primary fuel filter (A) canister.
5. Remove primary fuel filter element and replace with new element.

IMPORTANT: Do NOT prefill either fuel filter with fuel.

6. Remove packing for primary fuel filter canister and replace with new packing provided with filter element. Lubricate packing for primary fuel filter with fuel, and install canister onto base. Tighten 1/2 turn after packing contacts base.
7. Connect sensor.
8. Lubricate packing on new final fuel filter, and install filter onto base. Tighten 1/2 turn after packing contacts base.

IMPORTANT: Key must be turned to ON position for 60 seconds before starting engine to provide time to prefill fuel filters. Fuel system is self-bleeding.

9. Turn key switch to ON position for 60 seconds to allow transfer pump to prefill fuel filters.
10. Turn key switch clockwise to START position, and run engine at fast idle for 2 minutes.

OURX935,00004C8 -19-29AUG08-1/1

RXA0088950 —UN—28AUG08

750 Hour Service

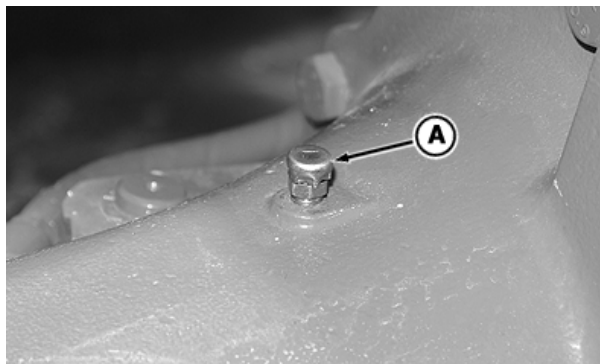
Cleaning MFWD Axle Vent Filter

NOTE: If vent filter is packed with dirt, soak in solvent before blowing air through breather vent. Interval may vary according to operating conditions.

IMPORTANT: Allowing excess dirt and foreign material to build up in vent filter may cause damage to axle seals.

Remove axle vent filter (A). Clean by blowing air through vent filter (bottom to top).

A—MFWD Axle Vent Filter



RXA0078357 —UN—08DEC04

OURX935,00002D4 -19-11JUN08-1/1

Cleaning Fuel Tank Vent Filter

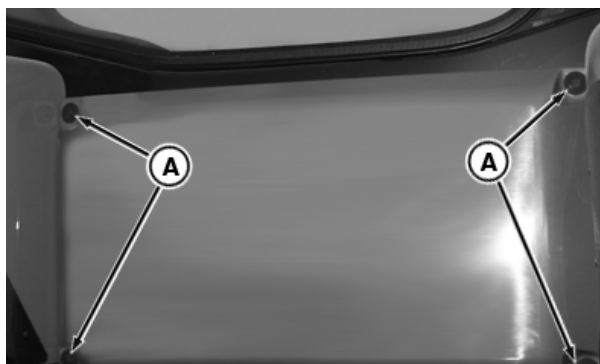
Remove four cap screws (A) and lift off cab back panel .

Fuel tank vent filter is located under back panel on tractor left-side side. Remove fuel tank vent filter (B) and clean in soapy detergent solution.

Blow dry with compressed air and replace.

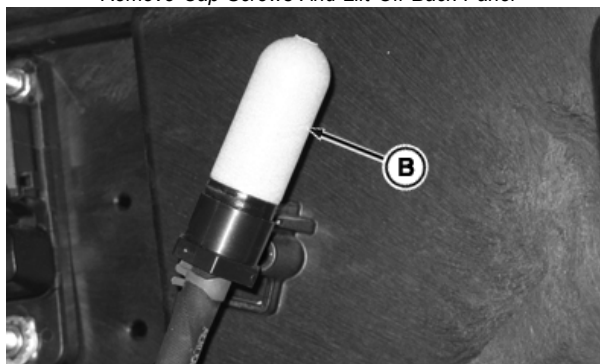
A—Cap Screws

B—Fuel Tank Vent Filter



RXA0104629 —UN—09SEP09

Remove Cap Screws And Lift Off Back Panel



RXA0100451 —UN—17MAR09

Remove Fuel Tank Vent Filter

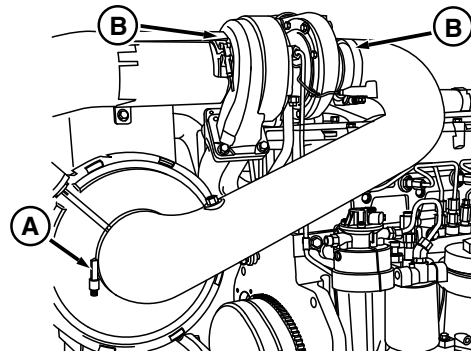
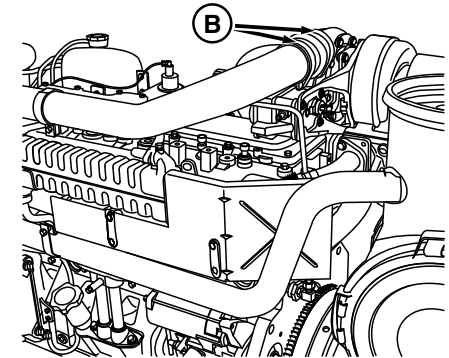
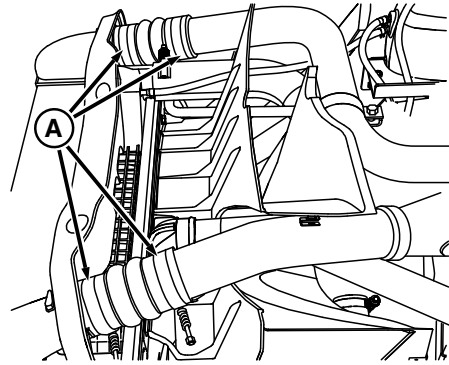
OURX935,0000B69 -19-12SEP09-1/1

Servicing Air Intake System

Check all air intake system joints (A) to make sure that they are not damaged and have tight connections with no air leaks. Interval can vary according to operating conditions

Check hose clamps (B) at turbocharger to make sure that they are not damaged and have a tight connection.

A—Air Intake System Joint **B—Hose Clamps**



RXA0080176 —UN—07APR05

RXA0079201 —UN—22FEB05

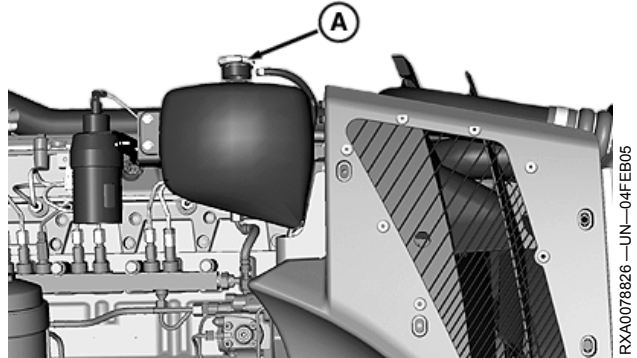
RXA0079202 —UN—22FEB05

OURX935,00002D5 -19-11JUN08-1/1

Testing Coolant



TS281 —UN—23AUG88



RXA0078826 —UN—04FEB05

A—De-aeration Tank Cap

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

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

1. Raise hood.
2. Slowly turn de-aeration tank cap (A) to relieve pressure. Remove cap.

NOTE: De-aeration tank will not be full of coolant when cap is removed. When inspecting tank, if it is at least half full, do not add additional coolant.

3. Test coolant using TY26605 COOL-GARD™II 3-way test strips available from your John Deere dealer.

COOL-GARD is a trademark of Deere & Company

NOTE: Follow instructions on back of reader card in test strip pack when testing coolant.

4. Add TY26603 COOL-GARD II Coolant Extender available from your John Deere dealer as indicated by the color matrix on reader card in test strip pack. If tank is too full, drain a small amount of coolant from system before extender is added.

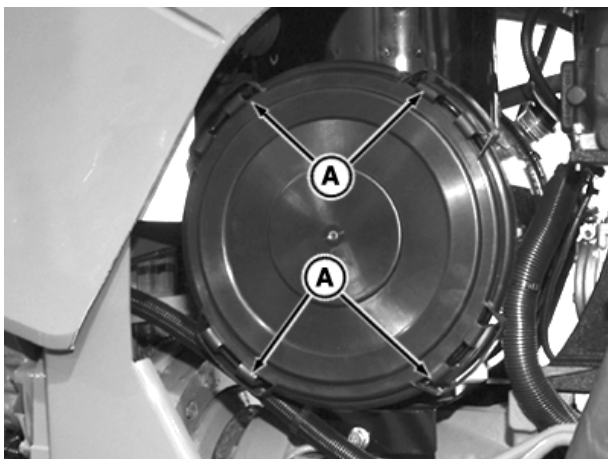
NOTE: Cap gasket should be visually checked for sealing effectiveness. A good functioning gasket should have the imprint of the mating surface with no apparent scratches or leak paths.

5. Install de-aeration tank cap and lower hood.

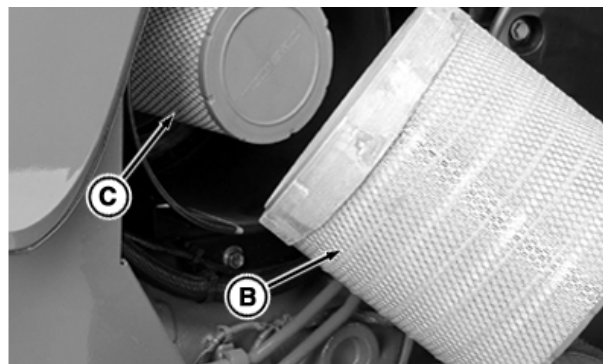
OURX935,00002D6 -19-11DEC08-1/1

Annual Service

Cleaning, Inspecting, Replacing Primary Engine Air Filter



Remove Cover



Secondary Filter

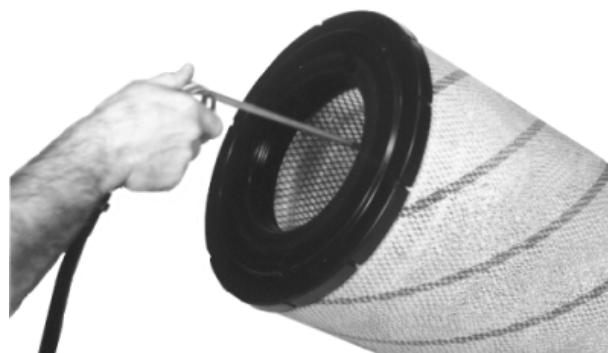
NOTE:

Service primary air filter if service alert light is ON. Replace filters **at least** once a year or after six cleanings or if air filter service alert remains ON after cleaning.

When service light and code indicates engine air filter is plugged cab air filters should also be inspected and if plugged or damaged, cab air filters should also be replaced.

1. Unfasten plastic clips (A), and remove filter cover. Interval can vary according to operating conditions.
2. Turn and pull to remove primary filter (B).
3. Clean filter using compressed air. Hold nozzle next to **inner** surface and move up and down pleats.
4. Hold a bright light inside filter and check carefully for damage. Discard filter if screen is damaged or filter shows the slightest rupture or hole.

IMPORTANT: Do not attempt to clean secondary filter (C). Replace secondary filter annually or every second primary filter change. Install



Clean And Inspect Primary Filter

A—Clips
B—Primary Filter

C—Secondary Filter

new secondary filter immediately to prevent dust from entering air intake system.

5. make sure that gasket is in good condition.
6. Replace filter elements and install cover.

OURX935,00008D6 -19-04MAR09-1/1

Replacing Cab Air Filters and Recirculation Filters

Recirculation Filter

⚠ CAUTION: Cab air filters are not designed to filter out harmful chemicals. Follow the instructions in the implement operator's manual and those given by the chemical manufacturer when using agricultural chemicals. * *Interval can vary according to operating conditions*

1. Remove upholstery cover (A) in the headliner by grabbing outer edges and pulling down.

NOTE: When removing fasteners (B), hold cover (C) in place with one hand.

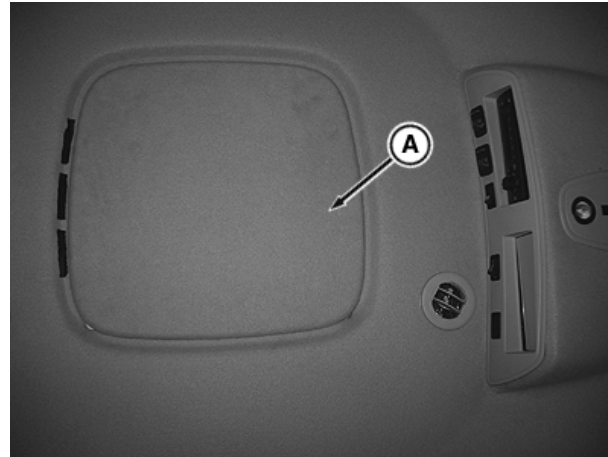
2. Remove fasteners allowing cover to be lowered.

NOTE: Using a clean cloth, wipe down inside and outside filter cover before installing new filter.

3. Remove and inspect condition of filter.
4. Replace filter (D) annually or when plugged or damaged.
5. Re-Install cover (C).
6. Re-install cover panel by lining up ball studs (E) with clip nuts (F) and pushing up.

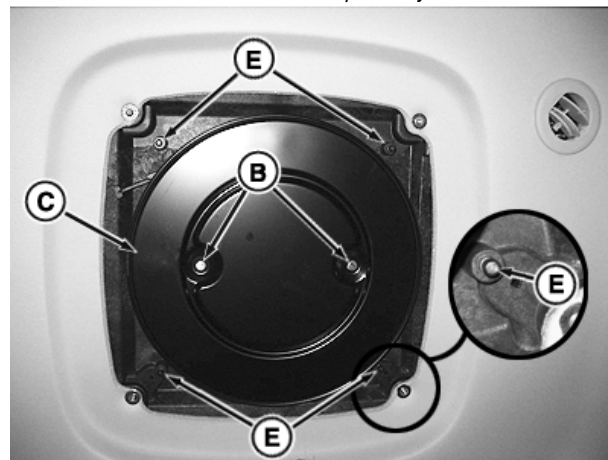
A—Upholstery Cover
B—Fasteners
C—Cover

D—Filter
E—Ball Stud
F—Clip Nuts



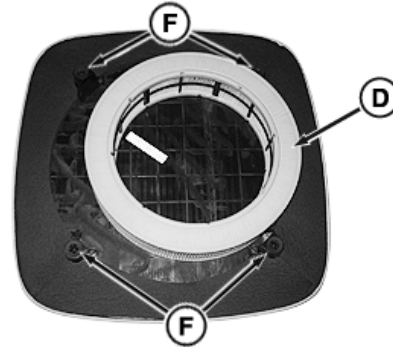
RXA0098070 —UN—18SEP08

Remove Roof Upholstery



RXA0100957 —UN—17MAR09

Remove Cover



RXA0100959 —UN—17MAR09

Remove Filter

Continued on next page

OURX935,0000512 -19-26JUN09-1/3

Cab Fresh Air Filter

1. Support cover then turn knob allowing cover (A) to swing down.
2. Remove old filter (B).
3. Inspect condition of filter.
4. Replace filter annually or sooner when plugged or damaged.

NOTE: Using a clean cloth, wipe down inside and outside filter cover before replacing old filter or installing new filter.

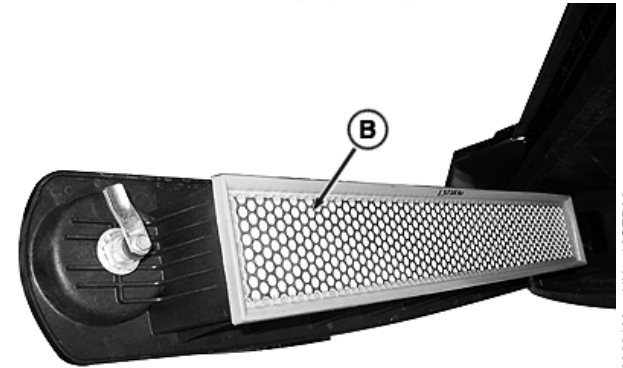
A—Cover

B—Knob



RXA0099137 —UN—19SEP08

Let Cover Swing By Turning Knob



RXA0099139 —UN—19SEP08

Remove Filter



RXA0099699 —UN—04NOV08

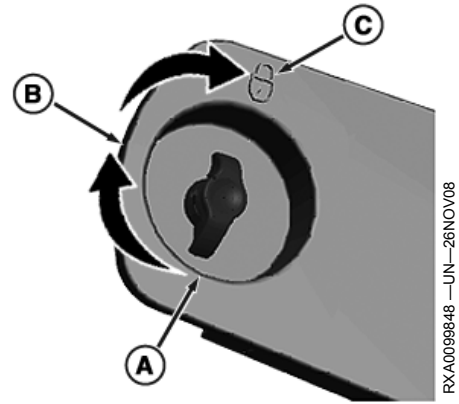
Continued on next page

OURX935,0000512 -19-26JUN09-2/3

5. If required, Install new filter.

NOTE: Filter cover has three positions; Open (A), latched (B) and locked (C).

6. Close cover and turn knob 180° so that latch is locked.



Air Filter Cover

RXA009848 —UN—26NOV08

OURX935,0000512 -19-26JUN09-3/3

Handling Batteries Safely

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

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

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

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

Avoid hazards by:

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

If acid is spilled on skin or in eyes:

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

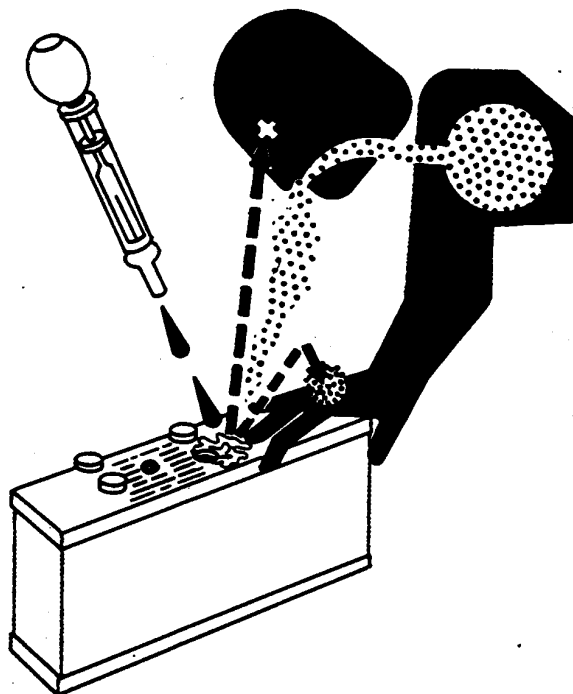
If acid is swallowed:

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

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



TS204 —UN—23AUG88



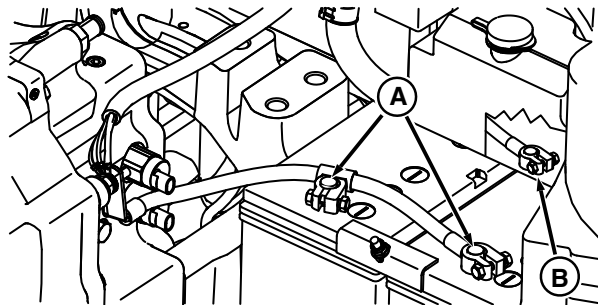
TS203 —UN—23AUG88

ZE59858,0000686 -19-11JAN11-1/1

Servicing Batteries



RXA0086786 —UN—14FEB06



RXA0086787 —UN—14FEB06

Disconnect Negative Battery Cables Before Positive Cables

A—Negative Battery Cables

B—Positive Battery Cables

NOTE: Although this battery is a maintenance free battery, conditions such as long periods of operation at high ambient temperatures and excessive engine cranking may require adding water. See label on battery.

CAUTION: Never use compressed air to clean batteries. It can cause a build up of static charge leading to potential injury.

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

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

Always remove battery ground cables before positive battery cables and connect them last. Do not let disconnected ground terminal touch metal surface.

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

CAUTION: Avoid contact with poisonous sulfuric acid in battery electrolyte. Battery acid can burn skin, damage clothing, and cause blindness if splashed into eyes.

NOTE: For optimum battery performance, keep battery terminals clean and tight.

For replacement batteries, follow manufacturer's recommendations.

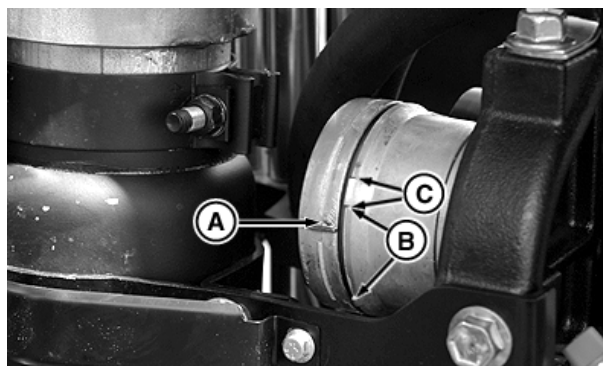
1. Remove battery compartment cover.
2. Remove battery hold down clamp and slide batteries forward.
3. **Disconnect negative battery cables (A), then positive battery cables (B).**
4. Remove any corrosion with a terminal brush, then clean terminals and battery posts using a baking soda and water solution.
5. Rinse with clean water and air dry.
6. Connect positive battery terminals, then connect negative battery terminal.
7. Apply thin coat of grease to cable ends.
8. Slide batteries back into compartment and install battery hold down clamp.
9. Install battery compartment cover.

OURX935,00002E2 -19-05AUG08-1/1

Inspecting Auxiliary Drive Belt

Inspect auxiliary drive belt as outlined below.

1. Inspect auxiliary drive belt indicator.
2. If indicator (A) is within normal operating band (B), do NOT change auxiliary drive belt. If indicator (A) is within stretch indicator band (C), change auxiliary drive belt.
3. Release belt, then check to see that tensioner pulley turns smoothly without binding. See Replacing Auxiliary Drive Belt in this section.
4. If tensioner pulley appears damaged or worn, replace it.



A—Indicator
B—Normal Operating Band

C—Stretch Indicator Band

RXA0078787 —UN—08APR05

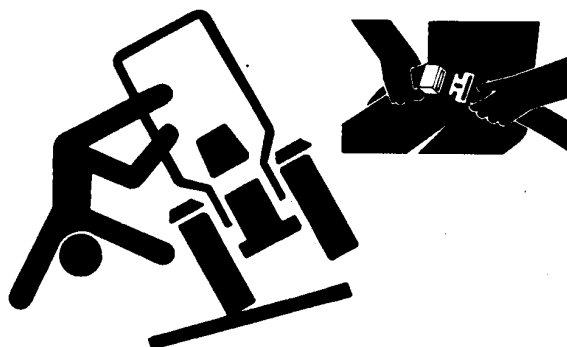
OURX935,00002E3 -19-11JUN08-1/1

Inspecting Seat Belts

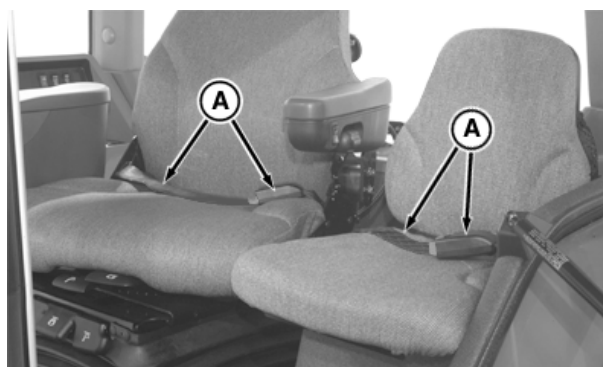
CAUTION: If seat belt system, including mounting hardware, buckle, belt, or retractor shows any sign of damage such as cuts, fraying, extreme or unusual wear, discoloration or abrasion, the entire seat belt system should be replaced immediately. Replace belt system only with replacement parts approved for your machine.

Inspect seat belts (A) and mounting hardware. If seat belts need to be replaced, see your John Deere™ dealer.

A—Seat Belts



TS205 —UN—23AUG88



RXA0062690 —UN—20SEP02

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OURX935,0000B2F -19-02SEP09-1/1

Checking Independent Link Suspension Upper and Lower Rod and Head End Accumulator Charge Pressure

See your John Deere™ dealer for details.

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OURX935,0000B30 -19-02SEP09-1/1

1500 Hour Service

Draining Differential And Clean Oil Reservoir

IMPORTANT: Change oil in clean oil reservoir immediately if oil is contaminated with water.

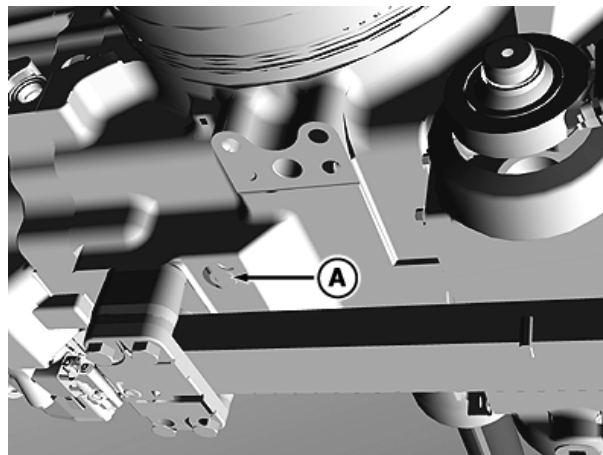
1. Park tractor on level ground (in a shop) with hitch lowered.
2. Place drain pan under differential case.
3. Remove drain plug (A) on bottom of rear differential case. Retain drain plug for reinstallation.
4. After used oil is completely drained, reinstall drain plug.
5. Dispose of used oil in accordance with local laws and ordinances.

NOTE: If tractor is equipped with ActiveSeat™ disconnect elbow and a return oil line to drain clean oil reservoir.

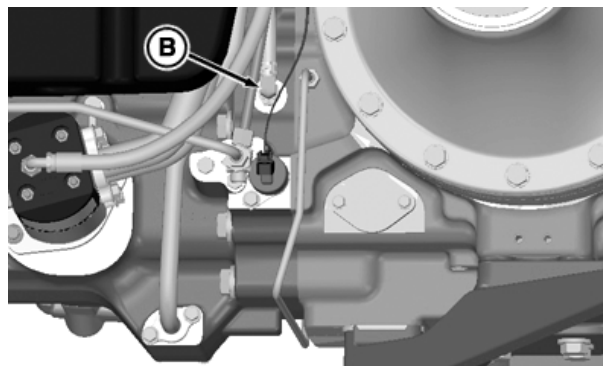
6. Place drain pan under clean oil reservoir drain plug.
7. Remove clean oil reservoir drain plug (B) to drain oil in catch pan.
8. Place drain plug in a safe place so that it can be reinstalled before refilling.
9. After oil is completely drained, reinstall drain plug.
10. Dispose of used oil in accordance with local laws and ordinances.
11. For tractors with PowerShift (PST) transmission, proceed to Draining PST Transmission in this section.

For tractors with IVT™/AutoPowr™ transmission, proceed to Draining IVT™/AutoPowr™ Transmission and Screen in this section.

*ActiveSeat is a trademark of Deere & Company
IVT is a trademark of Deere & Company
AutoPowr is a trademark of Deere & Company*



RXA0078660 —UN—21JAN05



RXA0110091 —UN—26AUG10

A—Differential Drain Plug

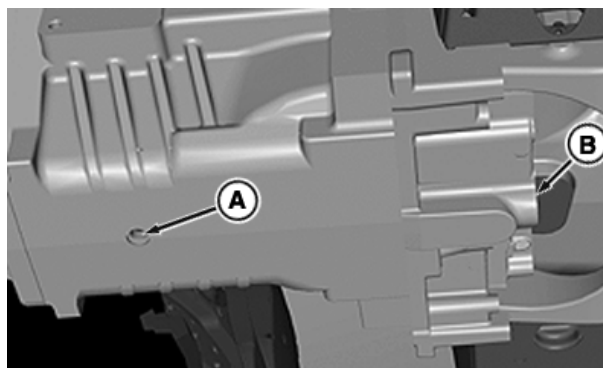
B—Clean Oil Reservoir Drain Plug

OURX935,000004B -19-21SEP10-1/1

Draining PowerShift (PST) Transmission and Cleaning Filter

1. Place drain pan under transmission drain plug.
2. Remove drain plug (A).
3. Retain drain plug for reinstallation.
4. Remove large transmission filter screen plug (B).
5. Remove filter screen and wash carefully in solvent. Blow dry with compressed air before reinstalling screen.
6. Replace transmission screen and drain plug.
7. Dispose of used oil in accordance with local laws and ordinances.
8. For tractors equipped with Independent Link Suspension, proceed to Draining Independent Link Suspension (If Equipped).

For tractors not equipped with Independent Link Suspension, proceed to Cleaning Hydraulic Oil Suction Screen in this section.



RXA01 10092 —UN—26AUG10

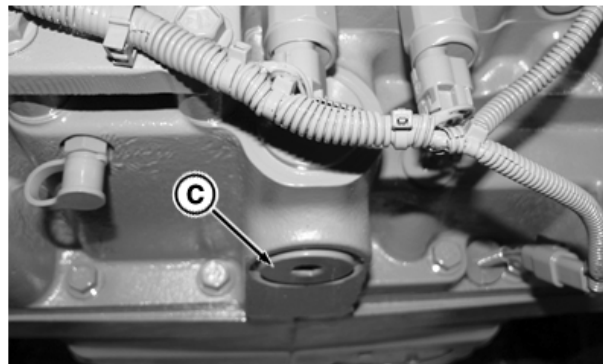
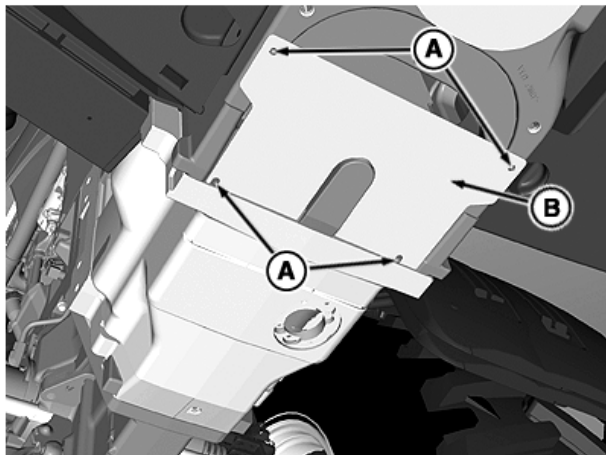
PST Transmission and Filter Screen

A—Drain Plug

B—Filter Screen Plug

OURX935,0000049 -19-20SEP10-1/1

Draining IVT™/AutoPowr™ Transmission And Cleaning Transmission Filter



RXA0110093 —UN—26AUG10

Remove IVT™/AutoPowr™ Transmission Cover, Drain Plug and Drain Transmission

A—Cap Screws

B—Cover

C—Drain Plug

1. Remove four cap screws (A) and cover (B).
2. Place drain pan under transmission drain plug.
3. Remove drain plug (C).
4. Retain drain plug for reinstallation.
5. Using a work light, inspect the filter through the bottom drain plug opening.
6. If the filter screen appears clean, reinstall plug, and dispose of oil in accordance with local laws and ordinances.

If screen appears dirty, remove screen as described below.

IMPORTANT: Do not remove screen unless it is dirty.
Refer to your John Deere™ dealer with any

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question you have on removing hydro control valve and/or transmission filter screen.

When working with hydraulic components, cleanliness is essential and ANY FOREIGN MATERIAL (DIRT) can damage equipment! Clean area around the hydro control valve thoroughly with steam cleaner prior to removing it, then make sure valve is clean before installing it.

IMPORTANT: Make sure wiring harness is disconnected and kept out of the way of any dripping oil before removing screen access plug. Oil in wiring harness connectors will damage equipment.

Continued on next page

OURX935,000004C -19-20SEP10-1/2

7. Remove connectors (A) on control valves then tuck wiring harness (B) out of the way.

IMPORTANT: Removing hydro control valve requires a 1 1/4 in. (deep broach) deep well socket (C) to avoid damaging control valve.

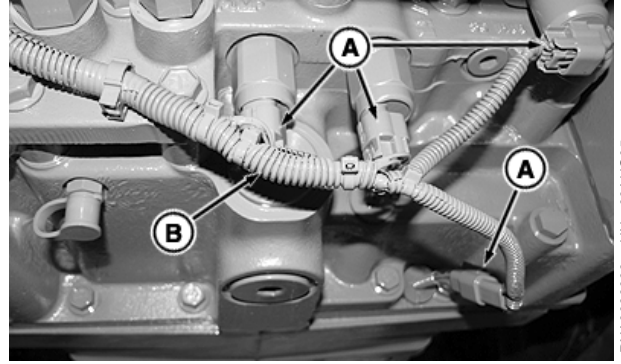
8. Remove hydro control valve (D).

NOTE: For tractors with Independent Link Suspension, remove screen carefully avoiding Independent Link Suspension tube (G).

9. Remove screen access plug (E) at front of transmission, then remove screen (F).
10. Remove filter screen and wash carefully in solvent. Blow dry with compressed air before reinstalling screen.
11. Install screen in transmission, front screen plug, and bottom drain plug.
12. Reinstall control valve and wiring harness connectors.
13. Reinstall drain plug.
14. Dispose of used oil in accordance with local laws and ordinances.
15. For tractors equipped with Independent Link Suspension, proceed to Draining Independent Link Suspension (If Equipped).
- For tractors not equipped with Independent Link Suspension, proceed to Cleaning Hydraulic Oil Suction Screen in this section.

A—Connectors
B—Wiring harness
C—Deep Well Deep Broach Socket
D—Hydro Control Valve

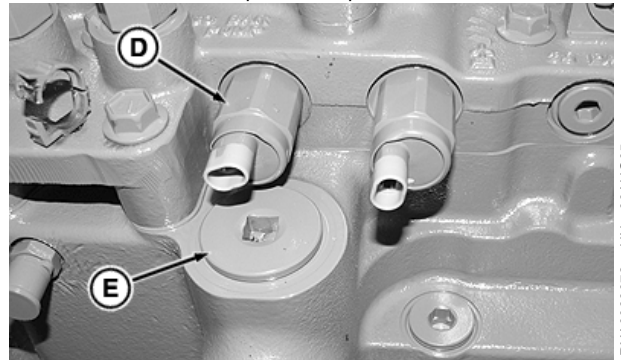
E—Screen Access Plug
F—Screen
G—Independent Link Suspension Tube



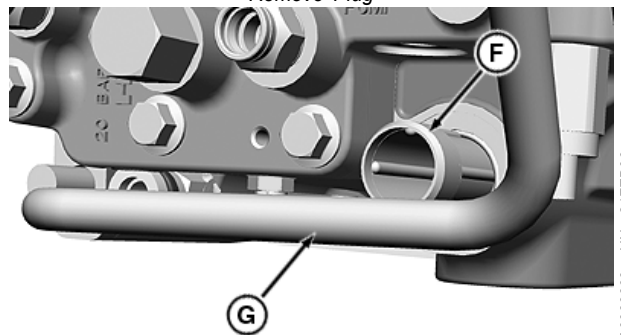
Remove Connectors



1 1/4 in. Deep Well Deep Broach Socket



Remove Plug



OURX935,000004C -19-20SEP10-2/2

RXA0083068 —UN—03AUG05

RXA0083064 —UN—03AUG05

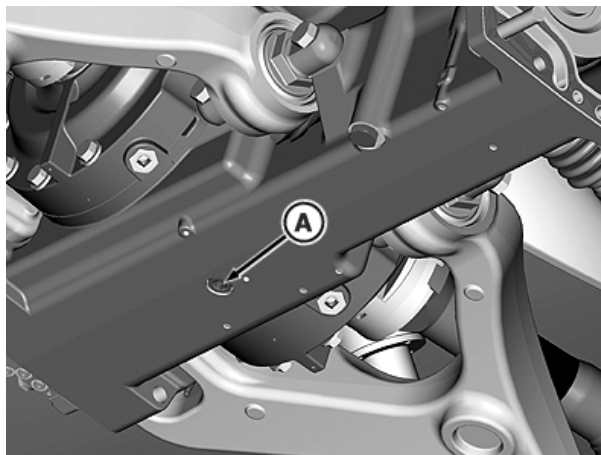
RXA0083072 —UN—03AUG05

RXA0086863 —UN—21FEB06

Draining Independent Link Suspension (If Equipped)

1. Place drain pan under Independent Link Suspension drain plug.
2. Remove drain plug (A).
3. Retain drain plug for reinstallation.
4. After oil is completely drained, reinstall drain plug.
5. Dispose of used oil in accordance with local laws and ordinances.
6. Proceed to Cleaning Hydraulic Oil Suction Screen in this section.

A—Drain Plug



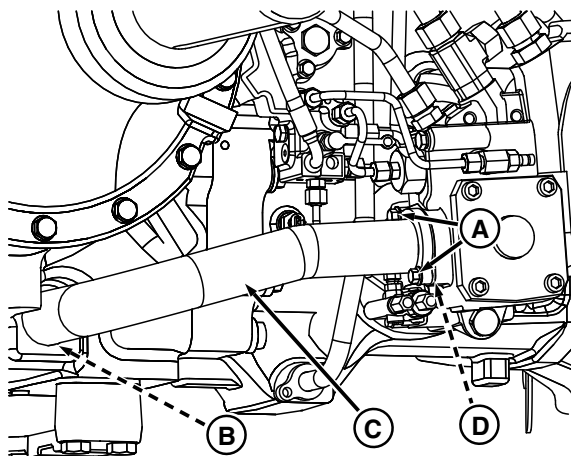
RXA0110830—UN—16SEP10

Drain Independent Link Suspension

OURX935,000004F -19-20SEP10-1/1

Cleaning Hydraulic Oil Suction Screen

1. Place drain pans under both ends of oil suction tube.
2. Remove cap screws (A) and tube (C) on differential case front left side.
3. Remove suction screen (B) and wash carefully in solvent, then blow dry screen with compressed air.
4. Reinstall suction screen.
5. Install tube making sure O-ring (D) is correctly positioned.
6. Dispose of any oil that may have leaked into catch pans in accordance with local laws and ordinances.
7. Proceed to Replacing Transmission/Hydraulic Filters And Refill Transmission/Hydraulic Oil.



RXA0082965—UN—04AUG05

**A—Cap Screws
B—Suction Screen**

**C—Tube
D—O-Ring**

OURX935,000004D -19-21SEP10-1/1

Replacing Transmission/Hydraulic Filters And Refill Transmission/Hydraulic Oil.

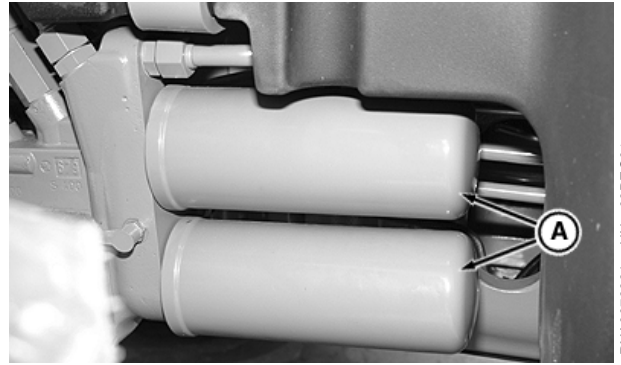
1. Place drain pan under transmission/hydraulic filters.
2. Remove **both** filters (A).
3. Lubricate the new filter packing with hydraulic oil only.

IMPORTANT: Make sure old packings are removed before installing new filters.

4. Install and hand tighten both new filter elements.
5. Before refilling transmission/hydraulic oil, check all drain plugs to be sure they are correctly installed.
6. Refill with Transmission/Hydraulic oil specified in Fuels, Lubricants, and Coolant section.

IMPORTANT: Fill differential housing with oil. Start engine and run at 900 rpm until clean oil reservoir level indicator light goes off (approximately 2 minutes). Refilling clean oil reservoir will take a few minutes.

NOTE: Oil temperature should be approximately 45° C. See *Changing Display Functions* in



Transmission/Hydraulic Filters

A—Transmission/Hydraulic Filters

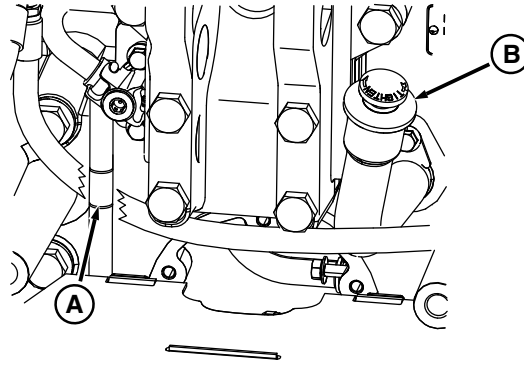
the CommandCenter section to determine oil temperature.

Sight glass observations will be significantly higher with hotter oil temperatures and lower with colder oil or if engine has not run long enough.

Continued on next page

OURX935,000015D -19-10NOV10-1/2

RXA0078381 —UN—09DEC04



RXA0098554 —UN—16JUN08

A—Sight Glass

B—Filler Cap

7. Operate engine at approximately 1000 rpm for at least one minute.
8. Stop engine and wait an additional three minutes for oil to settle back into differential case.
9. Ensure rear hitch is in lowered position.
10. Observe oil level in sight glass (A). Oil level should be between the marks on the glass. Optimum level is at the top mark.

IMPORTANT: Oil level above the top mark on sight glass can result in power loss and heat generation during transport.

If oil level is below the lower mark, remove filler cap (B) and add hydraulic oil.

11. Start and operate engine several minutes, then check for leaks.

12. Stop engine and recheck oil level after a minimum of five minutes.

13. Add oil as necessary.

Drain and Fill Capacity *

MFWD Axle:

.. System 150 L (40 gal)

Independent Link Suspension Axle:

.. System 160 L (42 gal)

* Capacities are average values and can vary between oil changes

OURX935,000015D -19-10NOV10-2/2

Changing MFWD Differential Case Oil

NOTE: The differential case for MFWD axle with Independent Link Suspension is connected to the transmission case and operates using the same oil. There is no fill location.

1. Put the tractor on level surface.
2. Remove differential case drain plug (A). Replace plug after oil has drained.
3. For 1300 Axle, add John Deere™ Hy-Gard™ oil through fill hole (B) until oil is even with bottom of hole. Install the plug.

For 1500 Axle, remove check plug (C), add John Deere HY-GARD through fill hole (B) until oil is even with bottom of check hole. Install the fill and check plugs.

Differential Case

1300 Axle Oil Capacity	13.6 L (14.2 qt)
1500 Axle Oil Capacity	18.7 L (19.74 qt)

4. After a few minutes of operation, recheck oil level. Add oil if necessary.
5. Tighten plugs.

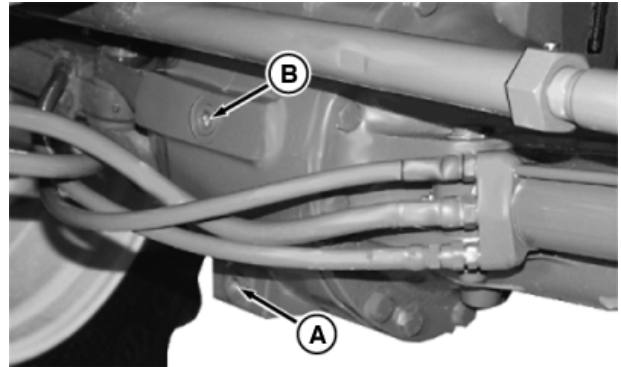
MFWD Drain Plugs—Specification

Drain Plug—Torque..... 70 N·m (52 lb-ft)

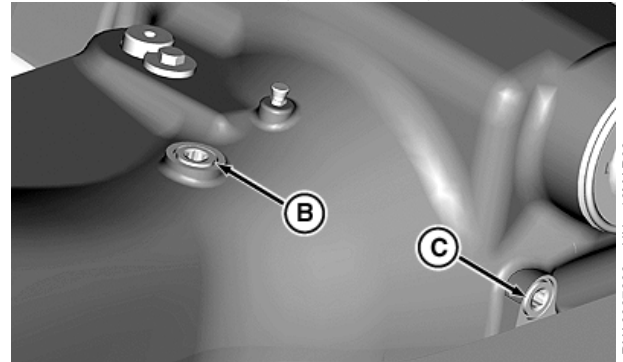
A—Drain Plug
B—Fill Hole

C—Check Plug

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Hy-Gard is a trademark of Deere & Company



Differential Case Plug and Fill Hole (1300 Axle)



Differential Case Plug and Fill Hole (1500 Axle)

RXA0052919 —UN—17APR01

RXA0087868 —UN—16MAR06

OURX935,0000B34 -19-02SEP09-1/1

Lubricating Independent Link Suspension Axle—Tie Rod Internal Ball Joints

NOTE: Contact your John Deere™ dealer for questions or assistance in lubricating the tie rod internal ball joints.

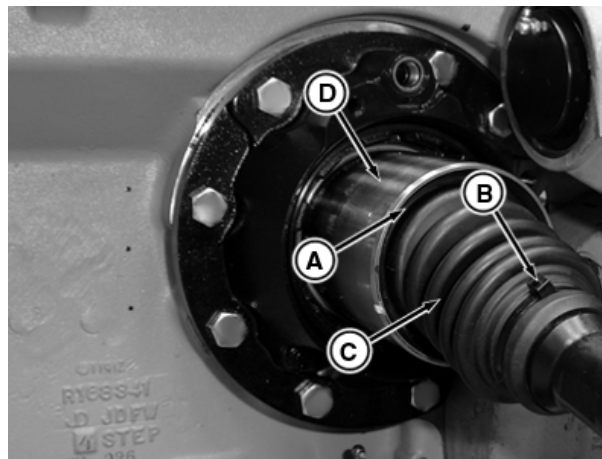
1. Remove boot retaining snap ring (A).
2. Remove tie band (B).
3. Slide boot (C) from inside steering rod (D) exposing ball joint.
4. Remove outer snap ring (E) from steering rod.

IMPORTANT: Remove any burrs in snap ring grooves using fine sand paper or Emery cloth. If not removed, damage to components will result. Thoroughly clean area inside steering rod removing all dirt and filings. If not, damage to components will result.

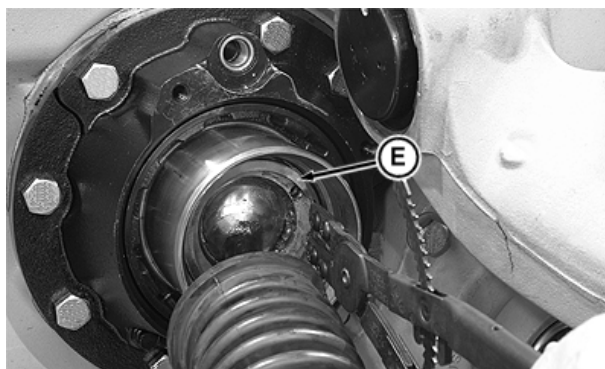
5. Remove snap ring retainer (F).

A—Boot Retaining Snap Ring
B—Tie Band
C—Boot

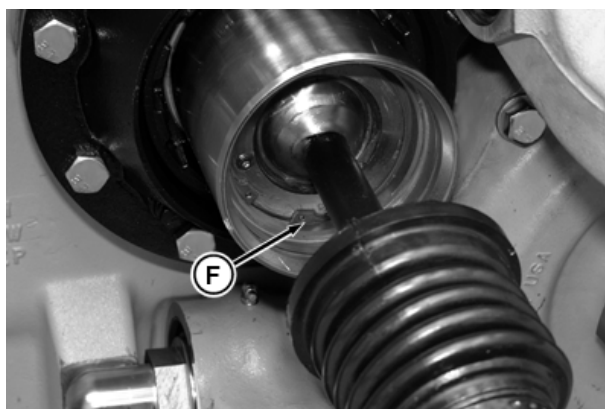
D—Steering Rod
E—Outer Snap Ring
F—Snap Ring Retainer



RXA0085956 —UN—18JAN06



RXA0085957 —UN—18JAN06



RXA0085958 —UN—18JAN06

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OURX935,0000B35 -19-02SEP09-1/2

NOTE: Do not remove inner snap ring. Grease may push ball joint from guide resulting in disassembling and reassembling components.

6. Compress snap ring enough to rotate in slot until it aligns with grease fitting hole.
7. Remove plug from hole (H) and install grease fitting (A).

IMPORTANT: Too much grease may damage O-ring (B).

NOTE: Use John Deere SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section.

8. Grease inner ball joint until grease (C) is visible around ball joint.
9. Remove grease fitting, install original Allen head plug and tighten to torque.

Specification

Allen Head

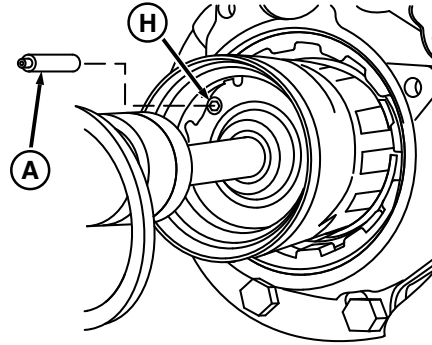
Plug—Torque..... 0.904 N·m (8 lb-in)

10. Install snap ring retainer.
11. Install outer snap ring.
12. Slide boot (G) back into steering rod (F).
13. Replace boot retaining snap ring (D).

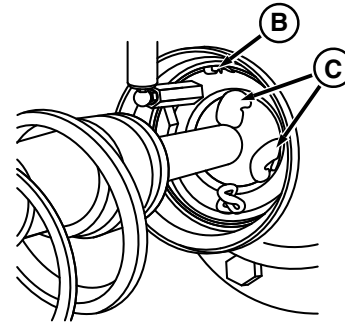
IMPORTANT: If tie band is not pulled tight, dirt and other foreign material will damage components.

14. Attach tie band (E) to boot, then pull tight.

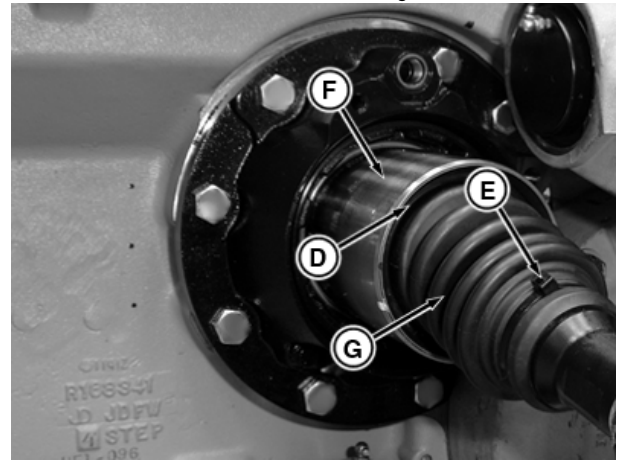
A—Grease fitting	E—Tie Band
B—O-ring	F—Steering Rod
C—Grease	G—Boot
D—Boot Retaining Snap Ring	H—Hole



Grease Fitting



Install Grease Fitting



Replace Boot

RXA0093500 —UN—23APR07

RXA0085959 —UN—18JAN06

RXA0085960 —UN—18JAN06

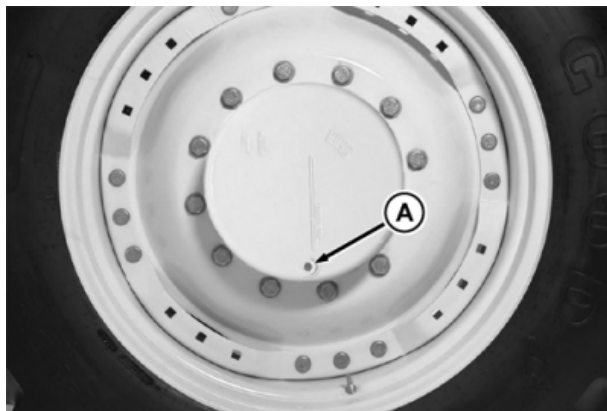
OURX935,000B35 -19-02SEP09-2/2

Changing MFWD Or Independent Link Suspension Wheel Hub Oil

1. Put the tractor on level surface.
2. Rotate wheel until drain/fill hole (A) is at bottom of hub. Remove plug and drain oil.
3. Rotate wheel with drain/fill plug positioned horizontally after oil has drained.
4. Add John Deere GL-5 Gear Lubricant through drain-fill hole until oil is even with bottom of hole. Replace plug.

Wheel Hub Capacity (Each)

Standard MFWD Axle	3.8 L (4 qt)
MFWD Axle with Independent Link Suspension	3.8 L (4 qt)



RW26336 —UN—25JUN99

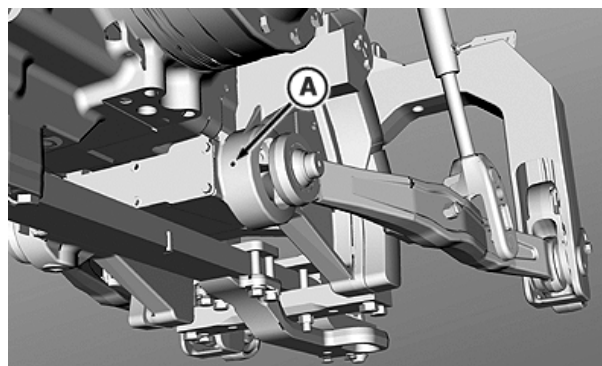
OURX935,00002DF -19-22DEC08-1/1

Lubricating Draft Link Support Shaft Bushing

Use John Deere™ SD Polyurea grease or other grease as specified in Fuel, Lubricants and Coolant section.

Apply one or two shots of grease to support shaft bushing (A).

A—Support Shaft Bushing



PXA0078654 —UN—21JAN05

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OURX935,0000B36 -19-02SEP09-1/1

2000 Hour Service

Adjusting Engine Valve Clearance

See your John Deere dealer for correct engine valve clearance.

OURX935,000030A -19-12JUN08-1/1

Draining, Flushing and Refilling Cooling System

IMPORTANT: Thermostats and de-aeration tank cap should be replaced whenever system is flushed.

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, the **SCHEDULED** interval (2 years or 2000 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 Fuels, Lubricants and Coolant section of this manual.COOL-GARD™

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

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

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TS281 —UN—23AUG88

Check de-aeration tank level. If tank is empty and recovery tank has been kept at least full cold, this indicates a leak that prevents system from recovering coolant from recovery tank. If recovery tank level does not change when engine is being warmed up, this is a sign of a leak or of a very low coolant level in the pressurized circuit.

After flushing system, cooling system should be checked for leaks and de-aeration cap should be pressure checked. See your John Deere dealer for testing.

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OURX935,000094B -19-12APR09-1/6

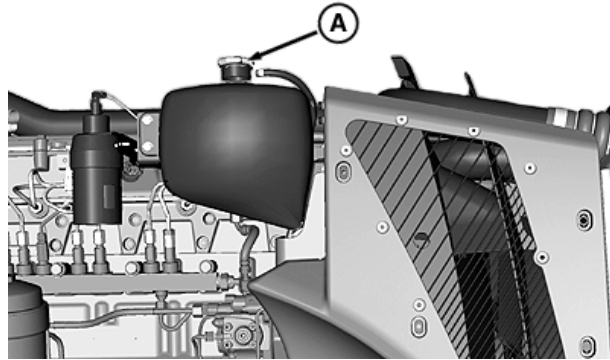
1. Open hood.
2. Remove de-aeration tank cap (A).

NOTE: For tractors equipped with Automatic Temperature Control, temperature readout must say "HI" and key must be in **RUN** position. This prevents trapping old coolant in the heater.

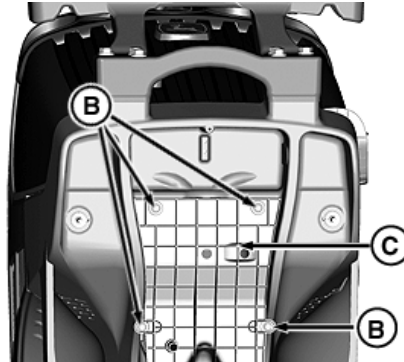
3. For tractors equipped with Automatic Temperature Control (ATC), turn key to Run. Turn ATC controls to ON; ATC indicator must show "HI".
4. Remove side panel.
5. Remove four cap screws (B), then remove deflector (C) beneath radiator drain valve.
6. Open radiator drain valve (D) and drain coolant into catch pan.
7. Open engine drain valve (E) and drain coolant into catch pan.

A—De-aeration Tank Cap
B—Cap Screws
C—Deflector

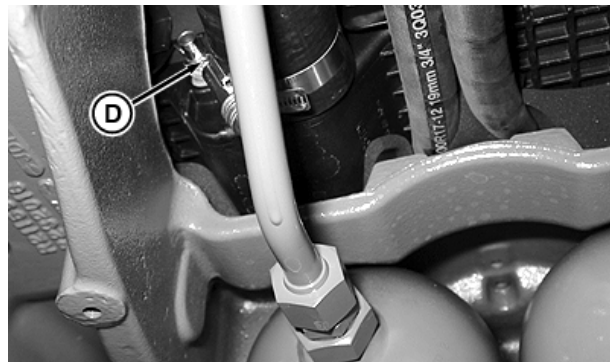
D—Radiator Drain Valve
E—Engine Drain Valve



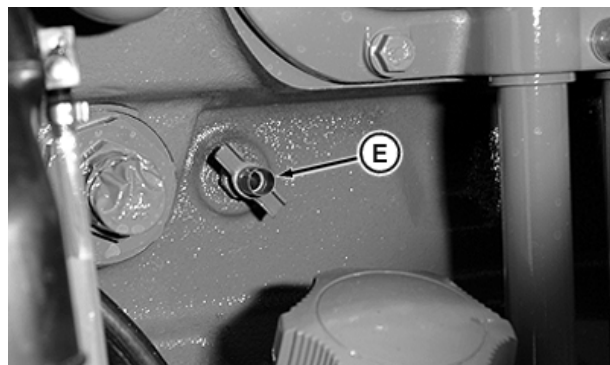
RXA0078826 —UN—04FEB05



RXA0080165 —UN—08APR05



RXA0078793 —UN—08APR05



RXA0078791 —UN—14JUN05

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OURX935,000094B -19-12APR09-2/6

8. Remove EGR cooler vent plug (A).
9. Remove charge air hose clamps (B) and slide rubber hose (C) toward tractor front and off of charge air tube.
10. Remove cap screw (D), then move charge air tube (E) out of the way.
11. Remove cap screw (F) and move radiator brace (G) out of the way.
12. Remove worm gear clamp (H) and upper radiator hose (I).
13. Remove three cap screws (J) and lift thermostat cover (K) out of the way.
14. Remove and discard old thermostats.
15. Install cover, O-ring and gasket without thermostats. Tighten cap screws to specifications.

Specification

Thermostat Cover Cap
Screws—Torque.....48 N·m
(35 lb-ft)

16. Replace previously removed radiator hoses and clamps, brace and tube.
17. Close engine drain valve, and radiator drain valve.

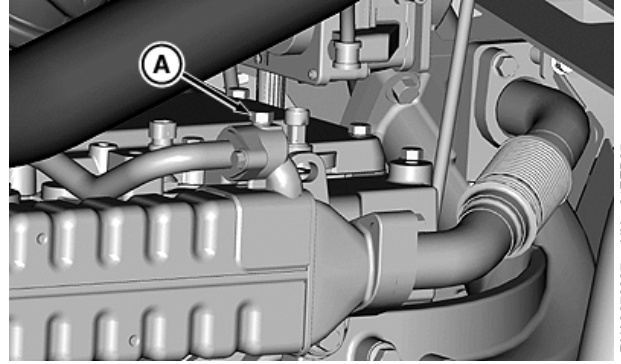
NOTE: See your John Deere Dealer for recommendations on cleaning solutions.

IMPORTANT: Never pour cold water or coolant into hot engine.

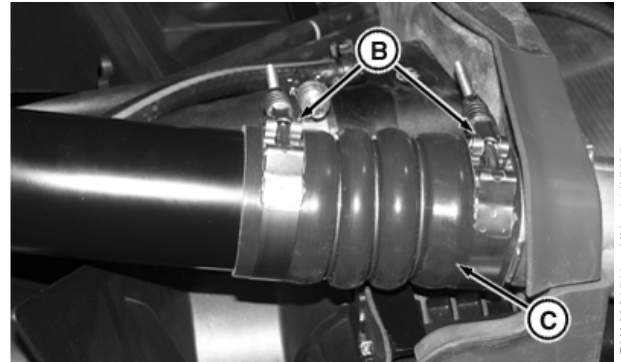
18. Begin filling system with cooling system cleaning solution. When air is purged and system cleaning solution appears at the EGR port, install EGR cooler vent plug and finish filling system.
19. Install de-aeration cap, side panel and close hood.

CAUTION: Make sure side panel is installed and hood is closed before starting engine.

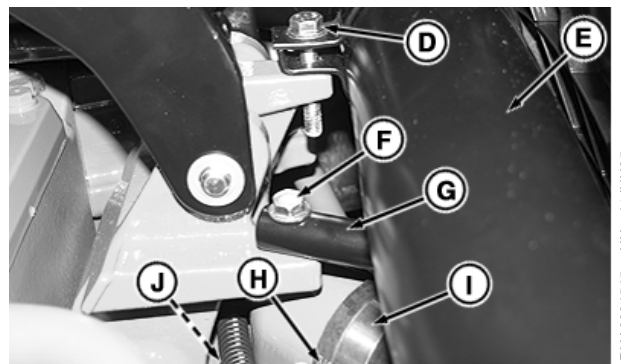
A—EGR Cooler Vent Plug	G—Radiator Brace
B—Hose Clamps	H—Worm Gear Clamp
C—Radiator Hose	I—Upper Radiator Hose
D—Cap Screw	J—Cap Screws
E—Charge Air Tube	K—Thermostat Cover
F—Cap Screw	



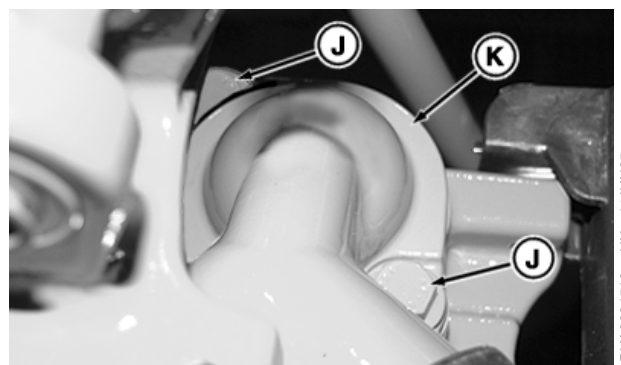
RXA0078827 —UN—04FEB05



RXA0081511 —UN—14JUN05



RXA0081515 —UN—14JUN05



RXA0081513 —UN—14JUN05

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OURX935.000094B -19-12APR09-3/6

20. Start engine and run at a minimum of 1500 rpm for 15 minutes.

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

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



TS281—UN—23AUG88

21. Shut off engine and allow to cool.
22. Open hood, remove de-aeration cap, put drain pans in place, then open radiator and engine drain valves. Remove EGR cooler vent plug.

NOTE: For tractors equipped with Automatic Temperature Control, temperature readout must say "HI" and key must be in RUN position. This prevents trapping cleaning solution in the heater.

23. For tractors with ATC, Start engine and turn ATC to High. When High is displayed on readout, turn off engine and finish draining system.
24. Install radiator and engine drain plugs.
25. Using clean water, begin filling coolant system. When air is purged and water appears at the EGR port, install EGR cooler vent plug and finish filling the system.

CAUTION: Make sure fan guard and side panel are installed and hood is closed before starting engine.

26. Close hood, start engine and run for a minimum of 1500 rpm for 15 minutes.

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

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

27. Turn off engine, allow coolant to cool, then using previously listed steps, drain system.
28. Close engine drain valve and radiator drain valve.
29. Begin filling system with proper mix of coolant and distilled water or demineralized water. When air is purged and water is visible in the EGR valve port, close EGR cooler vent plug.

CAUTION: Make sure fan guard and side panel are installed and hood is closed before starting engine.

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OURX935,000094B -19-12APR09-4/6

30. Start engine and run at 1500 rpm for a minimum of 15 minutes.

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

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



TS281 —UN—23AUG88

31. Turn off engine, allow coolant to cool, raise hood, remove side panel, then using previously listed steps, drain system.

32. Using previous steps, remove clamps, hoses, tube and braces.

Install New Thermostats

1. Remove thermostat cover and clean sealing area.
2. Apply RTV silicone sealant to new gasket.
3. Install new thermostats, new gasket and cover. Tighten cap screws to specifications.

Specification

Thermostat Cover Cap	
Screws—Torque.....	48 N·m (35 lb·ft)

4. Using previously listed sequence, install hoses, clamps, tube, cap screws and brace.
5. Install fan guard and side panel.
6. Close radiator and engine drain valves.

Fill Cooling System

IMPORTANT: Use coolant as specified in Fuel, Lubricants and Coolant section.

1. Fill high pressure coolant circuit at de-aeration tank.
2. Begin filling coolant recovery tank. When air is purged and coolant is visible, close EGR cooler vent plug.
3. Finish filling coolant recovery tank to Full Hot mark.

NOTE: Coolant level in recovery tank will drop the first few cycles unless there is a leak.

4. With de-aeration tank cap **ON** and hood closed, start engine and run at idle for 1 to 5 minutes.
5. Shut off engine, raise hood, remove de-aeration tank cap. Top off high pressure circuit at de-aeration tank and reinstall cap.
6. Close hood, start engine and warm up for 15 minutes. If the coolant recovery tank loses coolant to the ground, repeat previous step and top off until it does not. Loosing coolant to the ground indicates air in high pressure circuit is being discharged through coolant recovery bottle.

7. Shut off engine and allow to cool. Observe coolant level dropped below **Full Hot** in the recovery tank.

NOTE: If coolant level did not drop below **Full Hot**, there is a leak in cooling system that could lead to engine damage.

8. Monitor coolant recovery tank level for the next two days of use. Refill coolant recovery tank as required.

NOTE: It is normal for level to go down with the first few cycles and then range somewhere between Full Hot and Full Cold.

NOTE: It is normal for de-aeration tank to be partially full of air when cap is removed and system completely de-aerated. When inspecting tank, if it is at least half full, do not add additional coolant. Topping off tank may cause coolant to be expelled onto the ground and/or cavitation of water pump.

Continued on next page

OURX935,000094B -19-12APR09-5/6

Check Cooling System for Leaks

1. Raise hood.
2. Check radiator for leaks or damage.
3. Slowly turn de-aeration tank cap (A) to relieve pressure. Remove cap.
4. Attach radiator tester (B) to filler neck.
5. Pressurize system.

Specification

Radiator—Pressure

Test..... 60 kPa (0.6 bar)
(9 psi)

6. If pressure drops immediately, or will not build pressure, have John Deere dealer check and repair system.
7. Test and/or replace de-aeration cap whenever cooling system is flushed. Use suitable equipment or see your John Deere dealer for testing equipment.

NOTE: Cap gasket should be visually checked for sealing effectiveness. A good functioning gasket should have the imprint of the mating surface with no apparent scratches or leak paths. If gasket is damaged, replace cap and test new cap.

NOTE: Cap should hold pressure within specifications. Relief occurs at top of range.

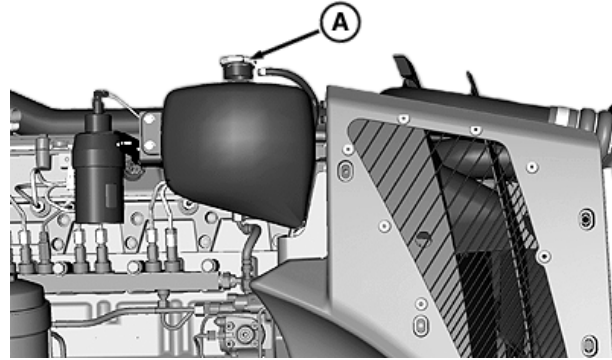
NOTE: Replace cap if test result is out of specifications.

8. Pressurize cap.

Specification

Radiator Cap—Pressure

Test..... 60–80 kPa (0.6–0.8 bar)
(9–12 psi)



Remove De-aeration Tank Cap



Attach Radiator Tester

A—De-aeration Tank Cap

B—Radiator Tester

9. Remove tester and install radiator cap.
10. Close hood.

OURX935,000094B -19-12APR09-6/6

4500 Hour Service

Replacing Engine Crankshaft Damper

Have your John Deere Dealer replace engine crankshaft damper.

OURX935,0000331 -19-19JUN08-1/1

General Services

Servicing and Connecting Snap to Connect STC® Fittings

CAUTION: Do not disconnect STC fitting when under pressure. Failure to relieve pressure before disconnecting fitting may result in personal injury, damage to equipment or both.

NOTE: Snap to Connect fittings are used on steel lines, hose connections and come in a variety of sizes. JDG1885 STC tool (A) is designed as a spacer to move release ring (B) inward which releases retaining ring (C). JDG1885 STC tool can be purchased through your John Deere dealer.

IMPORTANT: Do not use tool to pry fittings apart. Prying with tool may damage fitting and tool.

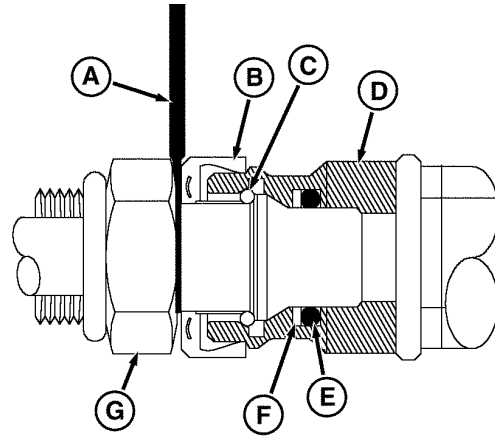
1. Insert correct STC tool between release ring and fitting.
2. Remove hose or line from connector.

NOTE: If retaining ring (C), backup ring (F) or O-ring (E) are damaged, see your John Deere dealer for replacement kit and replace all three parts.

Before connecting Snap to Connect Fitting:

1. Check mating surfaces for nicks, scratches or flat spots.
2. Check O-ring, backup ring and retaining ring for wear or damage.

STC is a registered trademark of Aeroquip Corporation



FXA0080095 —UN—31MAR05

A—JDG1885 STC Tool
B—Release Ring
C—Retaining Ring
D—Female End (STC Fitting)
E—O-Ring
F—Backup Ring
G—Male End (STC Fitting)

3. make sure that female end (D) and male end (G) are clean and free of contaminants.
4. make sure that release ring (B) is on male end fitting.
5. Push fitting halves together until a definite snap and solid stop is felt.
6. Pull back on hose to make sure that fitting halves are locked together.

OURX935,000030B -19-12JUN08-1/1

Welding 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. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.



TS953 —UN—15MAY90

6. After welding, reverse Steps 1—5.

DX,WW,ECU02 -19-14AUG09-1/1

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.

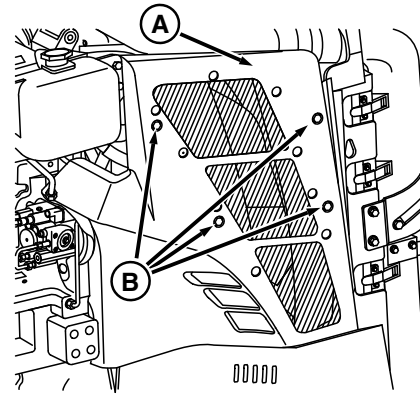
DX,WW,ECU04 -19-11JUN09-1/1

Cleaning Radiator, Coolers and Air Conditioning Condenser

1. Stop engine and raise hood.
2. Remove four cap screws (B) and front side shield (A).

A—Front Side Shield

B—Cap Screws



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OURX935,000030C -19-12JUN08-1/2

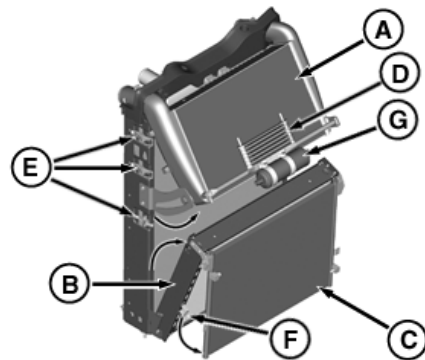
3. Release three spring latches (E) per side.

NOTE: To avoid damaging receiver/dryer (G), charge air cooler (A) must swing up first, then Hydraulic oil cooler (B) can swing down.

4. Swing open charge air cooler, then hydraulic oil cooler.
5. Release plastic latches (F), then swing air conditioner condenser (C) forward.

NOTE: Using an air hose, clean radiator and cooler units by blowing out any foreign material from back to front.

6. Clean radiator, charge air cooler and hydraulic oil cooler by blowing air through each of them.
7. Blow air through air conditioner condenser.
8. Close hydraulic oil cooler and latch.
9. Return condenser to original position and latch.
10. Close charge air cooler, close latches, then remove any remaining debris on fuel cooler (D) front.



A—Charge Air Cooler
B—Hydraulic Oil Cooler
C—Air Conditioner Condenser
D—Fuel Cooler

E—Latches
F—Plastic Latches
G—Receiver/Dryer

RXA0078741 —UN—29MAR05

OURX935,000030C -19-12JUN08-2/2

Checking Air Conditioning System

CAUTION: Avoid possible injury. Improper servicing may cause refrigerant to penetrate eyes and skin or cause burns.

IMPORTANT: R134a refrigerant must be used. This requires special equipment and procedures. See your John Deere Dealer.

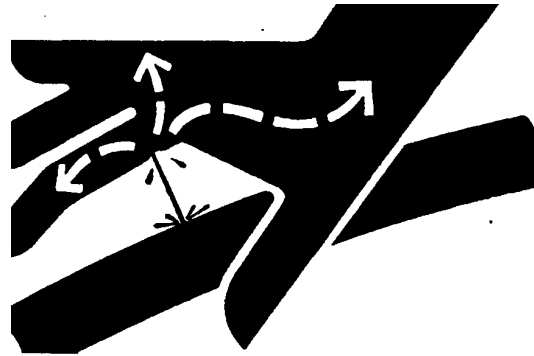
NOTE: Some oil seepage from compressor shaft seal is normal.

Check the following if air conditioner will not cool, or cooling is intermittent:

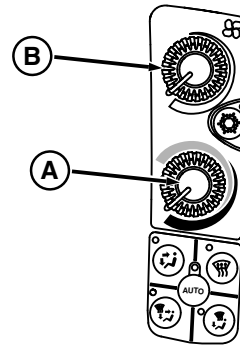
- Clean grille, radiator, and refer to Cleaning Radiator, Coolers and Air Conditioning Condenser in this section.
- Inspect and clean cab air filters. Replace filters if required. Refer to Cleaning or Replacing Cab Air Filters in this section.
- For CLIMATRAK turn temperature control button (A), operate engine at 2000 rpm and rotate fan control knob (B) clock wise to maximum HIGH position.
- For HVAC turn temperature control button (E), operate engine at 2000 rpm and rotate fan control knob (F) clock wise to maximum HIGH position.
- For CLIMATRAK, temperature indicator arrow (C) will be all the way to the left.
- For CLIMATRAK, fan indicator arrow (D) will be all the way to the right.

If problems persist, see your John Deere Dealer.

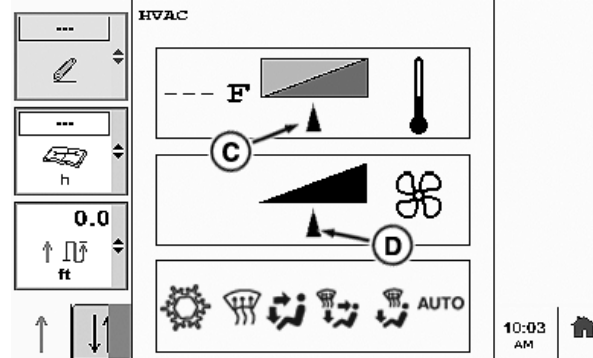
- | | |
|---|--|
| A—Fan Control Knob
(CLIMATRAK) | D—Fan Indicator Arrow |
| B—Temperature Control Knob
(CLIMATRAK) | E—Temperature Control Knob
(Standard) |
| C—Temperature Indicator
Arrow | F—Fan Control Knob
(Standard) |



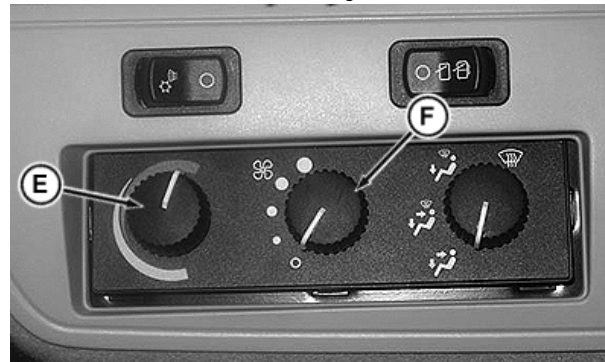
Caution for Escaping Fluid



CommandARM™ Controls (ClimaTrak™)



HVAC Page



CommandARM is a trademark of Deere & Company
ClimaTrak is a trademark of Deere & Company

OURX935,0000550 -19-16SEP09-1/1

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RXA0099460—UN—16OCT08

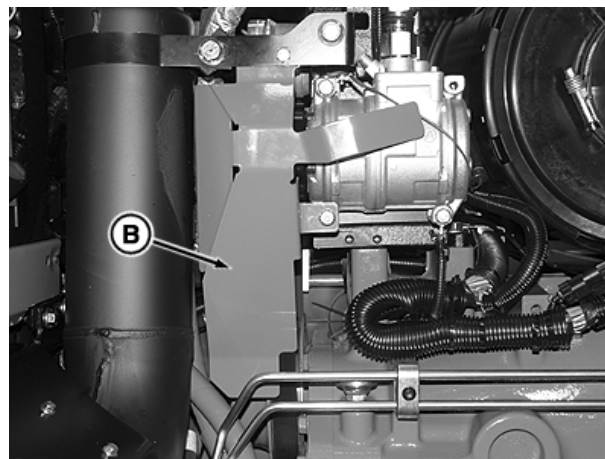
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RXA0099873—UN—29JAN09

Replacing Auxiliary Drive Belt



Auxiliary Drive Left-Hand Shield



Auxiliary Drive Right-Hand Shield

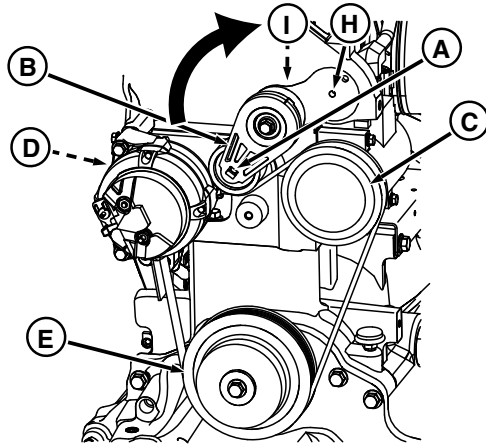
A—Left-Hand Shield

B—Right-Hand Shield

1. Open hood. Remove left-hand shield (A) and right-hand shield (B).

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OURX935.000030E -19-12JUN08-1/2

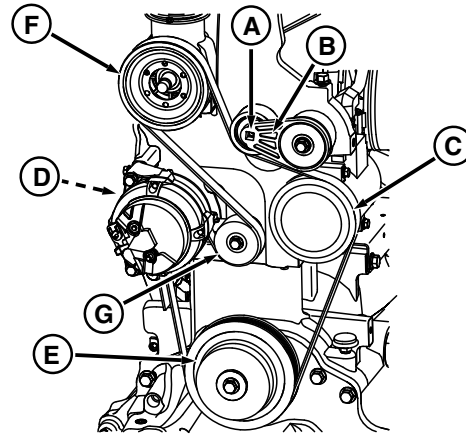


Auxiliary Drive Belt Installed on Tractor Without Air Brake

A—Square Hole
B—Tensioner Arm
C—Air Conditioner Pulley

D—Alternator Pulley
E—Auxiliary Drive Pulley
F—Air Brake Pulley

RXA0085936 —UN—18JAN06



Auxiliary Drive Belt Installed on Tractor With Air Brake

G—Idler
H—Tension Arm Mounting Hole
I—Tension Arm Mounting Hole

RXA0085937 —UN—18JAN06

IMPORTANT: Keep tension off belt during removal.

2. Insert 1/2 in. drive tool into square hole (A) in tensioner arm (B).
3. Push up on tool handle to relieve tension on drive belt.
4. Remove belt from air conditioner pulley (C).

NOTE: Tractors with air brake have tension arm installed in tension arm hole (H). Tractors without air brake have tension arm installed in tension arm hole (I).

5. For tractors with air brake only, remove belt from air brake pulley (F) and idler (G).
6. Remove belt from alternator pulley (D).

NOTE: Clearance between transmission auxiliary drive pulley and tractor frame is minimal.

7. Remove belt from auxiliary drive pulley (E).
8. Discard old belt.

NOTE: There is minimal clearance between transmission auxiliary drive pulley and tractor frame. Do not damage new belt when installing.

9. Install new belt to auxiliary drive pulley, then on the alternator pulley.
10. For tractors with air brake, install belt on air brake pulley and idler.
11. Install belt on air conditioner pulley.
12. Remove 1/2 in drive tool restoring tension on new belt.
13. Install shield and close hood.

OURX935,000030E -19-12JUN08-2/2

Removing and Installing Fan Belt

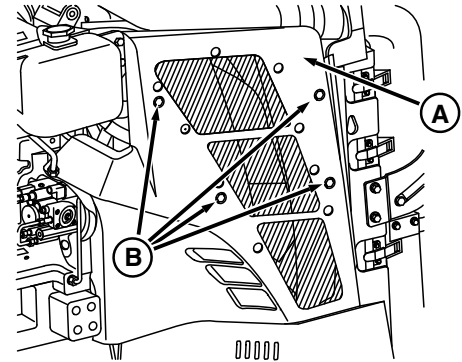
1. Raise hood.
2. Remove four cap screws (B) and right-hand front side panel (A).
3. Remove three cap screws (C) and lift diverter panel (D) out.

IMPORTANT: Removing bleed screw will drain oil. Loosen bleed screw only enough to bleed oil back into reservoir (a maximum of two full turns).

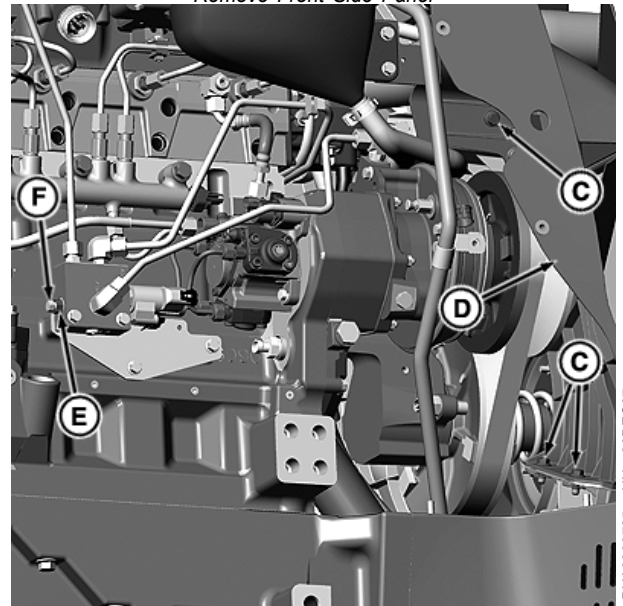
4. Loosen jam nut (E), then loosen bleed screw (F).

A—Side Panel
B—Cap Screws
C—Cap Screws

D—Diverter Panel
E—Jam Nut
F—Bleed Screw



Remove Front Side Panel



Bleeding Drive Assembly

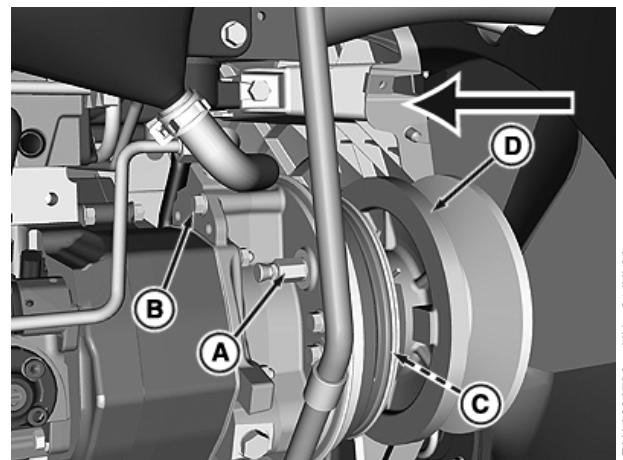
OURX935.0000264 -19-11MAR11-1/5

5. Remove vent adapter (A) from vent hole, then remove service cap screw (B) from storage hole.
6. Install service cap screw through vent hole in piston plate (C) and thread into inner sheave housing.
7. Tighten to carefully pull rear sheave (D) rearward until it stops.

NOTE: Bleed screw must be closed for proper tension to be applied to belt once tractor is started.

A—Vent Adapter
B—Service Cap Screw

C—Piston Plate
D—Rear Sheave



Pull Inner Sheave Rearward

Continued on next page

OURX935.0000264 -19-11MAR11-2/5

8. Close bleed screw, tighten to specification and tighten jam nut.

Specification

Bleed Screw—Torque.....25 N·m
221 lb-in.

Tractor may be equipped with either a 3 cap screw or a 6 cap screw fan drive.

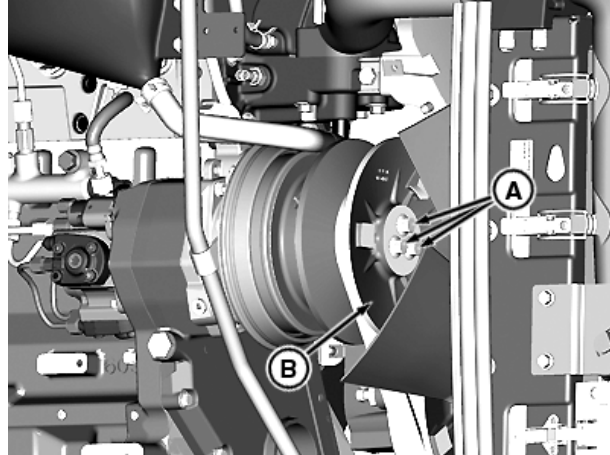
9. Remove cap screws (A).

IMPORTANT: When prying outer sheave (B) forward, make sure that belt contact surface of pulley is not damaged.

10. Pry outer sheave evenly off shaft.
11. Remove belt through opening between fan and fan hub.
12. Discard old belt.

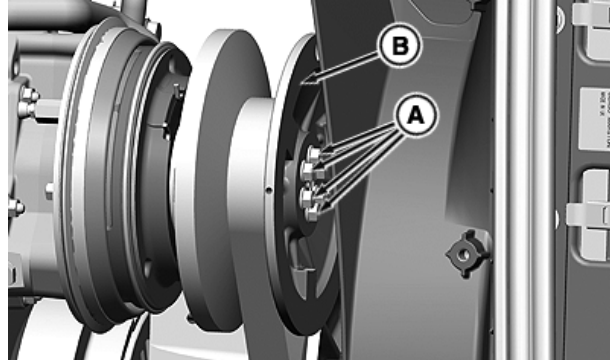
A—Cap Screws

B—Outer Sheave



RXA0108318 —UN—23JUN10

For Three Cap Screw Sheave Remove Cap Screws And Outer Sheave

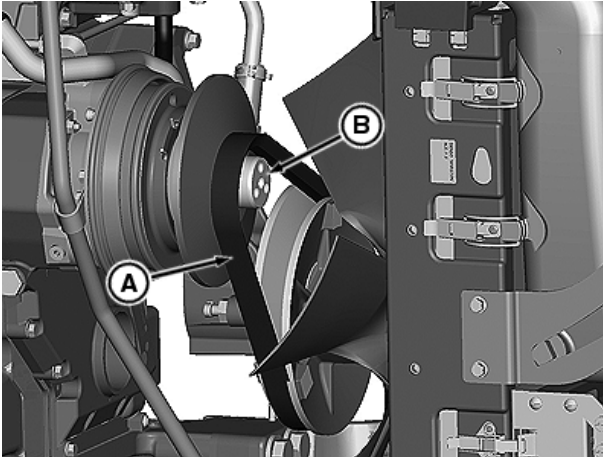


RXA011804 —UN—28OCT10

For Six Cap Screw Sheave Remove Cap Screws And Outer Sheave

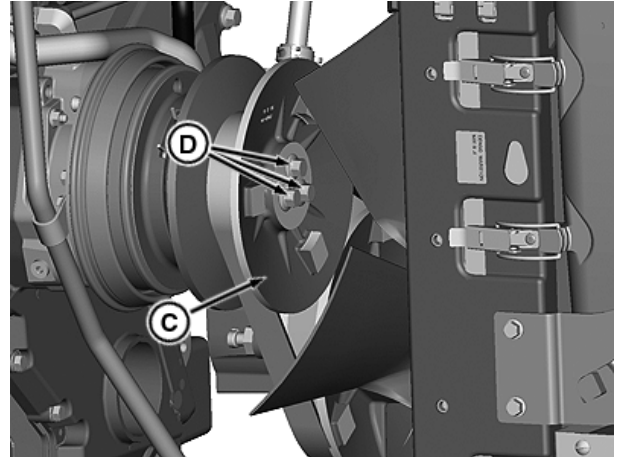
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OURX935,0000264 -19-11MAR11-3/5



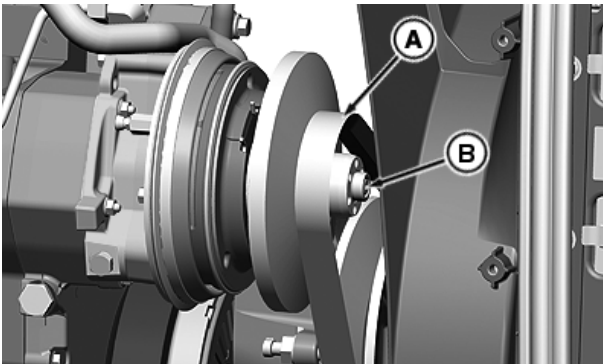
RXA0108320 —UN—22JUN10

Install Belt On Three Cap Screw Shaft



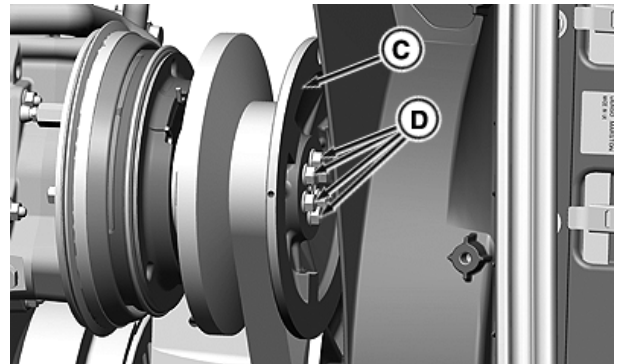
RXA0095841 —UN—29AUG07

Install Front Sheave And Three Cap Screws



RXA0111805 —UN—28OCT10

Install Belt On Six Cap Screw Shaft



RXA0111806 —UN—28OCT10

Install Front Sheave And Six Cap Screws

A—Belt

B—Drive Shaft

C—Front Sheave

D—Cap Screws

13. Install new fan belt (A) between fan and fan hub.

14. Pull or gently pry belt onto drive shaft (B) and against rear sheave.

IMPORTANT: When installing front sheave (C), make sure that belt remains loose and is not pinched between sheaves.

Clean mating surfaces of front sheave and shaft.

15. Install front sheave.

16. Tighten cap screws (D) to specification.

3 Cap Screw Drive Pulley-to-Drive —Specification

Cap Screws—Torque.....130 N·m
(96 lb-ft)

6 Cap Screw Drive Pulley-to-Drive —Specification

Cap Screws—Torque.....37 N·m
(27 lb-ft)

Continued on next page

OURX935,0000264 -19-11MAR11-4/5

17. Check bleed screw to make sure it is closed and belt is loose between sheaves.

IMPORTANT: If service cap screw is left in vent hole, fan cannot adjust causing tractor to overheat.

18. Remove vent adapter (A) from storage hole and service cap screw (B) from vent hole.
19. Install vent adapter in vent hole and service cap screw in storage hole. Torque to specification.

Fan Drive Hardware —Specification

Vent Adapter—Torque.....24 N·m
(18 lb-ft)

Service Cap
Screw—Torque.....13 N·m
(9 lb-ft)

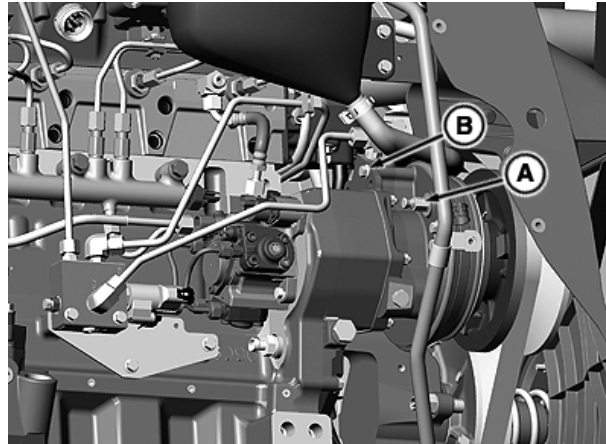
20. Install diverter panel and right-hand side front shield and torque to specification.

Diverter Panel Cap Screws —Specification

Cap Screw—Torque.....20 N·m
(15 lb-ft)

NOTE: Starting engine with belt loose between pulleys allows belt to climb out of groove between pulleys. Belt will correctly position itself within a few seconds after engine is started.

21. Start engine and run at idle for 15 seconds. Turn off engine.



RXA0097840 —UN—25APR08

Return Vent Adapter To Vent Hole And Service Cap Screw To Storage Hole

A—Vent Adapter

B—Service Cap Screw

22. Remove right-hand side front shield and make sure that belt is correctly positioned between pulleys.

⚠ CAUTION: Keep hands away from exposed fan blades. Blades have sharp edges which may result in personal injury.

23. Install right-hand front side panel.

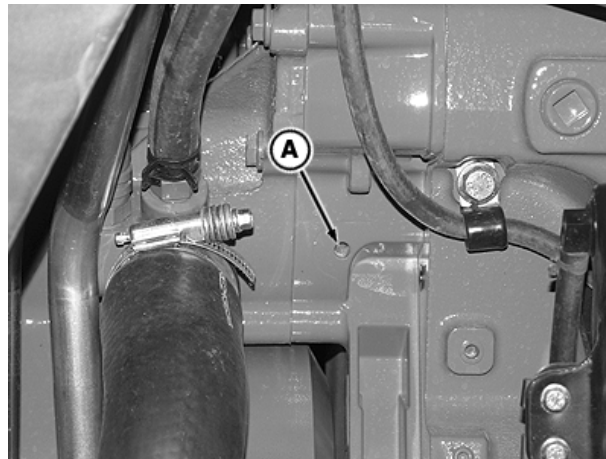
OURX935,0000264 -19-11MAR11-5/5

Checking Weep Hole

1. Remove left-hand side panel.
2. Inspect weep hole (A) for oil or coolant leakage.
 - Oil leakage indicates a damaged rear seal.
 - Coolant leakage indicates a damaged front seal.

If leakage is detected, see your John Deere dealer to replace complete coolant pump assembly (repair parts are not available).

A—Weep Hole

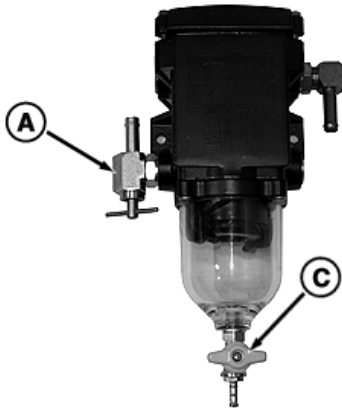


RXA0082662 —UN—28JUL05

Coolant Pump Weep Hole

OURX935,0000312 -19-12JUN08-1/1

Back Flushing the Optional Fuel Water Separator—If Equipped



RXA0084314 —UN—26SEP05



RXA0084316 —UN—26SEP05

A—Fuel Shut-Off Valve

B—Bleed Screw

C—Drain Valve

NOTE: Optional fuel water separator should be back flushed whenever bowl is half full of water or when diagnostic trouble code ECU 94.17, “Low fuel pressure out of lift pump”, appears. If trouble code is still displayed, wash filter element, see **CLEANING FILTER ELEMENT**. If code persists, change both fuel filters.

1. Close fuel shut-off valve (A).
2. Open bleed screw (B) on top of water separator lid. Allow water and dirt to be released from filter element and settle in bottom of bowl.
3. Push IN on drain valve (C) and turn COUNTER-CLOCKWISE to drain out water and dirt from bowl.

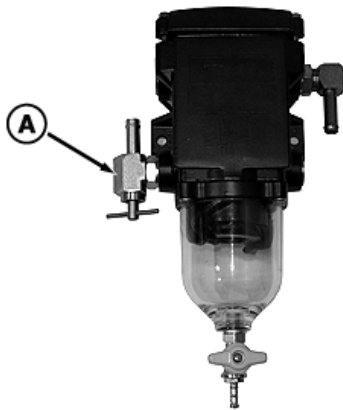
NOTE: As fuel, water, and dirt is drained from bowl in step 3, more water and dirt will be flushed from filter element and collect in bottom of bowl.

4. Close drain valve (C) and allow water and dirt to settle again.
5. Repeat steps 3 and 4 until all dirt and water is removed.
6. Close bleed screw (B) and open fuel shut-off valve (A).
7. Start and run engine at fast idle for 2 minutes. If engine won't start or dies, see **REPLACING FUEL FILTER ELEMENTS** in tractor Operator's Manual and follow instructions for priming the engine.

NOTE: Filter element in water separator can be back flushed up to five times before being cleaned replaced.

OURX935,0000313 -19-17JUN08-1/1

Maintaining Optional Fuel Water Separator Filter Element—If Equipped



A—Fuel Shut-Off Valve

NOTE: After filter element has been back flushed up to five time, clean filter. Replace filter when light is no longer visible while holding filter up to the light.



1. Close fuel shut-off valve (A).
2. Loosen lid screws evenly in sequence shown.

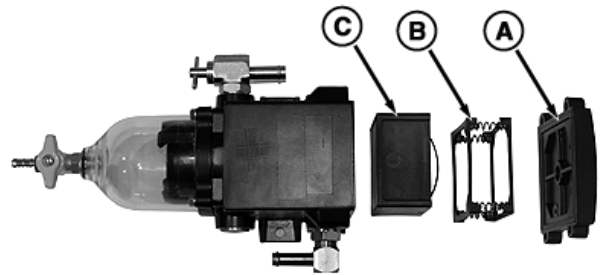
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OURX935,0000314 -19-17JUN08-1/2

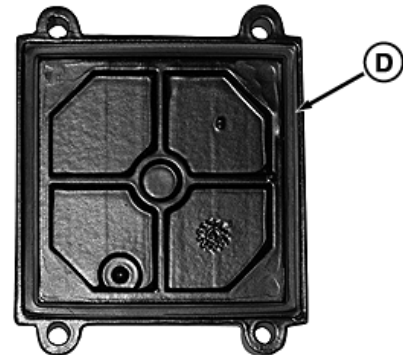
3. Remove lid (A), spring cassette (B), and filter element (C). Save lid and spring cassette.
4. Install new filter element and spring cassette (B) from step 3.
5. Inspect lid gasket (D) condition and replace if necessary.
6. Install lid (A) and tighten in sequence shown.
7. Open fuel shut-off valve.
8. Start and run engine at fast idle for 2 minutes. If engine won't start or dies, see REPLACING FUEL FILTER ELEMENTS in tractor Operator's Manual and follow instructions for priming engine.

A—Lid
B—Spring Cassette

C—Filter Element
D—Lid Gasket



RXA0084322 —UN—26SEP05



RXA0084324 —UN—26SEP05



RXA0084320 —UN—26SEP05

OURX935,0000314 -19-17JUN08-2/2

Cleaning Optional Fuel Water Separator Filter Element—If Equipped

NOTE: To replace filter element and filter housing gasket, See your John Deere dealer.

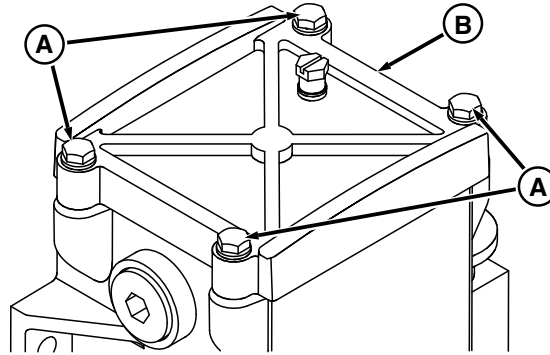
1. Turn off engine.

NOTE: Drain fuel into an appropriate container and dispose of properly.

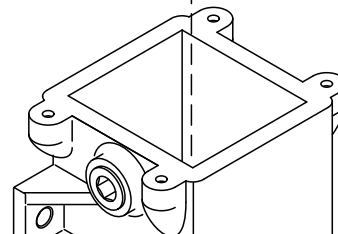
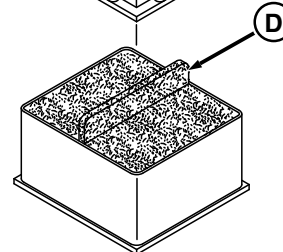
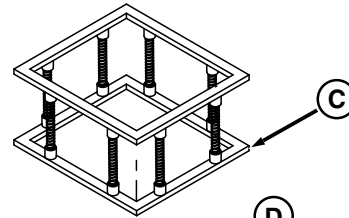
2. Open drain valve and drain fuel from bowl.
3. Remove cap screws (A) and lid (B).
4. Remove spring cassette (C).
5. Lift out filter element by the handle (D).
6. Wash filter in clean diesel fuel or mineral spirits.
7. Inspect filter for damage. If damage, replace with new filter.
8. Install filter element.
9. Install spring cassette.
10. Inspect lid gasket (E) and replace if necessary.

A—Cap Screws
B—Cover
C—Spring Cassette

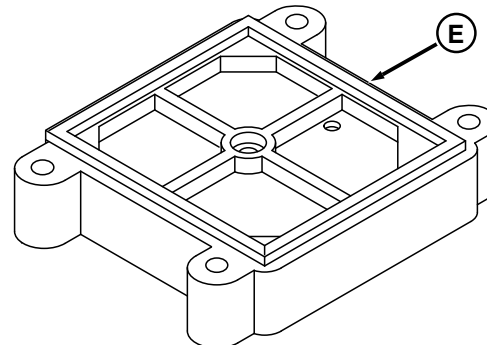
D—Handle
E—Gasket



Remove Cap Screws



Remove Spring Cassette and Filter Element



Gasket

RXA0089770 —UN—14JUL06

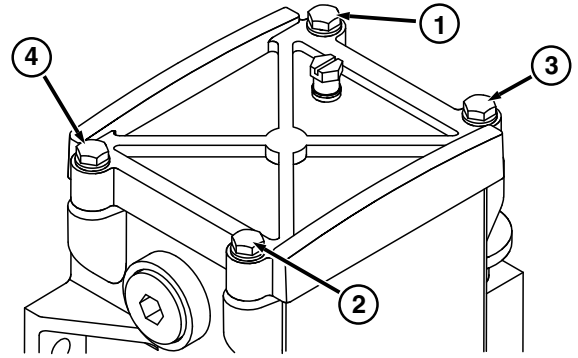
RXA0089818 —UN—14JUL06

RXA0089773 —UN—14JUL06

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OURX935,0000315 -19-12JUN08-1/2

11. Install new filter, spring cassette, lid and four cap screws. Leave cap screws finger tight.
12. Tighten cap screws in sequence as shown.
13. Prime fuel system and check for leaks.



Install Cap Screws

RXA0089820 —UN—14JUL06

OURX935,0000315 -19-12JUN08-2/2

Electrical Services

Introduction to Electrical System Section

In addition to the fuses and relays mounted in the fuse panel (behind the operators seat), these tractors are also equipped with solid state load centers located in two of the electronic controllers.

These solid-state load centers replace fused relay circuits previously used. The primary function is to control the majority of high current loads such as fender flood lights and the horn. This electronic circuitry will monitor loads and voltages to provide fast reaction time and the ability to alert the operator if a circuit overloads or if voltage is out of specifications, i.e. open circuit (undercurrent) or short circuit (over-current).

If circuit is faulty and a diagnostic trouble code is generated, the circuit will stay in the OFF state and diagnostic trouble code will remain active until the circuit is shut off by the operator. If the circuit or one of its components is turned back ON and the problem is not present, the system will function normally.

As an example, if a light circuit is determined to have an over-current condition, it will shut off. If the operator turns the light switch off and then back on to clear the fault, and

the current sense reading is zero amps with the light off, the logic circuit will turn back on.

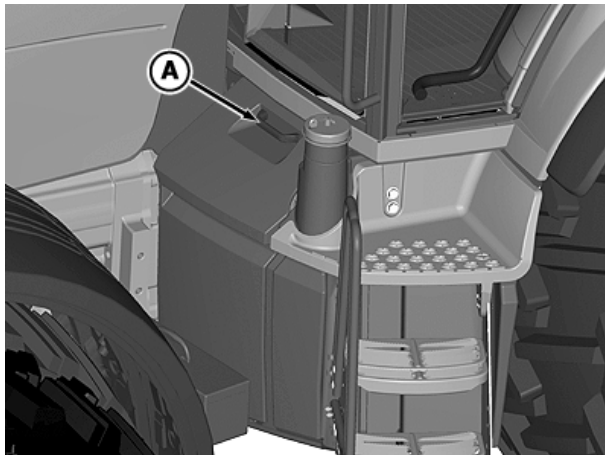
If the total current load of the solid state load center exceeds a preset level, the software will begin to shut down the system, turning off one circuit at a time. The logic circuit will wait a few seconds between circuit shutdowns to determine if the total controller current has fallen below preset level, or if additional circuits should be turned off.

Solid state circuits are rated for a fixed value. If any additional electrical devices need to be added to the tractor, we recommend to use a power strip or convenience outlets in conjunction with an off/on switch. Splicing into a wire in the wrong location could cause the circuit to overload and shut the circuit down.

If extra implement lights and controls, such as switches are needed, contact your John Deere dealer. He can provide information on methods to tie in the light switch with one of the accessory wires located in the 7 pin terminal on the back of the tractor.

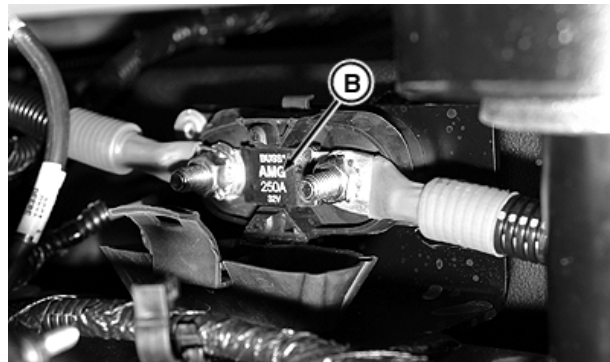
OURX935,0000316 -19-12JUN08-1/1

Load Center Fuses



Battery Compartment

RXA0079685 —UN—11MAR05



250 Amp Master Fuse

RXA0079352 —UN—14JUN05

A—Battery Compartment Cover B—250 Amp Master Fuse

IMPORTANT:

Do not attempt to disassemble master fuse unless instructed by your John Deere dealer.

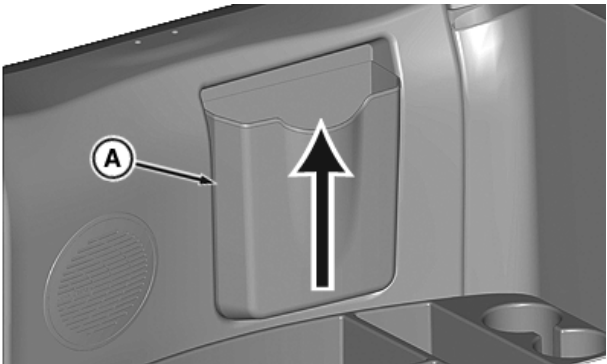
R Series Tractors have a 250 amp master fuse (B) which can be accessed through battery compartment cover (A).

Continued on next page

OURX935,0000989 -19-19MAY09-1/4

Load center is found directly behind the operator's seat and just below the cab rear window. To access load center, lift up on Operator's Manual holder (A).

A—Operator's Manual Holder



Operator's Manual Holder

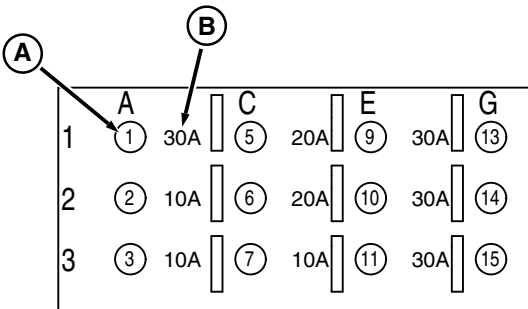
OURX935,0000989 -19-19MAY09-2/4

RXA0099400 —UN—16DEC08

The illustration to the right explains how to read the load center diagram.

A—Fuse Location Number

B—Fuse Size

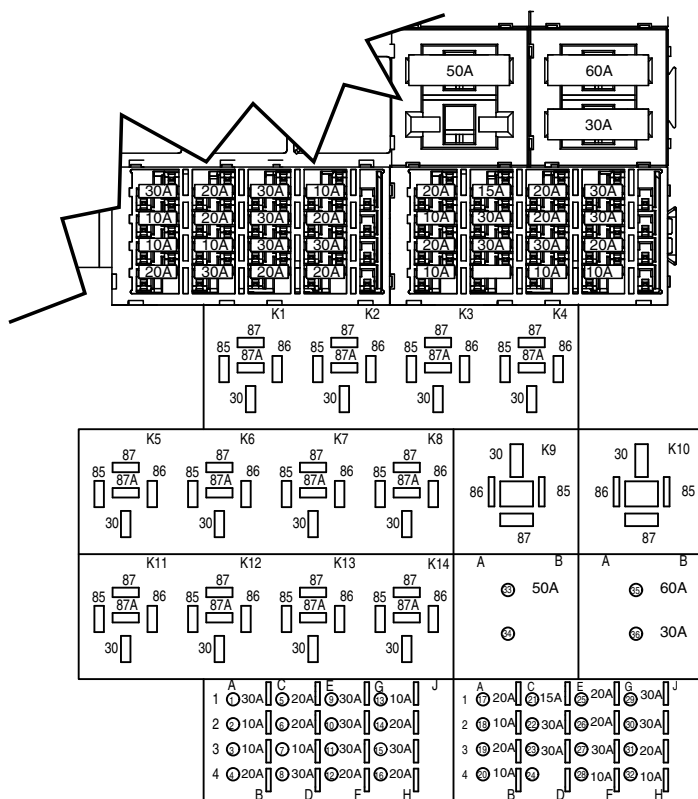


Load Center — Legend

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OURX935,0000989 -19-19MAY09-3/4

RXA0099396 —UN—14OCT08



- 1— Key Switch
- 2— Seat
- 3— Air Conditioner
- 4— Beacon
- 5— Radio
- 6— SCC
- 7— CLC
- 8— Fenders

- 9— Roof
- 10— Implement
- 11— Implement
- 12— Brake
- 13— Spare
- 14— Loader
- 15— Convenience
- 16— FCC

- 17— ECU
- 18— Light
- 19— Seat
- 20— Alt.
- 21— Fuel
- 22— Suspension
- 23— Convenience
- 24— Reserved—Used ForAutoPowr™ only

- 25— SBW
- 26— SST (Track Tractors Only)
- 27— Convenience
- 28— Reserved— Used For AUTOPOWR Only
- 29— Spare
- 30— Implement Power
- 31— Mirror
- 32— Home—Used For AUTOPOWR Only

IMPORTANT: Fuse replacement must be the same rating as the original.

Ensure both negative (—) and positive (+) battery connections are disconnected from both batteries prior to fuse inspection or replacement.

AutoPowr is a trademark of Deere & Company

OURX935,0000989 -19-19MAY09-4/4

RXA009398 —UN—14OCT08

Implement Power Relay Module

Remove cab back panel. In upper left corner is a relay module to route power to implement Bus Breakaway Connector.

Top left module stud is switched power lug (A) protected by a 60 Amp fuse (F). Top right module stud is unswitched power lug (B) protected by a 30 Amp fuse (G).

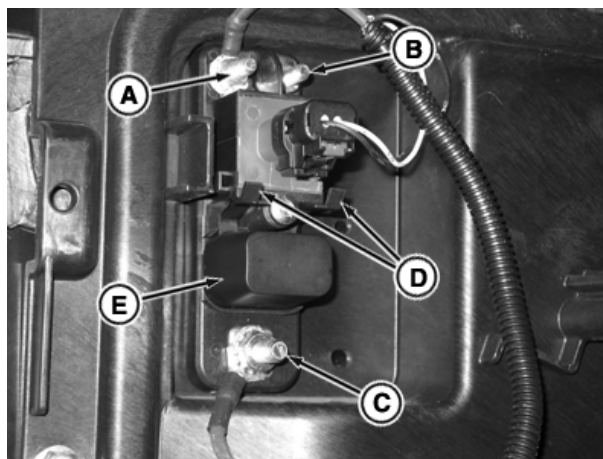
Bottom center is the battery power input stud (C).

To Change Fuses

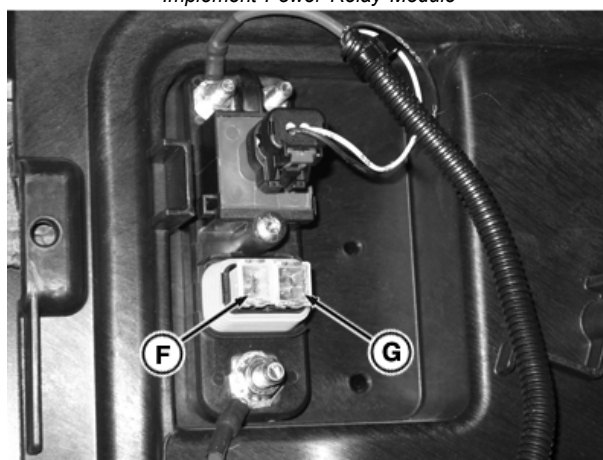
1. Press down on fuse cover tabs (D) and remove fuse cover (E).
2. To remove, pull fuse straight back.
3. Replace with new fuse.
4. Replace cover and slide tabs over cover edge to hold in place.

A—Switched Power Lug
B—Unswitched Power Lug
C—Input Stud
D—Fuse Cover Tabs

E—Fuse Cover
F—60 Amp Fuse
G—30 Amp Fuse



Implement Power Relay Module



Remove Cover To Access Implement Power Relay Module

OURX935,0000988 -19-19MAY09-1/1

RXA0100354 —UN—03FEB09

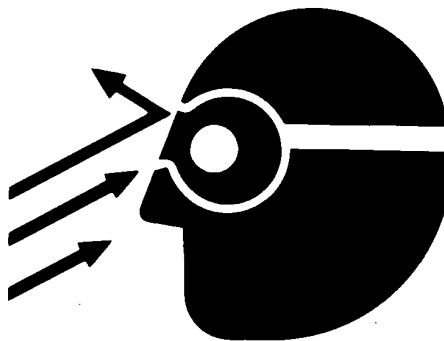
RXA0100356 —UN—03FEB09

Handling Halogen Light Bulbs Safely

⚠ 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 bulbs to cool before changing. Leave switch off until bulb change is done.
- Wear eye protection.
- Handle bulb by its base. Keep bulb oil free; wear gloves to avoid touching glass.
- Do not drop or scratch bulb. Keep moisture away.
- Place used bulb in the new bulb carton and dispose of properly. Keep out of reach of children.

A—Halogen Bulb



TS266 —UN—23AUG88

H39474 —UN—30JUN00

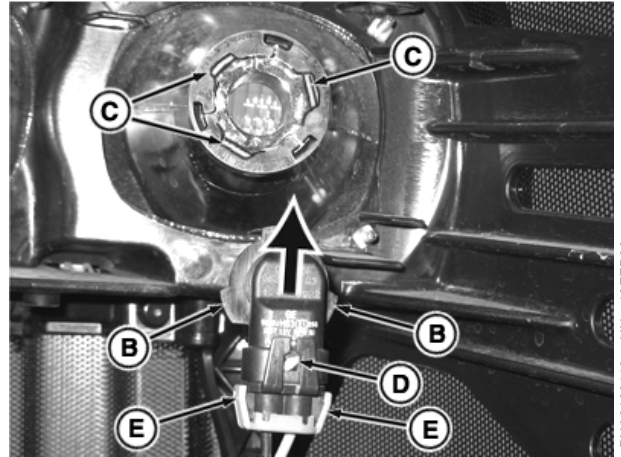
OURX935,0000318 -19-12JUN08-1/1

Replacing Front Grille Flood Light Bulb—Standard Lighting

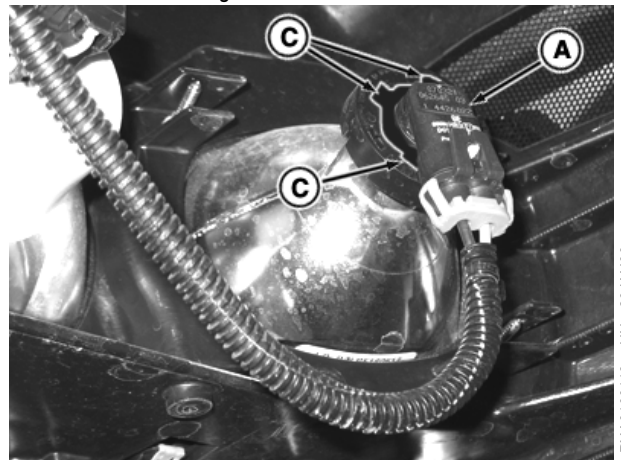
1. Raise hood.
2. Rotate light Bulb (A) counterclockwise so that bulb flanges (B) align with light assembly notches (C), then pull bulb rearward from light assembly.
3. Pull keepers (E) out to the sides, make sure pin (D) is aligned with slot, and remove light bulb from harness.
4. Install new bulb in harness. Make sure pin is aligned and that keepers seat on bulb.
5. Align bulb flanges with light assembly notches and rotate bulb 1/4 turn so that wiring harness is pointed down.
6. Close hood and check to make sure new bulb works.

A—Bulb
B—Bulb Flanges
C—Light Assembly Notches

D—Pin
E—Keepers



Right-Hand Side Shown



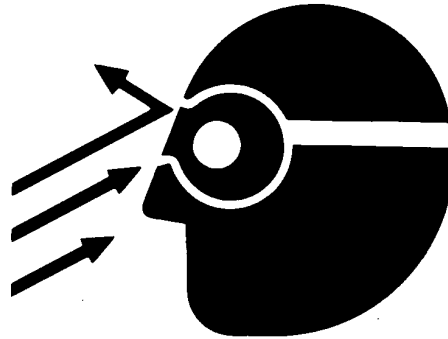
Right-Hand Side Shown

OURX935,00008B3 -19-18FEB09-1/1

Handling HID Light Bulbs Safely

CAUTION: Handling a bulb improperly could cause it to shatter into flying fragments. To avoid possible injury:

- High voltage is conducted by electrical connection between worklights and ballast unit; this connection must never be broken.
- Handle bulb by its base. Keep bulb oil free; wear gloves to avoid touching glass. Use a clean cloth and alcohol to remove any fingerprints from the glass bulb before installing. Skin oil deposited on bulb will cause overheating and premature failure.
- Do not operate bulb outside of enclosure. When operating, HID bulbs have high internal pressure and if they are cracked or broken, they could explode and cause injury.
- Turn light switch off and allow bulbs to cool before changing. Leave switch off until bulb change is done.



- Wear eye protection.
- Do not drop or scratch bulb. Keep moisture away.
- Place used bulb in the new bulb carton and dispose of properly. Keep out of reach of children.

OURX935,000031B -19-12JUN08-1/1

HID Bulbs

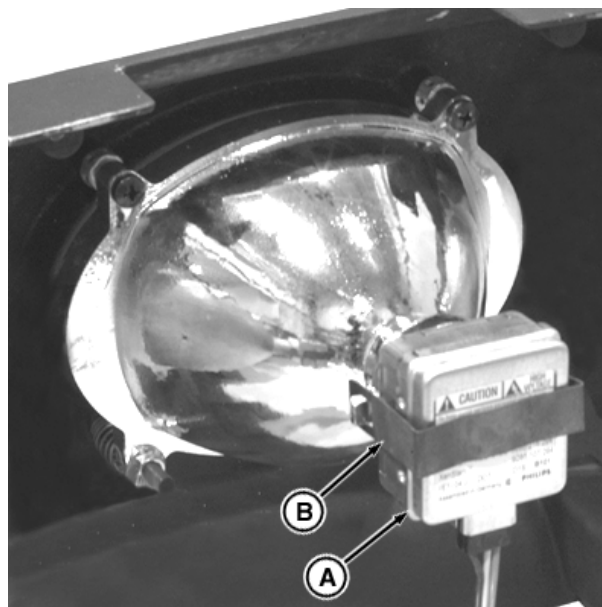
Front HID Bulb Replacement:

⚠ CAUTION: Wear gloves and safety glasses when handling bulbs. Dangerous voltage spark-over may occur and cause damage/injury at the connector. See manufacturer warning packaged with replacement bulb.

1. Disconnect wiring harness from HID assembly.
2. Press in on HID assembly (A) and remove retainer (B) using a screwdriver.

A—HID Assembly

B—Retainer



RXA0082294 —UN—12JUL05

Front HID Bulb Replacement

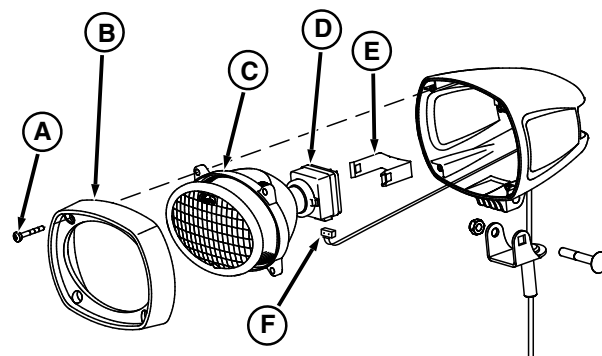
OURX935,000031C -19-12JUN08-1/2

Rear Fender HID Bulb Replacement:

1. Remove cap screws (A) and bezel (B).
2. Carefully pull reflector (C) with lamp (D) out of cover far enough to unplug wiring harness (F).
3. Press in on HID light assembly and remove retainer (E) with a screw driver. Remove lamp from reflector.
4. Install new lamp in reflector and install retainer.
5. Connect wiring harness plug to new HID light assembly. Install HID light assembly in cover and install bezel and cap screws.

A—Cap Screw
B—Bezel
C—Reflector

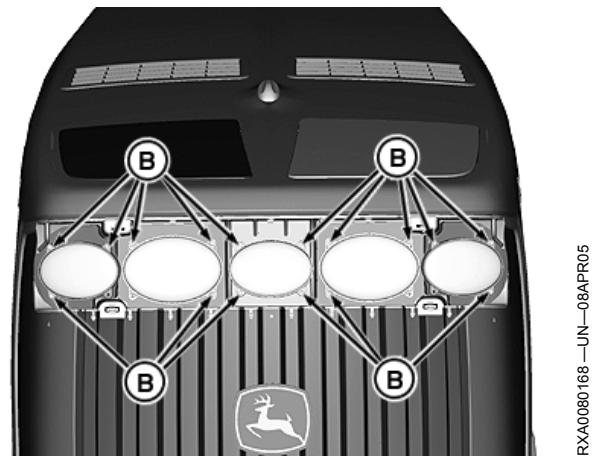
D—Lamp
E—Retainer
F—Wiring Harness



RXA0085596 —UN—13FEB06

OURX935,000031C -19-12JUN08-2/2

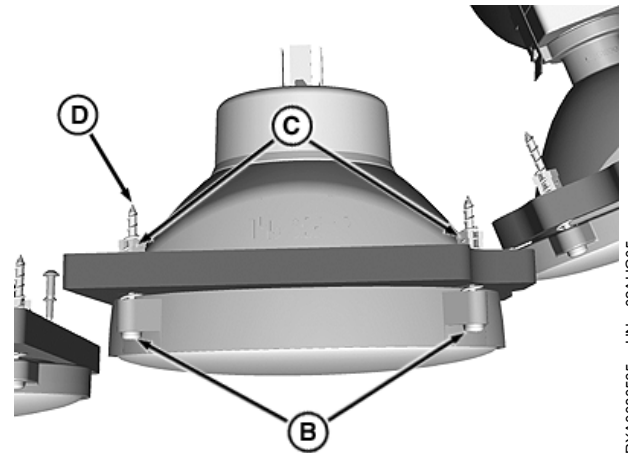
Adjusting Front Grille Lights



1. To remove bezel, place one hand on each side of bezel (A) and pull straight back.
2. Adjust the light beam by turning aiming screws (B).
3. To return light to factory setting, adjust cap screws so the screw tips (D) are flush with plastic retainers (C), then adjust light beams from there.

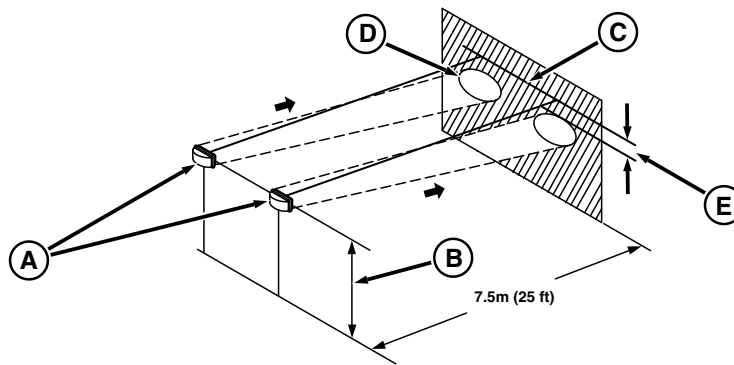
A—Position
B—Aiming Cap Screws

C—Plastic Retainers
D—Screw Tips



OURX935,000031D -19-12JUN08-1/1

Aiming Head Lights



A—Head Lights
B—Distance from Center of Head Light to Ground
C—Horizontal Line on Wall
D—Border of Bright Area
E—10% of Distance (B)

1. Park tractor on a level surface with head lights (A) 7.5 meters (25 ft) from a vertical wall.
2. Measure the distance (B) from the center of a head light to the ground.
3. Mark a horizontal line (C) on the wall, at the same distance from the ground as (B).
4. Set head lights on low beam and observe bright areas on the wall.
5. Adjust head lights so the upper border of bright area (D) is **at least** one tenth of distance (B) **below** line (C).

OURX935,000031E -19-12JUN08-1/1

RXA0086628 —UN—13FEB06

Replacing Front, Side And Rear Cab Roof Bulbs

1. Push down light fixture tab (A).
2. Turn bulb (B) 1/4 turn to remove bulb from fixture.
3. Insert bulb into fixture, then turn bulb 1/4 turn to lock in place.
4. Insert fixture into cab roof until it seats and tab is snapped into place.

A—Light Fixture Tab
B—Bulb



Push Down On Tab To Remove Fixture



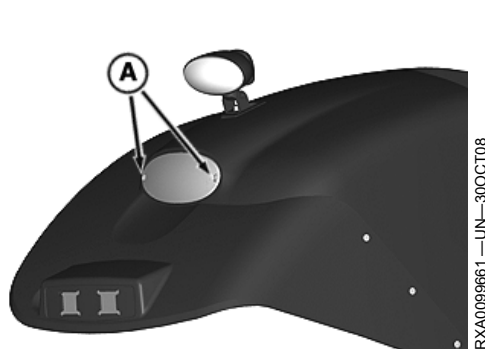
Remove Bulb

OURX935,0000543 -19-03OCT08-1/1

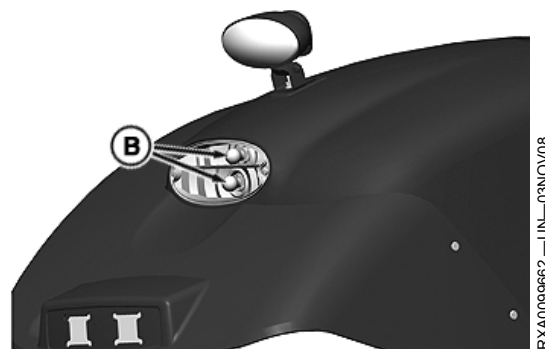
RXA0099133 —UN—19SEP08

RXA0099135 —UN—19SEP08

Replacing Brake or Turn Signal Light Bulb



Remove Lens



Remove Light

A—Screws

B—Light Bulb

1. Remove screws (A) and lens.
2. Turn bulb (B) counterclockwise 1/4 turn and pull out to remove.
3. Install new bulb in fixture and turn 1/4 turn clockwise.
4. Replace lens and screws.

OURX935,00009A8 -19-01JUN09-1/1

Replacing Dome Light Bulb

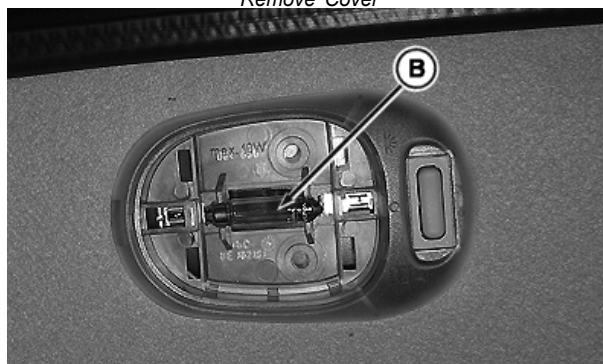
1. Remove lens cover (A).
2. To remove light bulb (B), grasp bulb and pull straight down.
3. Gently push new bulb into fixture until it seats.
4. Replace cover.

A—Cover

B—Light Bulb



Remove Cover



Remove And Replace Bulb

OURX935,0000544 -19-26JUN09-1/1

Replacing Courtesy Light

1. Carefully insert fingers under edges (G) of cover, then pull cover (A) down to expose bulbs.
2. Pull down on cover front disconnecting front clip (H).
3. Remove rear clips (F) by sliding cover toward cab center.
4. Unplug Courtesy connector (B).
5. Disconnect plug (D), Courtesy Light connector (B), and Map Light plug (E). Cover with bulb assembly is now free from cab roof.
6. Remove Courtesy bulb (C) from cover.
7. Install new bulb in cover.
8. Slide rear clips into roof.
9. Reconnect connectors (B and E), plug (D), then install rear clips before swinging cover front up and snapping front clip (H) into place.

A—Cover

B—Courtesy Light Connector

C—Courtesy Bulb

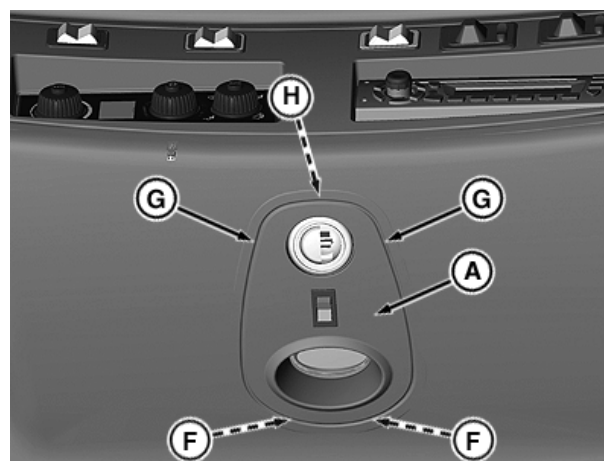
D—Plug

E—Map Light Connector

F—Rear clips

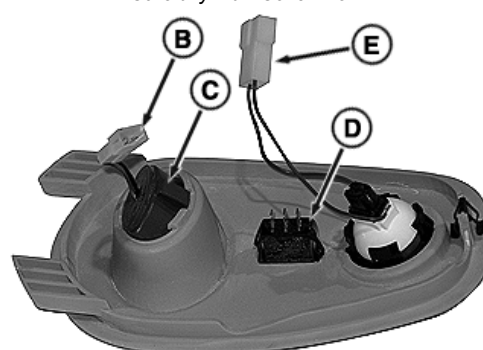
G—Edges of Cover

H—Front Clips



RXA0101058 —UN—19MAR09

Carefully Pull Cover Down



RXA0099147 —UN—18FEB09



RXA0099143 —UN—19SEP08

Remove Bulb From Retaining Ring

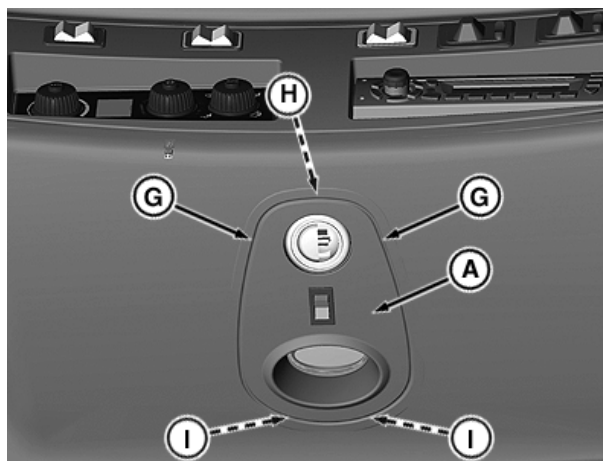
OURX935,000054D -19-01APR09-1/1

Replacing Map Light

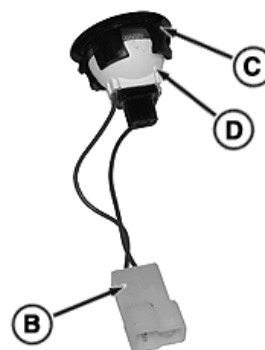
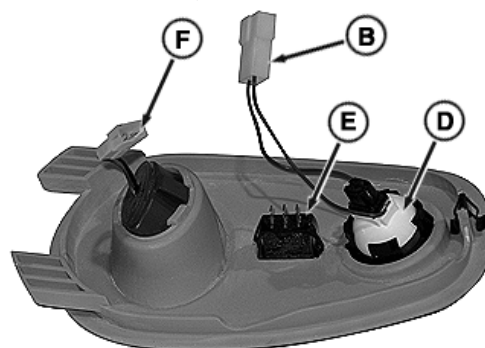
1. Carefully insert fingers under edges (G) of cover, then pull cover (A) down to expose bulbs.
2. Pull down on cover front disconnecting front clip (H).
3. Remove rear clips (I) by sliding cover toward cab center.
4. Disconnect plug (E), Courtesy Light connector (F), and Map light plug (B). Cover with bulb assembly is now free from cab roof.
5. Remove bulb (D) from retaining ring (C).
6. Install new bulb in retaining ring.
7. Snap retaining ring with bulb into cover.
8. Slide rear clips into roof.
9. Reconnect connectors (B and F), plug (E), then install rear clips before swinging cover front up and snapping front clip into place.

A—Cover
B—Map Light Connector
C—Retaining Ring
D—Bulb
E—Plug

F—Courtesy Light Connector
G—Edges of Cover
H—Front Clip
I—Rear clips



Carefully Pull Cover Down.



Remove Bulb From Retaining Ring

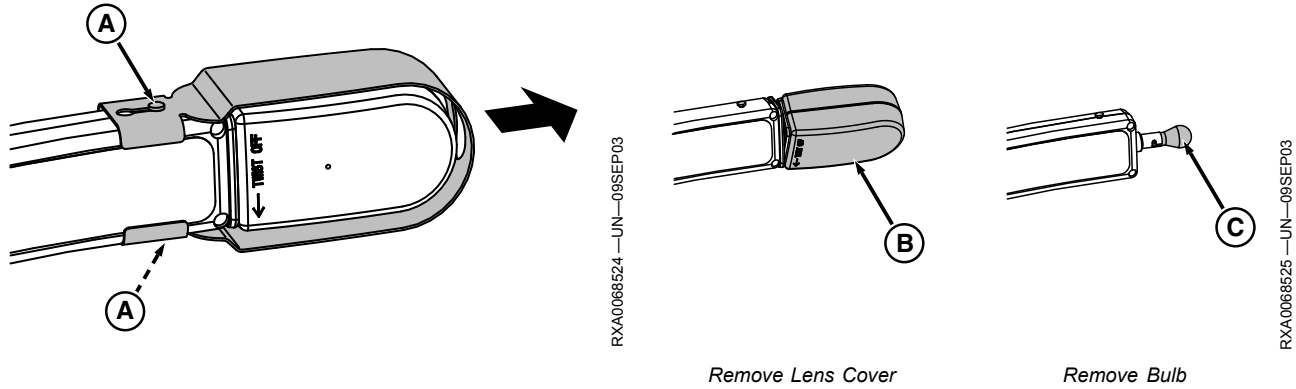
RXA0099148 —UN—18FEB09

RXA0099146 —UN—18FEB09

RXA0099141 —UN—19SEP08

OURX935,000054E -19-01JUN09-1/1

Replacing Extremity Warning Light Bulb (if Equipped)



1. Loosen screws (A).
2. Slide shield away from lens cover to remove.
3. Turn lens cover (B) counterclockwise to remove light bulb (C).
4. Install new bulb in reverse order of removal

A—Screws
B—Lens Cover

C—Light Bulb

OURX935,0000324 -19-25SEP09-1/1

Troubleshooting

Engine Troubleshooting

Symptom	Problem	Solution
Engine hard to start or will not start	Incorrect starting procedure	Review starting procedure
	Blown fuse	Check fuse 17
	No fuel	Check fuel tank
	Air in fuel line	Bleed fuel line (Turn key to "RUN" for 60 seconds with engine off)
	Cold weather	Use cold weather starting aids
	Slow starter speed	See Starter Cranks Slowly
	Crankcase oil too heavy	Use correct oil viscosity
	Incorrect type of fuel	Consult fuel supplier; use correct fuel type for operating conditions
	Water, dirt, or air in fuel system	Drain, flush, fill and bleed system
	Clogged fuel filter	Replace filter elements
	Dirty or faulty injectors	Have your John Deere™ dealer check injectors
	Injection pump shut-off not reset	Turn key switch to OFF then to ON
Engine knocks	Insufficient oil	Add oil
	During warm up, pilot injection system will activate and deactivate depending on engine operating temperature	This is normal operation
	Low coolant temperature	Replace thermostats
	Engine overheating	See Engine Overheats
Engine runs irregularly or stalls frequently	Low coolant temperature	Replace thermostats
	Clogged fuel filters	Replace filter elements
	Water, dirt, or air in fuel system	Drain, flush, fill and bleed system
	Vent on fuel tank obstructed	Clean vent under rear cab panel
	Dirty or faulty injectors	Have your John Deere dealer check injectors
Below normal engine temperature	Defective thermostat	Replace thermostats
	Defective temperature gauge or sender	See your John Deere dealer

Continued on next page

OURX935.00009AA -19-01JUN09-1/4

Symptom	Problem	Solution
	Variable speed fan running too fast	See your John Deere dealer
Variable Fan Speed Drive surges at low engine rpm	Fan drive surging is NOT normal	See your John Deere dealer
Throttle does not allow full engine rpm	AutoPowr load control knob may not be set properly	See section 42, Operating AutoPowr Transmission
	Field Cruise may be on and limiting max engine rpm	Check the settings for Field Cruise in the CommandCenter. Insure full rpm has been selected on the display
	Cold oil can limit engine speed to 1500 rpm	Warm up transmission/hydraulic oil
		See your John Deere dealer if problem persists
Lack of power	Engine overloaded	Reduce load or shift to lower gear
	Low fast idle speed	Insure Field Cruise is set to max rpm
		Insure AutoPowr is set correctly
		If problem persists, see your John Deere Dealer
	Intake air restriction	Service air cleaner
	Clogged fuel filters	Replace fuel filter elements
	Incorrect type of fuel	Use correct fuel
	Overheated engine	See Engine Overheats
	Below normal engine temperature	Remove and check thermostats
	Incorrect valve clearance	See your John Deere Dealer
	Dirty or faulty injectors	Have your John Deere Dealer check injectors
	Turbocharger not functioning	See your John Deere Dealer
	Leaking exhaust manifold gasket	See your John Deere Dealer
	Implement incorrectly adjusted	See implement operator's manual
	Restricted fuel inlet	Clean or replace fuel line
	Incorrect ballast	Adjust ballast to load. See section 75, Performance Ballasting
Low oil pressure	Low oil level	Add oil

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OURX935,00009AA -19-01JUN09-2/4

Symptom	Problem	Solution
High oil consumption	Incorrect type of oil	Drain, fill crankcase with correct quality and viscosity of oil
	Crankcase oil too light	Use correct viscosity oil
	Oil leaks	Check for leaks in lines, around gaskets and drain plug
	Defective turbocharger	See your John Deere Dealer
Engine emits smoke	Restricted engine breather tube	Unclog engine breather tube
	Incorrect type of fuel	Use correct fuel
	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to a low gear
Engine overheats	Injection nozzles dirty	See your John Deere Dealer
	Turbocharger not functioning	See your John Deere Dealer
	Dirty radiator core, oil cooler, or grille screens	Remove all trash and clean coolers
	Engine overloaded	Shift to lower gear or reduce load
	Low engine oil level	Check oil level. Add oil as required
	Low coolant level	Fill de-aeration tank and recovery tank to correct level, check radiator and hoses for loose connections or leaks
	Faulty radiator cap	Replace radiator cap
	Loose or defective fan belt	Check and replace belt as needed
	Fan drive running too slow	Make sure bleed screw under fan drive is fully closed
	Cooling system needs flushing	Flush cooling system
	Defective thermostat	Replace thermostats
	Defective temperature gauge or sender	See your John Deere Dealer
High fuel consumption	Clogged or dirty air cleaner	Service air cleaner
	Engine overloaded	Reduce load or shift to lower gear
	Injection nozzles dirty	See your John Deere Dealer

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OURX935,00009AA -19-01JUN09-3/4

Troubleshooting

Symptom	Problem	Solution
	Implement incorrectly adjusted	See implement operator's manual
	Excessive ballast	Adjust ballast to load. See section 75, Performance Ballasting
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Transmission Troubleshooting

Symptom	Problem	Solution
PST transmission vent between engine and transmission yoke leaks oil	Clogged transmission filter screen	Clean screen
AutoPowr transmission external vent leaks oil	Clogged transmission filter screen	Clean screen
Transmission warning displays	Diagnostic trouble code has been stored	See PTI or PTP codes in the Diagnostic Trouble Codes section
PST Transmission skips gears	No problem	See Shifting the Transmission in Operating the Tractor section
Transmission shifts slowly and tractor steers hard	Cold oil	See Transmission/Hydraulic System Warm-Up in Operating the Tractor section
Transmission slips, shifts rough or abruptly (jerky) after oil change	Recalibrate transmission (PST only)	See Changing Transmission/Hydraulic Oil in the Lubrication section Have dealer recalibrate See your John Deere dealer
Transmission starts out too fast/slow	No problem	Start-up gear can be changed through the CommandCenter settings. See Shifting the PST Transmission in Operating the Tractor section. For AutoPowr tractors, see Adjusting Set Speeds. If problem persists, see your John Deere™ dealer
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Hydraulic System Troubleshooting

Symptom	Problem	Solution
Entire hydraulic system fails to function	Low oil supply	Check sight glass, fill system with correct oil
	Clogged hydraulic filters	Replace BOTH hydraulic filters
	Clogged charge pump suction screen	Clean screen
	High-pressure internal leak	See your John Deere™ dealer
Hydraulic oil overheats	Low or high oil supply	Fill system to correct level
	Oil cooler air passages clogged	Clean oil cooler and condenser in front cooling module
	Internal hydraulic leak	See your John Deere Dealer
	Implement hydraulic load not matched to tractor or not properly routed back into tractor hydraulic system	See Remote Hydraulic Connections.
	Clogged transmission oil filter element	Replace filter elements

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OURX935,0000653 -19-12SEP09-1/1

Hitch Troubleshooting

Symptom	Problem	Solution
Insufficient transport clearance	Center link too short	Adjust center link
	Center link in wrong position	Put center link of tractor in correct hole. See Hitch section
	Lift links too short	Adjust lift links
	Implement not level	Level implement
	Implement not correctly adjusted	See implement operator's manual
	Upper height limit not correctly set	Adjust upper height limit in CommandCenter
	Independent Link Suspension leveling not functioning correctly or extended above level	Induce leveling with engine operating by depressing clutch and putting transmission in gear for four seconds. Repeat until suspension is in normal operating position
Hitch fails to follow lever	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere™ dealer
Poor position control	Load/depth mix control on wrong position	Adjust load/depth mix control in the CommandCenter™ to the left
	System is reset	Enable system
	Malfunction in lever position sensor circuit or hitch position sensor	See your John Deere dealer
	Independent Link Suspension leveling not functioning correctly during large draft changes	Induce leveling with engine operating by depressing clutch and putting transmission in gear for four seconds. Repeat until suspension is in normal operating position
Hitch drops slowly	Hitch rate-of-drop control not correctly set	Adjust rate-of-drop through settings in CommandCenter
Hitch fails to lift or lifts slowly	Excessive load on hitch	Reduce load
	Center link in wrong position	Put center link in correct hole
	Hitch valve leak	See your John Deere dealer
	Raise limit switch setting may be limiting lift	Check settings in CommandCenter
Implement will not operate at desired depth	Lift links too short	Adjust lift links
	Lack of penetration	See implement operator's manual
	Draft sensor failed	See your John Deere Dealer

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OURX935,0000654 -19-12SEP09-1/2

Troubleshooting

Symptom	Problem	Solution
Insufficient or no hitch response to draft load	Load/depth mix control in wrong setting	Adjust load/depth mix control in the CommandCenter hitch settings
	Rate-of-drop too slow	Adjust rate-of-drop in the CommandCenter hitch settings
Hitch too responsive	Load/depth mix control not correctly set	Adjust load/depth mix control in the CommandCenter hitch settings
Hitch settles too fast after tractor is parked and engine is shut off	Internal circuit leakage	See your John Deere Dealer
Hitch will not move (controls not working, including rear raise/lower switch)	Fuse blown	Replace fuse 30
External raise/lower switch will not move hitch	Failure of raise/lower switch, connector, or wiring harness	See your John Deere Dealer
	Lever in transport lock	Move lever out of transport. Unlock hitch at CommandCenter
Hitch movement sluggish	SCV stack filter plugged	Replace SCV stack filter

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Selective Control Valve Troubleshooting

Symptom	Problem	Solution
Remote cylinder will not lift load	Flow check	Cycle SCV levers
	Excessive load	Reduce load
	Hoses not completely installed	Attach hoses correctly
	Incorrect remote cylinder size	Use correct size cylinder
	SCV transport lock engaged	Release SCV transport lock
	Incorrect or damaged hose tips	Replace hose tips
Remote cylinder rate of travel too fast or too slow	Incorrect flow rate	Adjust flow rate
Direction of remote cylinder travel is reversed	Incorrect hose connections	Reverse hose connections
Hoses will not couple	Incorrect hose male connectors	Replace connectors with ISO Standard connectors
Detent does not hold or releases too soon	Detent time set incorrectly	Set time correctly
	SCV lever is not being released to neutral	Release SCV lever from detent to neutral in less than 0.8 seconds
SCV lever does not release	SCV float is being "commanded"	Do not push lever down in forward position
	Lever mechanism failed	See your John Deere™ Dealer
Implement does not operate or does not operate correctly	Incorrect hose connections	See implement operator's manual
		See your John Deere Dealer
Implement is sluggish	SCV stack filter plugged	Replace SCV stack filter

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TouchSet Depth Control Troubleshooting

Symptom	Problem	Solution
Depth control does not function correctly	Implement transport lock-up valve closed	Open valve
	Cylinders not "rephased" (synchronized)	"Rephase" (synchronize) cylinders IMPORTANT: Be sure all air is bled from depth control system
	Machine operating at different depths	Hard ground or adverse operating conditions See implement operator's manual
	Cylinder leakage	Check for leakage Repair or replace cylinders; see your John Deere™ dealer
	Insufficient tractor hydraulic pressure	Check tractor hydraulic pressure; use correct size cylinders for tractor pressure
	Hydraulic hoses not connected correctly	Reconnect correctly

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Electrical System Troubleshooting

Symptom	Problem	Solution
Voltage indicator displayed when there is low battery voltage (key ON and engine OFF)	Defective battery	Check electrolyte level and specific gravity
	Low charging voltage	Have your John Deere™ dealer check charging circuit
	High resistance in charging circuit	Have your John Deere Dealer check charging circuit
	Indicator malfunction	Have your John Deere Dealer check indicator
Voltage symbol displayed and service alert indicator flashing indicating low charging voltage (engine running)	Low engine speed	Increase speed
	Auxiliary drive belt slipping, not charging alternator	Check auxiliary drive belt tension
	Defective battery	Check electrolyte level and specific gravity
	Defective alternator	Have your John Deere Dealer check alternator
	Excessive electrical load	Decrease load
Voltage symbol displayed and service alert indicators flashing indicating excessive charging voltage	Faulty connection to alternator	Check wiring connections
	Defective regulator	Have your John Deere Dealer check alternator
Chirping noise from side console	Noise is normal	The 8030 series tractors use solid-state electronic drivers instead of relays to control the turn signal lights. The tractor warning system provides a turn signal indicator beep replacing the relay clicking noise.
Batteries will not charge	Loose or corroded connections	Clean and tighten connections
	Sulfated or worn-out batteries	Check electrolyte level and specific gravity
	Loose or defective alternator belt	Adjust auxiliary belt tension or replace belt
Starter inoperative	Transmission in gear	Place transmission in PARK
	Faulty or maladjusted neutral start switch or starter solenoid malfunction	See your John Deere Dealer

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OURX935,0000657 -19-12SEP09-1/2

Troubleshooting

Symptom	Problem	Solution
Starter cranks slowly	Loose or corroded connections	Clean and tighten loose connections
	Low battery output	See your John Deere Dealer
	Blown fuse 1	Replace fuse
	Low battery output	Check electrolyte level and specific gravity
	Crankcase oil too heavy	Use correct viscosity oil
Light system does not function; rest of electrical system functions Entire electrical system does not function	Loose or corroded connections	Clean and tighten loose connections
	Blown fuse 18	Replace fuse
	Faulty battery connection	Clean and tighten connections
	Sulfated or worn out batteries	Check electrolyte level and specific gravity
	Blown master fuse	Replace master fuse (in battery compartment)
Blower malfunctioning	Blower does not work	Check for stored codes, total cab electrical load may be exceeding solid state load center capacity
	Blown fuse 3	Replace fuse
Blower operates only in PURGE	Blown blower resistance assembly	See your John Deere Dealer

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Operator Enclosure Troubleshooting

Symptom	Problem	Solution
Blower not keeping dust out of operator enclosure	Defective seal around filter element	Check seal condition
		Check filter for correct installation
	Defective filter	Replace filter
	Excessive air leak	Seal air leaks
Blower air flow too low	Blower air flow too low	See Blower Air Flow Too Low
	Clogged filter or air intake screen	Clean
Heater will not shut off	Heater core or evaporator core clogged	Clean
	Heater hoses connected incorrectly	See your John Deere™ dealer
Air conditioner not cooling	Cable/water valve not adjusted properly	See your John Deere Dealer
	Low voltage	See your John Deere Dealer
	Low refrigerant	See your John Deere Dealer
	Belt slipping	Check belt tension
Intermittent cooling	Compressor switch not turned ON	Turn compressor switch ON
	Air restriction in front corners	Clean radiator, oil cooler, and air conditioner condenser
Seat suspension not working	Blown fuses 2 and 19	Replace fuse
Radio does not function	Blown fuse 5	Replace fuse
Tractor bounces or jumps	Power hop/wheel hop	Check weight split
		Check ballast
		Check inflation pressures
	Loose wheel hardware	See Controlling Wheel Hop in Performance Ballasting section Tighten hardware to correct torque

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Tractor Operation Troubleshooting

Symptom	Problem	Solution
Tractor bounces or jumps	Power hop/wheel hop	Check weight split
		Check ballast
		Check inflation pressures
		See Controlling Wheel Hop in the Performance Ballasting section
		See your John Deere™ dealer

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Independent Link Suspension Troubleshooting

Symptom	Problem	Solution
Suspension settles	Suspension cylinder leaking	See your John Deere™ dealer
	Check valve leaking	See your John Deere Dealer
Suspension does not level	Position sensor failure	See your John Deere Dealer
	Blown fuse 22	Replace fuse
	Wheel speed less than 0.5 km/h (0.3 mph)	Increase speed
	Auto-leveling disabled	See your John Deere Dealer
Suspension does not lock during hitch operation	Excess leakage, valve stuck, or solenoid failure	See your John Deere Dealer
	Wheel speed greater than 30 km/h (18.6 mph)	Reduce speed to less than 20 km/h (12.4 mph)
	Auto-leveling disabled	See your John Deere Dealer
Excessive suspension damping or suspension does not unlock	Wheel speed less than 0.5 km/h (0.3 mph)	Increase speed
	Auto-leveling disabled	See your John Deere Dealer
Tractor bounces or jumps	Independent Link Suspension is locked	See your John Deere Dealer
	Tires not correctly inflated or out of round	Check tires and inflation pressure
	Tires cold and out of round	Drive tractor 3.2 km (2 miles) to determine if condition still exists

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Premium Radio Troubleshooting

Symptom	Problem	Solution
"NO CD" displayed	CD will not play	No CD has been loaded in the player
"NO PLAYABLE DISC" displayed	No playable files on media	Change media
"NO MUSIC FILES" displayed	No playable files on media	Include music files to media
"Front AUX UNPLUGGED" displayed	No Front Aux connected while iPod connected	Connect front Aux cable
"iPod NOT SUPPORTED" displayed	iPod connected not supported	Disconnect iPod
"USB NOT SUPPORTED" displayed	USB connected not supported	Disconnect USB
Sound quality, skipping, difficulty in finding tracks, and/or difficulty in loading or ejecting	CD-R may be affected by a CD-R's quality, the method of recording, the quality of the music that has been recorded or the way the CD-R has been handled.	Play CD you know is good to see if the error corrects itself. If an error occurs repeatedly or if an error cannot be corrected, contact your dealer. If the radio displays an error message, write it down and provide it to your dealer when reporting the problem.

OURX935,000093D -19-11APR09-1/1

Diagnostic Trouble Codes

Introduction To Diagnostic Trouble Codes

When either a Service Alert or Information indicator is displayed, the tractor should be placed in park and engine shut off. Before contacting your John Deere dealer, restart the engine to verify the active Diagnostic Trouble Code will reappear. Sometimes, the code can be corrected by resetting the communication messages when tractor is restarted.

Some Service Alerts and Information indicators can be acknowledged and display cleared by pressing the

SELECT switch on the CommandCenter. The display will return to a normal mode. This will allow tractor function to continue however Diagnostic Trouble Code may reappear at a later date if condition still exists.

If a code is not in this section, contact your John Deere dealer.

OURX935,0000595 -19-03NOV08-1/1

Armrest Control Unit Diagnostic Trouble Codes

Diagnostic Trouble Code	Display	Solution
ACU 237.2	Identification System	Vehicle identification numbers do not match between control units.
ACU 237.14	Identification System	Vehicle identification fault.
ACU 628.12	Programming	Armrest control unit programming in progress.
ACU 629.12	Operator Controls	Armrest control unit fault. Restart engine to attempt vehicle recovery.
ACU 523955.31	Transmission Load High	Excessive engine load in manual mode. Change AutoPowr to Auto Mode. Increase engine speed, reduce ground speed, or reduce load.
ACU 523960.17	Operator Not In Seat	Operator out of seat. Return to seated position.
ACU 523966.31	Transmission Come Home active	Come Home Mode active. Basic tractor functionality only.
ACU 158.4	Rear PTO system	Armrest supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
ACU 177.17	Transmission oil temperature	Engine speed limited due to low transmission oil temperature. Engine speed restricted to less than 1500 RPM until oil temperature is greater than -5C (23 F).
ACU 237.31	Identification System	Vehicle identification fault.
ACU 581.7	Transmission System	AutoPowr not responding to commanded gear ratio. Return to Park to attempt vehicle recovery.
ACU 628.2	Operator Controls	Armrest control unit fault.
ACU 629.11	Operator Controls	Armrest control unit fault.
ACU 630.2	Operator Controls	AutoPowr set speed storage fault.
ACU 630.13	Operator Controls	Armrest control unit calibration fault.
ACU 974.2	Operator Controls	Hand throttle circuit voltage fault. Engine RPM limited.
ACU 974.3	Operator Controls	Hand throttle circuit voltage high. Restart engine to attempt vehicle recovery.
ACU 974.4	Operator Controls	Hand throttle circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 1079.3	Operator Controls	Armrest sensor supply voltage high. Restart engine to attempt vehicle recovery.
ACU 1079.4	Operator Controls	Armrest sensor supply voltage low. Restart engine to attempt vehicle recovery.
ACU 1080.3	Operator Controls	Armrest sensor supply voltage high. Restart engine to attempt vehicle recovery.
ACU 1080.4	Operator Controls	Armrest sensor supply voltage low. Restart engine to attempt vehicle recovery.
ACU 2000.9	Communication System	Engine control unit communication fault. Restart engine to attempt vehicle recovery.
ACU 2003.9	Communication System	Transmission control unit communication fault. Restart engine to attempt vehicle recovery.
ACU 2020.9	Communication System	Suspension control unit communication fault. Restart engine to attempt vehicle recovery.
ACU 2049.9	Communication System	Cab control unit communication fault. Restart engine to attempt vehicle recovery.
ACU 523664.2	Operator Controls	Drive lever circuit fault. Return to Park or restart engine to attempt vehicle recovery.
ACU 523923.2	Operator Controls	SCV I control lever sensor voltage fault. Restart engine to attempt vehicle recovery.
ACU 523923.3	Operator Controls	SCV I control lever sensor circuit voltage high. Restart engine to attempt vehicle recovery.
ACU 523923.4	Operator Controls	SCV I control lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 523953.2	Operator Controls	AutoPowr speed control lever sensor circuit fault. Restart engine to attempt vehicle recovery.
ACU 523953.3	Operator Controls	AutoPowr speed control lever sensor circuit voltage high. Restart engine to attempt vehicle recovery.
ACU 523953.4	Operator Controls	AutoPowr speed control lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 523954.7	Operator Controls	AutoPowr speed control lever fault. Restart engine to attempt vehicle recovery.
ACU 523954.11	Operator Controls	Set speed adjuster fault. Restart engine to attempt vehicle recovery.
ACU 523958.31	Operator Controls	The ratio between the forward and reverse set speed is incorrect.
ACU 523960.31	Operator Not In Seat	Sit down or press brake or clutch and select 'Park' before driving. Operator out of seat. Return to seated position. Return vehicle to Park before resuming operation.
ACU 523961.2	Transmission system	Park engaged while vehicle in gear. Return to Park or restart engine to attempt vehicle recovery.

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OURX935,00009AC -19-01JUN09-1/2

Diagnostic Trouble Codes

ACU 523961.7	Transmission Not In Park	Park lock not engaged. Cycle gear selector or restart engine to attempt vehicle recovery.
ACU 523962.31	MFWD System	MFWD speed circuit fault.
ACU 523963.2	Operator Controls	Speed Band 1 switch circuit fault. Restart engine to attempt vehicle recovery.
ACU 523967.2	Operator Controls	Speed Band 2 switch circuit fault. Restart engine to attempt vehicle recovery.
ACU 523968.2	iTEC Controls	Switch circuit fault.
ACU 523968.3	iTEC Controls	Control circuit voltage high. Restart engine to attempt vehicle recovery.
ACU 523968.4	iTEC Controls	Control circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 524017.31	Operator Controls	Transmission control lever voltage fault. Restart engine to attempt vehicle recovery.
ACU 524018.31	Operator Controls	Right hand reverser position fault. Return to Park to attempt vehicle recovery.
ACU 524019.31	Lever not in park	Right hand reverser position fault. Return to Park to attempt vehicle recovery.
ACU 524020.31	Lever not in park	Place transmission lever in Park.
ACU 524021.31	Operator Controls	Reverser switch fault. Restart engine to attempt vehicle recovery
ACU 524101.2	Operator Controls	Front hitch control lever sensor voltage fault. Restart engine to attempt vehicle recovery.
ACU 524101.3	Operator Controls	Front hitch control lever sensor voltage high. Restart engine to attempt vehicle recovery.
ACU 524101.4	Operator Controls	Front hitch control lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 524102.2	Operator Controls	SCV V control lever sensor voltage fault. Restart engine to attempt vehicle recovery.
ACU 524102.3	Operator Controls	SCV V control lever sensor circuit voltage high. Restart engine to attempt vehicle recovery.
ACU 524102.4	Operator Controls	SCV V control lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 524103.2	Operator Controls	SCV IV control lever sensor voltage fault. Restart engine to attempt vehicle recovery.
ACU 524103.3	Operator Controls	SCV IV control lever sensor circuit voltage high. Restart engine to attempt vehicle recovery.
ACU 524103.4	Operator Controls	SCV IV control lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 524104.2	Operator Controls	SCV III control lever sensor voltage fault. Restart engine to attempt vehicle recovery.
ACU 524104.3	Operator Controls	SCV III Control Lever Voltage Too High. Reference Diagnostic Procedure in Technical Manual.
ACU 524104.4	Operator Controls	SCV III control lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
ACU 524105.2	Operator Controls	SCV II control lever sensor circuit fault. Restart engine to attempt vehicle recovery.
ACU 524105.3	Operator Controls	SCV II control lever sensor voltage high. Restart engine to attempt vehicle recovery.
ACU 524105.4	Operator Controls	SCV II control lever sensor voltage low. Restart engine to attempt vehicle recovery.
ACU 524212.2	Operator Controls	Rear hitch control lever sensor circuit fault. Restart engine to attempt vehicle recovery.
ACU 524212.3	Operator Controls	Rear hitch control lever sensor voltage high. Restart engine to attempt vehicle recovery.
ACU 524212.4	Operator Controls	Rear hitch control lever sensor voltage low. Restart engine to attempt vehicle recovery.
ACU 524222.2	Operator Controls	Resume switch circuit fault.
ACU 524224.2	Operator Controls	Rear PTO switch circuit fault. Cycle PTO switch and restart engine to attempt vehicle recovery.
ACU 524254.31	Operator Controls	Transmission circuit fault. Restart engine to attempt vehicle recovery.
ACU 600006.31	Electrical System	Vehicle controls not operating correctly.

OURX935,00009AC -19-01JUN09-2/2

Active Seat Control Unity (ASU) Diagnostic Trouble Codes

Diagnostic Trouble Code	Display	Solution
ASU 629.12	Electrical System	Active seat control unit fault. Restart engine to attempt vehicle recovery.
ASU 524002.31	Active Seat System	Control solenoid fault.
ASU 524003.2	Operator Controls	Active Seat firmness control switch circuit fault.
ASU 524004.2	Operator Controls	Active Seat height control switch circuit fault.
ASU 524006.8	Active Seat System	Active Seat not operating correctly.
ASU 524007.8	Active Seat System	Active Seat not operating correctly.
ASU 524008.13	Active Seat System	Calibration fault.
ASU 524010.31	Active Seat System	Active Seat raise and lower solenoid circuit fault. Restart engine to attempt vehicle recovery.
ASU 524011.3	Active Seat System	Active Seat not operating.
ASU 524011.4	Active Seat System	Active Seat not operating.
ASU 524011.8	Active Seat System	Active Seat not operating.
ASU 524012.3	Active Seat System	Position sensor circuit voltage high.
ASU 524012.4	Active Seat System	Position sensor circuit voltage low.
ASU 600006.31	Active Seat System	Vehicle controls not operating correctly.

OURX935,00005D4 -19-22DEC08-1/1

Automatic Temperature Control Unit (ATC) Diagnostic Trouble Codes

IMPORTANT: Check the cleanliness of the condenser at the front of the tractor and make sure

the cab recirculation air filter is not plugged for all ATC diagnostic trouble codes. If the codes return, contact your John Deere dealer as soon as possible.

OURX935,0000598 -19-22DEC08-1/1

BRC Brake Control Unit Diagnostic Trouble Codes

Brake Control Unit (BRC) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
BRC 628.2	Brake System Not compatible	Brake control unit fault. Restart engine to attempt vehicle recovery.
BRC 629.12	Brake System	Brake control unit fault. Restart engine to attempt vehicle recovery.
BRC 630.13	Brake System Not Calibrated	Control unit not calibrated.
BRC 1079.3	Brake System Inoperable	Brake control unit sensor supply voltage high. Restart engine to attempt vehicle recovery.
BRC 1079.4	Brake System Inoperable	Brake control unit sensor supply voltage low. Restart engine to attempt vehicle recovery.
BRC 2049.9	Communication System	Brake control unit communication fault with cab control unit. Restart engine to attempt vehicle recovery.
BRC 522279.5	Secondary Brake System Inoperable	Control valve current low. Restart engine to attempt vehicle recovery.
BRC 522279.6	Secondary Brake System Inoperable	Control valve current high. Restart engine to attempt vehicle recovery.
BRC 522279.13	Secondary Brake System Not Calibrated	Control valve not calibrated.
BRC 522280.0	Secondary Brake System High	Brake pressure higher than expected. Put vehicle in Park with engine running and cycle secondary brake lever. Restart engine to attempt vehicle recovery.
BRC 522280.1	Secondary Brake System Low	Brake pressure lower than expected. Put vehicle in Park with engine running and cycle secondary brake lever. Restart engine to attempt vehicle recovery.
BRC 522280.3	Secondary Brake System Derated	Brake pressure sensor voltage high. Restart engine to attempt vehicle recovery.
BRC 522280.4	Secondary Brake System Derated	Brake pressure sensor voltage low. Restart engine to attempt vehicle recovery.
BRC 522280.13	Secondary Brake System Not Calibrated	Secondary brake not calibrated.
BRC 522281.5	Front Brake System Derated	Brake cooling control valve current low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
BRC 522281.6	Front Brake System Derated	Brake cooling control valve current high. Restart engine to attempt vehicle recovery.
BRC 523652.2	Brake System Inoperable	Brake control unit circuit fault. Incorrect or failed wiring harness connection.
BRC 523787.4	Brake System	Brake cooling control valve off due to low voltage. Reduce electrical load or increase engine RPM. Power down and check fuse.
BRC 523837.0	Front Brake System High	Pressure in brake system without pedal being depressed.
BRC 523837.3	Front Brake System Inoperable	Rear pressure sensor circuit voltage high. Restart engine to attempt vehicle recovery.
BRC 523837.4	Front Brake System Inoperable	Rear pressure sensor circuit voltage low. Restart engine to attempt vehicle recovery.
BRC 523837.13	Front Brake System Not Calibrated	Rear brake pressure sensor not calibrated causing front brake system fault.
BRC 523839.19	Secondary Brake System Derated	Secondary brake switch fault. Put vehicle in Park with engine running and cycle secondary brake lever. Restart engine to attempt vehicle recovery.
BRC 523840.0	Front Brake System High	Front brake pressure high. Restart engine to attempt vehicle recovery.
BRC 523840.1	Front Brake System Low	Front brake pressure low. Restart engine to attempt vehicle recovery.
BRC 523840.3	Front Brake System Derated	Front brake pressure sensor voltage high. Restart engine to attempt vehicle recovery.
BRC 523840.4	Front Brake System Derated	Front brake pressure sensor voltage low. Restart engine to attempt vehicle recovery.
BRC 523840.13	Front Brake System Not Calibrated	Brake System calibration fault.
BRC 523841.19	Secondary Brake System Derated	Secondary brake position fault. Return to Park. Cycle secondary brake lever. Restart engine to attempt vehicle recovery.

Continued on next page

OURX935,00005D8 -19-22DEC08-1/2

Diagnostic Trouble Codes

BRC 523841.31	Secondary Brake System Derated	Secondary brake position fault. Restart engine to attempt vehicle recovery.
BRC 523844.5	Front Brake System Inoperable	Front brake control valve current low. Restart engine to attempt vehicle recovery.
BRC 523844.6	Front Brake System Inoperable	Front brake control valve current high. Restart engine to attempt vehicle recovery.
BRC 523844.13	Front Brake System Not Calibrated	Calibration fault.
BRC 523910.2	Brake System Inoperable	Control unit fault. Restart engine to attempt vehicle recovery.
BRC 524016.4	Brake System Inoperable	Control unit supply voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
BRC 524157.19	Front Brake System Inoperable	Right brake pedal position switch fault. Restart engine to attempt vehicle recovery.
BRC 524162.19	Front Brake System Inoperable	Left brake pedal position switch fault. Restart engine to attempt vehicle recovery.
BRC 158.4	Brake System Derated	Control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
BRC 168.4	Brake System Derated	Control unit supply voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
BRC 639.12	Communication System	Brake control unit communication fault. Restart engine to attempt vehicle recovery.
BRC 639.14	Communication System	Brake control unit communication fault. Restart engine to attempt vehicle recovery.
BRC 2000.9	Communication System	Engine control unit communication fault. Restart engine to attempt vehicle recovery.
BRC 2071.9	Communication System	Chassis control unit communication fault. Restart engine to attempt vehicle recovery.
BRC 2602.18	Brake System Derated	Hydraulic oil level low. Limit hydraulic use to allow oil reservoir to refill. Check oil level according to Operator's Manual procedure.
BRC 600006.31	Brake System	Vehicle controls not operating correctly.

OURX935,00005D8 -19-22DEC08-2/2

Cab Control Unit Diagnostic Trouble Codes

Cab Control Unit (CAB) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
CAB 91.2	Operator Controls	Foot throttle sensor circuit voltage fault. Use hand throttle. Restart engine to attempt vehicle recovery.
CAB 91.3	Operator Controls	Foot throttle sensor circuit voltage high. Use hand throttle. Restart engine to attempt vehicle recovery.
CAB 91.4	Operator Controls	Foot throttle sensor circuit voltage low. Use hand throttle. Restart engine to attempt vehicle recovery.
CAB 158.3	Electrical System Voltage High	Cab control unit supply voltage high. Restart engine to attempt vehicle recovery.
CAB 158.4	Electrical System Voltage Low	Cab control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
CAB 237.2	Identification System	Vehicle identification numbers do not match between control units.
CAB 237.14	Identification System	Vehicle identification fault.
CAB 237.31	Identification System	Vehicle identification fault.
CAB 628.2	Programming	Vehicle controls not operating correctly.
CAB 628.12	Programming	Cab control unit programming in progress.
CAB 629.12	Electrical System	Cab control unit fault. Restart engine to attempt vehicle recovery.
CAB 1079.3	Operator Controls	Cab control unit sensor supply voltage high. Restart engine to attempt vehicle recovery.
CAB 1079.4	Operator Controls	Cab control unit sensor supply voltage low. Restart engine to attempt vehicle recovery.
CAB 523922.31	Secondary Brake On	Disengage brake or return vehicle to Neutral or Park.
CAB 1504.8	Operator Controls	Seat switch circuit fault.
CAB 2876.2	Operator Controls	Turn signal switch fault. Both signals activated. Restart engine to attempt vehicle recovery.
CAB 523839.2	Operator Controls	Secondary brake switch fault. Restart engine to attempt vehicle recovery.
CAB 523839.13	Operator Controls	Secondary brake calibration fault.
CAB 523841.3	Operator Controls	Secondary brake sensor circuit voltage high. Cycle brake or restart engine to attempt vehicle recovery.
CAB 523841.4	Operator Controls	Secondary brake sensor circuit voltage low. Cycle brake or restart engine to attempt vehicle recovery.
CAB 523908.2	Operator Controls	Rear PTO switch fault. Cycle PTO switch or restart engine to attempt vehicle recovery.
CAB 524016.4	Operator Controls	Cab control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
CAB 524017.13	Operator Controls	Reverser lever calibration fault.
CAB 524017.31	Operator Controls	Left hand reverser fault.
CAB 524018.31	Operator Controls	Reverser lever fault.
CAB 524019.31	Operator Controls	Reverser lever fault.
CAB 524020.31	Lever not in park	Reverser lever not in Neutral or Park during power up. Return lever to Park or Neutral.
CAB 524021.31	Operator Controls	Left hand reverser lever circuit fault. Return to Park. Restart engine to attempt vehicle recovery.
CAB 524166.2	Operator Controls	Right brake switch circuit fault.
CAB 524166.3	Operator Controls	Right brake circuit voltage high. Restart engine to attempt vehicle recovery.
CAB 524166.4	Operator Controls	Right brake circuit voltage low. Restart engine to attempt vehicle recovery.
CAB 524166.8	Operator Controls	Right brake pedal out of adjustment.
CAB 524166.13	Operator Controls	Right brake pedal calibration fault.
CAB 524169.2	Operator Controls	Left brake switch circuit fault.
CAB 524169.3	Operator Controls	Left brake circuit voltage high. Restart engine to attempt vehicle recovery.
CAB 524169.4	Operator Controls	Left brake circuit voltage low. Restart engine to attempt vehicle recovery.
CAB 524169.8	Operator Controls	Left brake pedal out of adjustment.
CAB 524169.13	Operator Controls	Left brake pedal calibration fault.
CAB 524173.2	Operator Controls	Clutch pedal sensor circuit fault.
CAB 524173.3	Operator Controls	Clutch pedal sensor circuit voltage high. Restart engine to attempt vehicle recovery.
CAB 524173.4	Operator Controls	Clutch pedal sensor circuit voltage low. Restart engine to attempt vehicle recovery.
CAB 600006.31	Operator Controls	Vehicle controls not operating correctly.

OURX935,00005D6 -19-30JUN09-1/1

Central Control Unit Diagnostic Trouble Codes

Central Control Unit (CCU) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
CCU 38.3	Fuel Level System	Secondary fuel sender voltage high.
CCU 38.4	Fuel Level Low	Secondary fuel sender voltage low.
CCU 96.3	Fuel Level System	Fuel level sensor circuit voltage high.
CCU 96.4	Fuel Level System	Fuel level sensor circuit voltage low.
CCU 96.17	Fuel Level Low	Refuel.
CCU 237.2	Identification System	Vehicle identification numbers do not match between control units.
CCU 237.14	Identification System	Vehicle identification fault.
CCU 237.31	Identification System	Vehicle identification fault.
CCU 567.5	Differential lock system	Differential lock circuit fault.
CCU 569.5	Differential Lock System	Differential lock solenoid circuit fault.
CCU 630.14	Rear PTO System	PTO calibration fault.
CCU 1079.3	Electrical system	Chassis control unit supply voltage high. Restart engine to attempt vehicle recovery.
CCU 1079.4	Electrical system	Chassis control unit supply voltage low. Restart engine to attempt vehicle recovery.
CCU 1086.3	Air Brake System	Pressure sensor voltage high.
CCU 1086.4	Air Brake System	Pressure sensor voltage low.
CCU 1086.18	Air Brake Pressure Low	Insufficient pressure to deactivate brakes. Allow pressure to increase. Bleed moisture from system.
CCU 1638.0	Hydraulic Oil Temperature High	Temperature extremely high. Reduce load. Check cooling system for debris.
CCU 1638.3	Hydraulic System	Hydraulic oil temperature sensor circuit voltage high. Restart engine to attempt vehicle recovery.
CCU 1638.4	Hydraulic System	Hydraulic oil temperature sensor circuit voltage low. Restart engine to attempt vehicle recovery.
CCU 1638.16	Hydraulic Oil Temperature High	Check cooling system for debris. Check hydraulic oil level.
CCU 1713.0	Hydraulic Oil Filter Restricted	Replace hydraulic filters.
CCU 1883.1	Rear PTO System	Shaft underspeed. Check engine speed. Cycle PTO switch to attempt vehicle recovery.
CCU 1883.13	Rear PTO System	Calibration fault.
CCU 1883.0	Rear PTO Speed High	Shaft speed high. Check engine RPM.
CCU 2392.5	Backup alarm system	Backup alarm circuit fault.
CCU 2602.2	Hydraulic System	Oil level sensor circuit fault.
CCU 2602.18	Hydraulic oil level low	Check oil level.
CCU 2602.1	Hydraulic oil level low	Check oil level.
CCU 523916.0	Hydraulic oil filter bypassed	Replace hydraulic filters.
CCU 522260.2	Wheel Speed	Speed sensor fault.
CCU 523749.16	Rear PTO System	Clutch temperature high due to PTO overload. Allow PTO clutch to cool for 15 seconds before attempting re-engagement.
CCU 523916.15	Hydraulic oil filter restricted	Replace hydraulic filters.
CCU 523916.16	Hydraulic oil filter bypassed	Replace hydraulic filters.
CCU 524251.31	Rear PTO on	Operator out of seat. Return to seated position.
CCU 524255.31	Remote PTO Enabled	Rear PTO external control switch active.
CCU 522384.14	Rear PTO System	Rear PTO cannot be engaged. Reduce ground speed.
CCU 523698.9	Implement Mgmt System	Greenstar display communication fault. Check connection.
CCU 523851.2	Implement Mgmt System	Sequence aborted due to SCV control unit communication fault.

Continued on next page

OURX935.000064C -19-30JAN09-1/2

Diagnostic Trouble Codes

CCU 523916.3	Hydraulic oil filter system	Filter restriction sensor circuit voltage high.
CCU 523916.4	Hydraulic oil filter system	Filter restriction sensor circuit voltage low.
CCU 524016.4	Electrical system	Chassis control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
CCU 524223.3	Differential lock system	Differential lock switch circuit voltage high.
CCU 524224.2	Rear PTO System	Rear PTO Switch fault.
CCU 524224.14	PTO Switch	Rear PTO disabled with switch on. Cycle PTO switch to attempt vehicle recovery.
CCU 524235.5	MFWD System	MFWD solenoid circuit fault.
CCU 524236.31	MFWD Switch	iTEC function cancelled. MFWD switch fault. Cycle MFWD control.
CCU 524252.5	Rear PTO System	PTO solenoid circuit fault.
CCU 600006.31	Electrical System	Vehicle controls not operating correctly.

OURX935,000064C -19-30JAN09-2/2

Cab Load Center Diagnostic Trouble Codes

Cab Load Center (CLC) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
	Electrical System	Cab load center control unit supply voltage high. Restart engine to attempt vehicle recovery.
CLC 158.0	Electrical System	Cab load center control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
CLC 158.1	Electrical System	Cab load center control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
CLC 158.18	Programming	Cab load center control unit programming in progress.
CLC 628.12	Operator Controls	Power distribution system failed. Reference Diagnostic Procedure in Technical Manual
CLC 629.12	Operator Controls	Cab load center control unit sensor supply voltage high. Restart engine to attempt vehicle recovery.
CLC 1079.3	Operator Controls	Cab load center control unit sensor supply voltage low. Restart engine to attempt vehicle recovery.
CLC 1079.4	Electrical System	Cab load center control unit supply voltage low. Turn key off or start engine.
CLC 158.17	Operator Controls	Cab load center control unit fault.
CLC 628.2	Electrical System	Lighting circuit current high. Lighting derated. Restart engine to attempt vehicle recovery.
CLC 2050.6	Lighting System	Rear fender work lights not operating. Check bulbs.
CLC 2360.5	Lighting System	Rear fender work lights not operating. Wiring fault.
CLC 2360.6	Lighting System	Rear inner roof lights not operating. Check bulbs.
CLC 2362.5	Lighting System	Rear inner roof lights not operating. Wiring fault.
CLC 2362.6	Lighting System	Cab beltline lights not operating. Check bulbs.
CLC 2364.5	Lighting System	Cab beltline lights not operating. Wiring fault.
CLC 2364.6	Lighting System	Front side lights not operating. Check bulbs.
CLC 2366.5	Lighting System	Front side lights not operating. Wiring fault.
CLC 2366.6	Lighting System	Left turn signal not operating. Check bulbs.
CLC 2368.5	Lighting System	Left turn signal not operating. Wiring fault.
CLC 2368.6	Lighting System	Right turn signal not operating. Check bulbs.
CLC 2370.5	Lighting System	Right turn signal not operating. Wiring fault.
CLC 2370.6	Lighting System	Brake lights not operating. Check bulbs.
CLC 2372.5	Lighting System	Brake lights not operating. Wiring fault.
CLC 2372.6	Lighting System	Tail lights not operating. Wiring fault.
CLC 2378.6	Lighting System	Rotating beacon light not operating. Check bulbs.
CLC 2386.5	Lighting System	Rotating beacon light not operating. Wiring fault.
CLC 2386.6	Lighting System	Implement power circuit current low. Check implement harness connection or fuse.
CLC 2394.5	Lighting System	Implement power circuit current high. Check implement harness connection.
CLC 2394.6	Lighting System	Rear outer roof lights not operating. Check bulbs.
CLC 2407.5	Lighting System	Rear outer roof lights not operating. Wiring fault.
CLC 2407.6	Lighting System	Rear side roof lights not operating. Check bulbs.
CLC 2598.5	Lighting System	Rear side roof lights not operating. Wiring fault.
CLC 2598.6	Wiper System	Front wiper switch circuit fault. Wiring fault.
CLC 2863.2	Wiper System	Rear wiper switch circuit fault. Wiring fault.
CLC 2865.2	Lighting System	Light switch circuit fault. Wiring fault.
CLC 2872.2	Electrical System	Cab load center control unit circuit fault.
CLC 522310.5	Electrical System	Cab load center control unit circuit fault.
CLC 522310.6	Wiper System	Rear wiper motor circuit current high.
CLC 522433.6	Wiper System	Front wiper motor circuit current high.
CLC 522434.6	Wiper System	Front wiper motor circuit current high.
CLC 522435.6	Electrical System	Power distribution circuit current low. Restart engine to attempt vehicle recovery.
CLC 524016.5	Electrical System	Power distribution circuit current high. Restart engine to attempt vehicle recovery.
CLC 524016.6	Electrical System	Cab load center control unit internal temperature high. Reduce electrical load.
CLC 524259.0	Electrical System	Cab load center control unit internal temperature high. Reduce electrical load.
CLC 524259.15	Electrical System	Cab load center control unit internal temperature high. Reduce electrical load.

Continued on next page

OURX935,00005D7 -19-23DEC08-1/2

Diagnostic Trouble Codes

CLC 524259.16	Operator Controls	Vehicle controls not operating correctly.
CLC 600006.31	Electrical System	Tractor equipment control unit programming in progress.

OURX935,00005D7 -19-23DEC08-2/2

Cab Switch Module Diagnostic Trouble Codes

Cab Switch Module (CSM) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
CSM 168.4	Electrical System	Cab switch module supply voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse.
CSM 628.2	Operator Controls	Cab switch module control unit fault. Restart engine to attempt vehicle recovery.
CSM 628.12	Electrical System	Cab switch module control unit programming in progress.
CSM 630.2	Operator Controls	Cab switch module control unit fault. Restart engine to attempt vehicle recovery.
CSM 3509.3	Operator Controls	Cab switch module sensor supply voltage high. Restart engine to attempt vehicle recovery.
CSM 3509.4	Operator Controls	Cab switch module sensor supply voltage low. Restart engine to attempt vehicle recovery.
CSM 522764.2	Operator Controls	Cab switch module temperature control switch fault.
CSM 523343.2	Single Lever Control	Auxiliary Control detent switch circuit fault. Restart engine to attempt vehicle recovery.
CSM 523343.3	Single Lever Control	Auxiliary Control sensor voltage high. Restart engine to attempt vehicle recovery.
CSM 523343.4	Single Lever Control	Auxiliary Control sensor voltage low. Restart engine to attempt vehicle recovery.
CSM 523625.2	Operator Controls	Cab switch module fan speed control switch fault.
CSM 523746.4	Electrical System	Cab switch module control circuit fault.
CSM 523775.2	Single Lever Control	Hand Presence switch circuit fault. Restart engine to attempt vehicle recovery.
CSM 523776.2	Single Lever Control	Transport Lock switch circuit fault. Restart engine to attempt vehicle recovery.
CSM 523801.2	Single Lever Control	Auxiliary Control switch circuit fault. Restart engine to attempt vehicle recovery.
CSM 523804.2	Single Lever Control	Lateral lever detent switch circuit fault. Restart engine to attempt vehicle recovery.
CSM 523804.3	Single Lever Control	Lateral lever sensor circuit voltage high. Restart engine to attempt vehicle recovery.
CSM 523804.4	Single Lever Control	Lateral Lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
CSM 523805.2	Single Lever Control	Fore-Aft lever detent switch circuit fault. Restart engine to attempt vehicle recovery.
CSM 523805.3	Single Lever Control	Fore-Aft lever sensor circuit voltage high. Restart engine to attempt vehicle recovery.
CSM 523805.4	Single Lever Control	Fore-Aft lever sensor circuit voltage low. Restart engine to attempt vehicle recovery.
CSM 600006.31	Electrical System	Vehicle controls not operating correctly.

OURX935,000064D -19-30JUN09-1/1

Engine Control Unit (ECU) Diagnostic Trouble Codes

Engine Control Unit (ECU) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
ECU 94.3	Engine System	Fuel pressure sensor voltage high.
ECU 94.4	Engine System	Fuel pressure sensor voltage low.
ECU 94.17	Engine System	Fuel pressure low.
ECU 97.3	Engine System	Water separator sensor voltage high.
ECU 97.4	Engine System	Water separator sensor voltage low.
ECU 97.16	Engine Water Separator Full	Engine power limited. Drain water.
ECU 100.4	Engine System	Engine oil pressure sensor voltage low.
ECU 100.18	Engine Oil Pressure Low	Check engine oil level.
ECU 102.3	Engine System	Intake manifold pressure sensor voltage high.
ECU 102.4	Engine System	Intake manifold pressure sensor voltage low.
ECU 103.0	Engine System	Turbocharger speed extremely high. Reduce engine speed and load.
ECU 103.5	Engine System	Turbocharger speed sensor circuit fault.
ECU 103.8	Engine System	Turbocharger speed message fault.
ECU 100.1	Engine Oil Pressure Low	Oil Pressure Extremely low. Check oil level.
ECU 105.0	Engine Air Temperature High	Reduce engine load. Check cooling system for debris.
ECU 105.3	Engine System	Intake manifold air temperature sensor voltage high.
ECU 105.4	Engine System	Intake manifold air temperature sensor voltage low.
ECU 105.16	Engine Air Temperature High	Intake manifold air temperature high. Reduce engine speed and load.
ECU 100.31	Engine Oil Pressure	Unexpected engine oil pressure with engine off.
ECU 102.2	Engine System	Intake manifold pressure sensor fault.
ECU 103.31	Engine System	Turbocharger speed sensor communication fault.
ECU 105.15	Engine Air Temperature High	Intake manifold air temperature high.
ECU 107.0	Engine Air Filter Restricted	Clean or replace air filter.
ECU 108.2	Engine System	Barometric pressure sensor fault.
ECU 110.15	Engine Coolant Temperature High	Reduce engine speed and load. Check cooling system for debris.
ECU 110.3	Engine System	Coolant temperature sensor voltage high.
ECU 110.4	Engine System	Coolant temperature sensor voltage low.
ECU 110.16	Engine Coolant Temperature High	Reduce engine speed and load. Check cooling system for debris.
ECU 110.17	Engine Coolant Temperature Low	Allow coolant temperature to increase.
ECU 110.0	Engine Coolant Temperature High	Coolant temperature extremely high. Reduce engine load. Check cooling system for debris.
ECU 157.3	Engine System	Fuel rail pressure sensor voltage high.
ECU 157.4	Engine System	Fuel rail pressure sensor voltage low.
ECU 152.14	Engine System	Engine control unit fault.
ECU 152.16	Engine System	Engine control unit fault.
ECU 157.17	Engine System	Fuel rail pressure low.
ECU 158.17	Engine System	Engine control unit fault.
ECU 174.3	Engine System	Fuel temperature sensor voltage high.
ECU 174.0	Fuel Temperature High	Check cooling system for debris.
ECU 189.0	Vehicle Controls	Vehicle identification fault. Engine Speed Derated.
ECU 190.0	Engine Speed High	Reduce engine speed.
ECU 412.0	Engine System	EGR temperature extremely high.
ECU 640.31	Engine System	Engine shutdown command.

Continued on next page

OURX935.000064E -19-30JUN09-1/4

Diagnostic Trouble Codes

ECU 1136.0	Engine System	Engine control unit internal temperature high.
ECU 1180.0	Engine System	Exhaust temperature high. Reduce engine speed and load. Check cooling system for debris.
ECU 2630.0	Engine System	Charge air cooler temperature high. Reduce engine speed and load. Check cooling system for debris.
ECU 3509.3	Engine System	Engine control unit sensor supply voltage high.
ECU 3509.4	Engine System	Engine control unit sensor supply voltage low.
ECU 157.10	Engine System	Fuel rail pressure abnormal fluctuation.
ECU 174.4	Engine System	Fuel temperature sensor voltage low.
ECU 174.16	Fuel Temperature High	Check cooling system for debris.
ECU 237.2	Identification System	Vehicle identification numbers do not match between control units.
ECU 237.13	Identification System	Vehicle identification numbers do not match between control units.
ECU 237.31	Identification System	Vehicle identification fault.
ECU 412.3	Engine System	EGR temperature sensor voltage high.
ECU 412.4	Engine System	EGR temperature sensor voltage low.
ECU 412.16	Engine System	EGR temperature high. Reduce engine speed and load.
ECU 611.3	Engine System	Fuel injector circuit voltage high.
ECU 611.4	Engine System	Fuel injector circuit voltage low.
ECU 627.1	Engine System	Fuel injector circuits current low.
ECU 629.12	Engine System	Engine control unit fault. Restart engine to attempt vehicle recovery.
ECU 636.5	Engine System	Camshaft position sensor circuit fault.
ECU 636.6	Engine System	Camshaft position sensor circuit fault.
ECU 637.2	Engine System	Crankshaft position sensor circuit fault.
ECU 637.5	Engine System	Crankshaft position sensor circuit fault.
ECU 637.6	Engine System	Crankshaft position sensor circuit fault.
ECU 637.7	Engine System	Crankshaft position sensor circuit fault.
ECU 637.8	Engine System	Crankshaft position sensor communication fault.
ECU 640.11	Engine System	Tracks control communication fault.
ECU 641.4	Engine System	Turbocharger actuator supply voltage low.
ECU 641.12	Engine System	Turbocharger actuator communication fault.
ECU 641.13	Engine System	Turbocharger actuator fault.
ECU 641.16	Engine System	Turbocharger actuator temperature high. Reduce engine speed and load.
ECU 647.5	Fan System	Engine fan drive circuit fault.
ECU 647.7	Fan System	Engine fan drive circuit fault.
ECU 651.5	Engine System	Injector #1 circuit current low.
ECU 651.6	Engine System	Injector #1 circuit current high.
ECU 651.7	Engine System	Injector #1 fuel flow low.
ECU 652.5	Engine System	Injector #2 circuit current low.
ECU 652.6	Engine System	Injector #2 circuit current high..
ECU 652.7	Engine System	Injector #2 fuel flow low.
ECU 653.5	Engine System	Injector #3 circuit current low.
ECU 653.6	Engine System	Injector #3 circuit current high.
ECU 653.7	Engine System	Injector #3 fuel flow low.
ECU 654.5	Engine System	Injector #4 circuit current low.
ECU 654.6	Engine System	Injector #4 circuit current high.
ECU 654.7	Engine System	Injector #4 fuel flow low.
ECU 655.5	Engine System	Injector #5 circuit current low.
ECU 655.6	Engine System	Injector #5 circuit current high.
ECU 655.7	Engine System	Injector #5 fuel flow low.
ECU 656.5	Engine System	Injector #6 circuit current high.
ECU 656.6	Engine System	Engine system not operating correctly. Reference diagnostic procedure in Technical Manual.
ECU 656.7	Engine System	Injector #6 fuel flow low.
ECU 1110.31	Engine System	Engine Protection Shutdown.
ECU 1136.16	Engine System	Engine control unit internal temperature high.

Continued on next page

OURX935,000064E -19-30JUN09-2/4

Diagnostic Trouble Codes

ECU 1180.16	Engine System	Exhaust temperature high.
ECU 1347.3	Engine System	High pressure fuel pump control valve voltage high.
ECU 1347.5	Engine System	High pressure fuel pump control valve circuit current low.
ECU 1347.7	Engine System	High pressure fuel pump not able to meet required pressure.
ECU 2630.3	Engine System	Charge air cooler outlet temperature sensor voltage high.
ECU 2630.4	Engine System	Charge air cooler outlet temperature sensor voltage low.
ECU 2630.16	Engine System	Charge air cooler outlet temperature high. Reduce engine speed and load. Check cooling system for debris.
ECU 2659.2	Engine System	EGR sensor circuit fault.
ECU 2659.15	Engine System	EGR sensor circuit fault.
ECU 2659.17	Engine System	EGR sensor circuit fault.
ECU 2790.16	Engine System	Turbocharger outlet temperature high. Reduce engine speed and load.
ECU 2791.3	Engine System	EGR valve position sensor voltage high.
ECU 2791.4	Engine System	EGR valve position sensor voltage low.
ECU 2791.7	Engine System	EGR valve position fault.
ECU 2791.13	Engine System	EGR valve position fault.
ECU 2795.7	Engine System	Turbocharger actuator not reaching expected position.
ECU 3510.3	Engine System	Engine control unit sensor supply voltage high.
ECU 3510.4	Engine System	Engine control unit sensor supply voltage low.
ECU 3511.3	Engine System	Engine control unit sensor supply voltage high.
ECU 3511.4	Engine System	Engine control unit sensor supply voltage low.
ECU 3512.3	Engine System	Engine control unit sensor supply voltage high.
ECU 3512.4	Engine System	Engine control unit sensor supply voltage low.
ECU 3513.3	Engine System	Engine control unit sensor supply voltage high.
ECU 3513.4	Engine System	Engine control unit sensor supply voltage low.
ECU 152.12	Engine system	Engine control unit fault.
ECU 412.15	Engine System	Fuel temperature high. Check cooling system for debris.
ECU 636.2	Engine System	Camshaft position sensor fault.
ECU 636.8	Engine System	Camshaft position sensor communication fault.
ECU 636.10	Engine System	Camshaft position sensor fault.
ECU 637.10	Engine System	Camshaft position sensor fault.
ECU 651.2	Engine System	Injector #1 fault.
ECU 651.13	Engine System	Injector #1 calibration fault.
ECU 652.2	Engine System	Injector #2 fault.
ECU 652.13	Engine System	Injector #2 calibration fault.
ECU 653.2	Engine System	Injector #3 fault.
ECU 653.13	Engine System	Injector #3 calibration fault.
ECU 654.2	Engine System	Injector #4 fault.
ECU 654.13	Engine System	Injector #4 calibration fault.
ECU 655.2	Engine System	Injector #5 fault.
ECU 655.13	Engine System	Injector #5 calibration fault.
ECU 656.2	Engine System	Injector #6 fault.
ECU 656.13	Engine System	Injector #6 calibration fault.
ECU 1075.5	Fuel Supply System	Fuel lift pump current low.
ECU 1075.12	Fuel Supply System	Fuel lift pump fault.
ECU 1172.3	Engine System	Turbocharger inlet temperature sensor voltage high.
ECU 1172.4	Engine System	Turbocharger inlet temperature sensor voltage low.
ECU 1568.2	Engine System	Engine system not operating correctly.
ECU 1569.31	Engine Power Derated	Engine power derate condition exists.
ECU 1639.1	Fan System	Engine fan speed low. Check fan drive system.
ECU 1639.16	Fan Speed High	Engine fan speed high. Check fan drive system.
ECU 1639.18	Fan Speed Low	Engine fan speed low. Check fan drive system.
ECU 2005.9	Communication System	Armrest control unit communication fault.

Continued on next page

OURX935.000064E -19-30JUN09-3/4

Diagnostic Trouble Codes

ECU 2005.14	Communication System	Armrest control unit communication fault.
ECU 2005.19	Communication System	Armrest control unit communication fault.
ECU 2030.9	Communication System	Engine system not operating correctly.
ECU 2071.9	Communication System	Vehicle controls not operating correctly.
ECU 2630.15	Engine System	Charge air cooler outlet temperature high. Check cooling system for debris.
ECU 2791.2	Engine System	EGR valve position fault.
ECU 2791.31	Engine System	EGR valve calibration fault.
ECU 600006.31	Engine system	Vehicle controls not operating correctly.

OURX935,000064E -19-30JUN09-4/4

Hitch Control Center (HCC) Diagnostic Trouble Codes

Hitch Control Center (HCC) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
HCC 158.4	Rear Hitch System	Hitch control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
HCC 168.4	Electrical System	Hitch control unit voltage low. Power down and check fuse. Restart engine to attempt vehicle recovery.
HCC 190.2	Rear Hitch System	Calibration failed due to engine speed too low. Raise engine speed above 1800 RPM and repeat calibration procedure.
HCC 629.12	Rear Hitch System	Hitch control unit fault. Restart engine to attempt vehicle recovery.
HCC 630.13	Rear Hitch System	Hitch not calibrated. Perform calibration procedure.
HCC 1079.3	Rear Hitch System	Hitch control unit sensor supply voltage high. Restart engine to attempt vehicle recovery.
HCC 1079.4	Rear Hitch System	Hitch control unit sensor supply voltage low. Restart engine to attempt vehicle recovery.
HCC 1638.2	Rear Hitch System	Calibration failed due to hydraulic oil temperature low. Raise oil temperature above 50C and repeat calibration procedure.
HCC 1873.2	Rear Hitch System	Hitch position sensing system voltage fault.
HCC 1873.3	Rear Hitch System	Hitch position sensing system voltage high fault.
HCC 1873.4	Rear Hitch System	Hitch position sensing system voltage low fault.
HCC 1873.13	Rear Hitch System	Hitch calibration failed due to <something>. Repeat calibration procedure.
HCC 1881.3	Rear Hitch System	Hitch System Limited. Reference Diagnostic Procedure in Technical Manual.
HCC 1881.4	Rear Hitch System	Hitch System Limited. Reference Diagnostic Procedure in Technical Manual
HCC 1881.13	Rear Hitch System	Hitch System Calibration Error. Reference Calibration Procedure
HCC 2005.9	Communication System	ACU Messages Missing. Reference Diagnostic Procedure in Technical Manual
HCC 2071.9	Communication System	CCU Messages Missing. Reference Diagnostic Procedure in Technical Manual
HCC 2139.9	Communication System	CSM Messages Missing. Reference Diagnostic Procedure in Technical Manual
HCC 2152.9	Communication System	HV1 Messages Missing. Reference Diagnostic Procedure in Technical Manual
HCC 2602.18	Hydraulic System	Hydraulic Oil Too Low. Check Oil Level
HCC 521000.2	Rear Hitch System	Hitch System Has Malfunctioned. Reference Diagnostic Procedure in Technical Manual
HCC 521000.31	Rear Hitch System	Hitch System Has Malfunctioned. Reference Diagnostic Procedure in Technical Manual
HCC 521001.2	Rear Hitch System	Hitch System Not Operating. Reference Diagnostic Procedure in Technical Manual
HCC 523652.2	Hydraulic System	Hitch System Has Malfunctioned. Reference Diagnostic Procedure in Technical Manual
HCC 523788.2	Rear Hitch System	Hitch System Limited. Reference Diagnostic Procedure in Technical Manual
HCC 523788.14	Rear Hitch System	Hitch System Limited. Reference Diagnostic Procedure in Technical Manual
HCC 523910.2	Rear Hitch System	Hitch System Not operating correctly. Reference Diagnostic Procedure in Technical Manual
HCC 523952.31	Rear Hitch Disabled	Hitch System Cannot be engaged. Reference Diagnostic Procedure in Technical Manual
HCC 524016.4	Rear Hitch System	Hitch System Circuit Fault. Reference Diagnostic Procedure in Technical Manual
HCC 524212.19	Hydraulic System	Hitch System Not operating. Reference Diagnostic Procedure in Technical Manual
HCC 524212.31	Rear Hitch System	Hitch System Cannot be engaged. Reference Diagnostic Procedure in Technical Manual
HCC 600006.31	Rear Hitch System	Vehicle Controls Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.

OURX935,000064F -19-22DEC08-1/1

Hitch Valve (HV1) Diagnostic Trouble Codes

Hitch Valve (HV1) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
HV1 158.3	Hydraulic System	Rear hitch control valve supply voltage high. Restart engine to attempt vehicle recovery.
HV1 158.4	Hydraulic System	Rear hitch control valve supply voltage low. Reduce electrical load or increase engine rpm to attempt vehicle recovery.
HV1 2035.9	Communication System	Rear hitch control unit communication fault. Restart engine to attempt vehicle recovery.
HV1 4084.7	Hydraulic System	Rear hitch control valve float position not reached. Cycle external control lever or restart engine to attempt vehicle recovery.
HV1 4084.16	Hydraulic System	Rear hitch control valve beyond commanded spool position. Cycle external control lever or restart engine to attempt vehicle recovery.
HV1 4084.18	Hydraulic System	Rear hitch control valve commanded spool position not reached. Cycle external control lever or restart engine to attempt vehicle recovery.
HV1 4085.7	Hydraulic System	Rear hitch control valve Neutral position not reached. Cycle external control lever or restart engine to attempt vehicle recovery.
HV1 4085.12	Hydraulic System	Rear hitch control unit fault. Restart engine to attempt vehicle recovery.
HV1 600006.31	Hydraulic System	Hitch control unit fault.

OURX935,0000650 -19-30JUN09-1/1

(JDL) Diagnostic Trouble Codes

(JDL) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
JDL 237.2	JDLINK	JdL not registered properly, invalid vehicle identification.
JDL 237.13	JDLINK	JdL has not received vehicle identification information.
JDL 237.19	JDLINK	JdL vehicle identification does not match the JDLINK web vehicle identification.
JDL 629.0	JDLINK	JdL processing capacity exceeded.
JDL 629.13	JDLINK	JdL is not completely configured.
JDL 639.9	JDLINK	JdL not detecting CAN bus messages. Check wiring connections.
JDL 964.13	JDLINK	JdL clock not set properly.
JDL 2850.5	JDLINK	JdL GPS or Cellular antenna fault detected.
JDL 2853.9	JDLINK	JdL controllers not communicating. Link status not operational.
JDL 2856.9	JDLINK	JdL cellular communication issue.
JDL 3372.9	JDLINK	JdL data transfer issue.
JDL 523310.0	JDLINK	JdL data storage exceeded.
JDL 523310.2	JDLINK	JdL memory fault.
JDL 523821.13	JDLINK	JdL not registered properly, vehicle identification not unique.
JDL 523821.31	JDLINK	JdL registration does not match machine.

OURX935,0000733 -19-22DEC08-1/1

PDU Diagnostic Trouble Codes

PDU Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
PDU 629.12	Electrical System	Primary display unit fault. Restart engine to attempt vehicle recovery.
PDU 628.12	Programming	Primary display unit programming in progress.
PDU 629.9	Communication System	Primary display unit communication fault.
PDU 630.2	Electrical System	Primary display unit calibration fault.
PDU 2000.9	Communication System	Engine control unit communication fault.
PDU 2001.9	Communication System	Control unit messages missing.
PDU 2002.9	Communication System	Control unit messages missing.
PDU 2003.9	Communication System	Transmission control unit communication fault.
PDU 2004.9	Communication System	Control unit messages missing.
PDU 2005.9	Communication System	Armrest control unit communication fault.
PDU 2006.9	Communication System	Control unit messages missing.
PDU 2007.9	Communication System	Control unit messages missing.
PDU 2008.9	Communication System	Control unit messages missing.
PDU 2009.9	Communication System	Control unit messages missing.
PDU 2010.9	Communication System	Control unit messages missing.
PDU 2011.9	Communication System	Brake control unit communication fault.
PDU 2012.9	Communication System	Control unit messages missing.
PDU 2013.9	Communication System	Control unit messages missing.
PDU 2014.9	Communication System	Control unit messages missing.
PDU 2015.9	Communication System	Control unit messages missing.
PDU 2016.9	Communication System	Control unit messages missing.
PDU 2017.9	Communication System	Control unit messages missing.
PDU 2018.9	Communication System	Control unit messages missing.
PDU 2019.12	Steering System	Steering control unit communication fault.
PDU 2019.9	Communication System	Steering control unit communication fault.
PDU 2020.9	Communication System	Suspension control unit communication fault.
PDU 2021.9	Communication System	Control unit messages missing.
PDU 2022.9	Communication System	Control unit messages missing.
PDU 2023.9	Communication System	Control unit messages missing.
PDU 2024.9	Communication System	Control unit messages missing.
PDU 2025.9	Communication System	Automatic temperature control unit communication fault.
PDU 2026.9	Communication System	Control unit messages missing.
PDU 2027.9	Communication System	Control unit messages missing.
PDU 2028.9	Communication System	Control unit messages missing.
PDU 2029.9	Communication System	Control unit messages missing.
PDU 2030.9	Communication System	Vehicle load center control unit communication fault.
PDU 2031.9	Communication System	Control unit messages missing.
PDU 2032.9	Communication System	Control unit messages missing.
PDU 2033.9	Communication System	Control unit messages missing.
PDU 2034.9	Communication System	SCV control unit communication fault.
PDU 2035.9	Communication System	Hitch control unit communication fault.
PDU 2036.9	Communication System	Front PTO control unit communication fault.
PDU 2037.9	Communication System	Control unit messages missing.
PDU 2038.9	Communication System	CommandCenter control unit communication fault.
PDU 2039.9	Communication System	Control unit messages missing.
PDU 2040.9	Communication System	Primary display unit communication fault.
PDU 2041.9	Communication System	Control unit messages missing.
PDU 2042.9	Communication System	Control unit messages missing.

Continued on next page

OURX935,0000739 -19-23DEC08-1/6

Diagnostic Trouble Codes

PDU 2043.9	Communication System	Control unit messages missing.
PDU 2044.9	Communication System	Control unit messages missing.
PDU 2045.9	Communication System	Control unit messages missing.
PDU 2046.9	Communication System	Control unit messages missing.
PDU 2047.9	Communication System	Control unit messages missing.
PDU 2048.9	Communication System	Control unit messages missing.
PDU 2049.9	Communication System	Cab control unit communication fault.
PDU 2050.9	Communication System	Cab Load Center control unit communication fault
PDU 2051.9	Communication System	Control unit messages missing.
PDU 2052.9	Communication System	Control unit messages missing.
PDU 2053.9	Communication System	Control unit messages missing.
PDU 2054.9	Communication System	ActiveSeat control unit communication fault.
PDU 2055.9	Communication System	Control unit messages missing.
PDU 2056.9	Communication System	Control unit messages missing.
PDU 2057.9	Communication System	Control unit messages missing.
PDU 2058.9	Communication System	Control unit messages missing.
PDU 2059.9	Communication System	Control unit messages missing.
PDU 2060.9	Communication System	Control unit messages missing.
PDU 2061.9	Communication System	Control unit messages missing.
PDU 2062.9	Communication System	Control unit messages missing.
PDU 2063.9	Communication System	Control unit messages missing.
PDU 2064.9	Communication System	Control unit messages missing.
PDU 2065.9	Communication System	Control unit messages missing.
PDU 2066.9	Communication System	Control unit messages missing.
PDU 2067.9	Communication System	Control unit messages missing.
PDU 2068.9	Communication System	Control unit messages missing.
PDU 2069.9	Communication System	Control unit messages missing.
PDU 2070.9	Communication System	Control unit messages missing.
PDU 2071.9	Communication System	Chassis control unit communication fault.
PDU 2072.9	Communication System	Control unit messages missing.
PDU 2073.9	Communication System	Control unit messages missing.
PDU 2074.9	Communication System	Control unit messages missing.
PDU 2075.9	Communication System	Control unit messages missing.
PDU 2076.9	Communication System	Control unit messages missing.
PDU 2077.9	Communication System	Control unit messages missing.
PDU 2078.9	Communication System	Control unit messages missing.
PDU 2079.9	Communication System	Control unit messages missing.
PDU 2080.9	Communication System	Control unit messages missing.
PDU 2081.9	Communication System	Control unit messages missing.
PDU 2082.9	Communication System	Control unit messages missing.
PDU 2083.9	Communication System	Control unit messages missing.
PDU 2084.9	Communication System	Control unit messages missing.
PDU 2085.9	Communication System	Control unit messages missing.
PDU 2086.9	Communication System	Control unit messages missing.
PDU 2087.9	Communication System	Control unit messages missing.
PDU 2088.9	Communication System	Control unit messages missing.
PDU 2089.9	Communication System	Control unit messages missing.
PDU 2090.9	Communication System	Control unit messages missing.
PDU 2091.9	Communication System	Control unit messages missing.
PDU 2092.9	Communication System	Control unit messages missing.
PDU 2093.9	Communication System	Control unit messages missing.
PDU 2094.9	Communication System	Control unit messages missing.
PDU 2095.9	Communication System	Control unit messages missing.

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OURX935,0000739 -19-23DEC08-2/6

Diagnostic Trouble Codes

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OURX935.0000739 -19-23DEC08-3/6

Diagnostic Trouble Codes

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OURX935,0000739 -19-23DEC08-4/6

Diagnostic Trouble Codes

PDU 2202.9	Communication System	Control unit messages missing.
PDU 2203.9	Communication System	Control unit messages missing.
PDU 2204.9	Communication System	Control unit messages missing.
PDU 2205.9	Communication System	Control unit messages missing.
PDU 2206.9	Communication System	Control unit messages missing.
PDU 2207.9	Communication System	Control unit messages missing.
PDU 2208.9	Communication System	Control unit messages missing.
PDU 2209.9	Communication System	Control unit messages missing.
PDU 2210.9	Communication System	Control unit messages missing.
PDU 2211.9	Communication System	Control unit messages missing.
PDU 2212.9	Communication System	Control unit messages missing.
PDU 2213.9	Communication System	SCV control unit message missing.
PDU 2214.9	Communication System	Control unit messages missing.
PDU 2215.9	Communication System	Control unit messages missing.
PDU 2216.9	Communication System	Control unit messages missing.
PDU 2217.9	Communication System	Control unit messages missing.
PDU 2218.9	Communication System	Control unit messages missing.
PDU 2219.9	Communication System	Control unit messages missing.
PDU 2220.9	Communication System	Control unit messages missing.
PDU 2221.9	Communication System	Control unit messages missing.
PDU 2222.9	Communication System	Control unit messages missing.
PDU 2223.9	Communication System	Control unit messages missing.
PDU 2224.9	Communication System	Control unit messages missing.
PDU 2225.9	Communication System	Control unit messages missing.
PDU 2226.9	Communication System	Control unit messages missing.
PDU 2227.9	Communication System	Control unit messages missing.
PDU 2228.9	Communication System	Control unit messages missing.
PDU 2229.9	Communication System	Control unit messages missing.
PDU 2230.9	Communication System	Control unit messages missing.
PDU 2231.9	Communication System	Control unit messages missing.
PDU 2232.9	Communication System	Control unit messages missing.
PDU 2233.9	Communication System	Control unit messages missing.
PDU 2234.9	Communication System	Control unit messages missing.
PDU 2235.9	Communication System	Control unit messages missing.
PDU 2236.9	Communication System	Control unit messages missing.
PDU 2237.9	Communication System	Control unit messages missing.
PDU 2238.9	Communication System	Control unit messages missing.
PDU 2239.9	Communication System	Control unit messages missing.
PDU 2240.9	Communication System	Tractor equipment control unit communication fault.
PDU 2241.9	Communication System	Control unit messages missing.
PDU 2242.9	Communication System	Control unit messages missing.
PDU 2243.9	Communication System	Control unit messages missing.
PDU 2244.9	Communication System	Control unit messages missing.
PDU 2245.9	Communication System	Control unit messages missing.
PDU 2246.9	Communication System	Control unit messages missing.
PDU 2247.9	Communication System	Control unit messages missing.
PDU 2248.9	Communication System	Control unit messages missing.
PDU 2249.9	Communication System	Control unit messages missing.
PDU 2250.9	Communication System	Control unit messages missing.
PDU 2251.9	Communication System	Control unit messages missing.
PDU 2252.9	Communication System	Control unit messages missing.
PDU 2253.9	Communication System	Control unit messages missing.

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OURX935.0000739 -19-23DEC08-5/6

Diagnostic Trouble Codes

PDU 523791.14	Starting Aid Time	Engine system will not start until starting aid is warm. Wait until starting aid warms up before starting
PDU 600006.31	Electrical System	Vehicle controls not operating correctly.

OURX935,0000739 -19-23DEC08-6/6

PTI Codes Diagnostic Trouble Codes

AutoPowr™

AUTOPOWR (PTI) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
PTI 190.0	Engine speed high	Engine speed high. Reduce engine speed.
PTI 191.0	Transmission speed high	Reduce ground speed.
PTI 628.12	Transmission system disabled	Transmission control unit programming in progress.
PTI 629.12	Transmission system disabled	Transmission control unit fault. Restart engine to attempt vehicle recovery.
PTI 630.13	Transmission system not calibrated	Calibration fault.
PTI 630.14	Transmission system not calibrated	Calibration fault.
PTI 754.18	Transmission system	Transmission clutch pressure low.
PTI 755.18	Transmission system	Transmission clutch pressure low.
PTI 756.18	Transmission system	Transmission clutch pressure low.
PTI 524226.8	Transmission system	Direction sensing fault. Return to Park and restart engine to attempt vehicle recovery.
PTI 524228.5	Park electrical	Park sump block solenoid circuit fault.
PTI 524228.11	Park system	Park sump block valve fault.
PTI 524232.16	Park system	Park brake pressure high. Return to Park to attempt vehicle recovery.
PTI 524232.18	Transmission oil pressure low	Park brake pressure low. Check hydraulic oil level.
PTI 524233.0	Transmission speed high	Reduce speed.
PTI 524242.0	Transmission oil pressure high	Oil pressure extremely high. Return to Park to attempt vehicle recovery.
PTI 524248.31	Park system	Motion detected while vehicle in Park. Stop vehicle and cycle gear selector.
PTI 524249.31	Operator not in seat	Operator out of seat. Return to seated position.
PTI 127.1	Transmission oil pressure low	Transmission oil pressure extremely low. Return to Park to attempt vehicle recovery.
PTI 158.1	Electrical system voltage low	Transmission control unit supply voltage low. Return vehicle to Park. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
PTI 168.1	Electrical system voltage low	Transmission control unit supply voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
PTI 177.17	Transmission oil temperature low	Return vehicle to Park. Idle engine and allow temperature to increase.
PTI 190.2	Engine speed not compatible	Return vehicle to Park. Restart engine to attempt vehicle recovery.
PTI 191.2	Transmission system inoperable	Return vehicle to Park. Restart engine to attempt vehicle recovery.
PTI 619.5	Park electrical	Park Brake solenoid circuit current low. Return vehicle to Park. Restart engine to attempt vehicle recovery.
PTI 628.2	Transmission system disabled	Transmission control unit fault. Restart engine to attempt vehicle recovery.
PTI 734.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 735.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 736.5	Transmission system inoperable	Reverse Brake solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 737.5	Transmission electrical inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 738.5	Transmission electrical inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 739.5	Transmission electrical inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 1079.4	Transmission electrical	Transmission control unit sensor supply voltage low. Restart engine to attempt vehicle recovery.
PTI 2000.9	Transmission system	Engine control unit communication fault.

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OURX935.0000935 -19-04APR09-1/2

Diagnostic Trouble Codes

PTI 2005.9	Transmission system	Armrest control unit communication fault.
PTI 523911.5	Transmission electrical	Transmission hydro control solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTI 523911.13	Transmission system not calibrated	Transmission system calibration fault.
PTI 523912.5	Transmission electrical	Clutch unit circuit fault. Restart engine to attempt vehicle recovery.
PTI 523912.13	Transmission system not calibrated	Transmission system calibration fault.
PTI 523913.5	Transmission electrical	Loop flush cut off solenoid circuit fault.
PTI 523917.7	Transmission system	Differential speed sensor fault. Restart engine to attempt vehicle recovery.
PTI 523917.8	Transmission system	C1 clutch failed to engage synchronizer. Restart engine to attempt vehicle recovery.
PTI 523917.17	Transmission system	Transmission speed low. Restart engine to attempt vehicle recovery.
PTI 524230.3	Transmission system	Transmission clutch pressure high. Return to Park to attempt vehicle recovery.
PTI 524230.5	Transmission electrical inoperable	Transmission clutch enable solenoid circuit fault. Return to Park to attempt vehicle recovery.
PTI 524232.1	Park system	Park brake pressure low. Return to Park to attempt vehicle recovery.
PTI 524232.2	Park electrical	Park brake pressure sensor fault.
PTI 524232.4	Park electrical	Park brake pressure sensor voltage low.
PTI 524232.14	Park system	Park brake pressure low in Come Home mode. Stop vehicle. Repeat operator manual procedure.
PTI 524232.17	Park system	Park brake pressure low. Return to Park to attempt vehicle recovery.
PTI 524233.2	Transmission speed	Hydro speed sensor circuit fault.
PTI 524233.7	Transmission electrical	PowerZero fault. Return to Park to attempt vehicle recovery.
PTI 524233.15	Transmission system	Hydro speed fault. Restart engine to attempt vehicle recovery.
PTI 524233.16	Transmission system	Hydro speed fault. Restart engine to attempt vehicle recovery.
PTI 524233.17	Transmission system	Hydro speed fault. Restart engine to attempt vehicle recovery.
PTI 524234.2	Transmission electrical	Clutch enable pressure fault.
PTI 524234.4	Transmission electrical	Clutch enable pressure sensor voltage low.
PTI 524237.31	Transmission lever	Reverser circuit fault. Return to Park to attempt vehicle recovery.
PTI 524238.31	Transmission lever not in park	Return to Park or Neutral to attempt vehicle recovery.
PTI 524239.31	Transmission system	No motion detected. Return to Park to attempt vehicle recovery.
PTI 524240.14	Transmission system	No motion detected with Come Home Mode active. Return to Park to attempt vehicle recovery.
PTI 524241.2	Transmission system	Hydro speed fault. Return to Park to attempt vehicle recovery.
PTI 524241.11	Transmission system	Clutch engagement fault. Restart engine to attempt vehicle recovery.
PTI 524243.31	Transmission lever	Armrest control unit communication fault. Return to Park to attempt vehicle recovery.
PTI 524244.31	Transmission lever	Armrest control unit communication fault. Return to Park to attempt vehicle recovery.
PTI 524245.31	Transmission lever	Armrest control unit communication fault. Return to Park to attempt vehicle recovery.
PTI 524247.2	Transmission system	Transmission speed sensor circuit fault.
PTI 524247.17	Transmission system	Carrier speed low at start-up. Restart engine to attempt vehicle recovery.
PTI 524250.31	Park system	Park brake fault.
PTI 524253.2	Transmission system	Armrest control unit fault. Return to Park to attempt vehicle recovery.
PTI 524254.3	Transmission electrical	Transmission enable circuit voltage high. Return to Park to attempt vehicle recovery.
PTI 524254.4	Transmission electrical	Transmission enable circuit voltage low. Return to Park to attempt vehicle recovery.
PTI 600006.31	Transmission system	Vehicle controls not operating correctly.

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OURX935,0000935 -19-04APR09-2/2

PowerShift Control Unit (PTP) Diagnostic Trouble Codes

PowerShift Control Unit (PTP) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
PTP 84.7	Transmission system not calibrated	Calibration fault. Return to Neutral or Park to attempt vehicle recovery.
PTP 127.1	Transmission oil pressure low	Transmission oil pressure extremely low. Return to Park to attempt vehicle recovery.
PTP 84.18	Transmission system	Engine off with transmission in gear. Return to Neutral or Park.
PTP 92.16	Transmission System	Excessive load in reverse. Reduce engine load or downshift.
PTP 123.3	Transmission electrical	Clutch pressure sensor circuit voltage high. Return to Park to attempt vehicle recovery.
PTP 123.4	Transmission electrical	Clutch pressure sensor circuit voltage low.
PTP 123.18	Clutch Partially Engaged	Transmission clutch slip high. Return to Neutral or Park to attempt vehicle recovery.
PTP 158.1	Transmission System	Transmission control unit supply voltage low. Return vehicle to Neutral or Park. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
PTP 168.3	Electrical system voltage high	Transmission control unit supply voltage high. Return vehicle to Neutral or Park to attempt vehicle recovery.
PTP 168.4	Electrical system voltage low	Transmission control unit supply voltage low. Return vehicle to Neutral or Park to attempt vehicle recovery.
PTP 177.17	Transmission oil temperature low	Top gear limited due to low transmission temperature.
PTP 190.18	Engine speed not compatible	Engine speed too low for transmission lubrication. Increase engine RPM or decrease wheel speed.
PTP 598.2	Transmission electrical	Clutch pressure switch circuit fault.
PTP 628.12	Transmission system disabled	Transmission control unit programming in progress.
PTP 629.12	Transmission system disabled	Transmission control unit fault. Restart engine to attempt vehicle recovery.
PTP 630.14	Transmission system not calibrated	Calibration fault.
PTP 2000.9	Transmission system	Engine control unit communication fault.
PTP 2005.9	Transmission system	Armrest control unit communication fault.
PTP 2020.9	Transmission system	Suspension control unit communication fault.
PTP 2021.9	Transmission system	RSC communication fault.
PTP 619.5	Park electrical	Park brake solenoid circuit fault. Return to Park to attempt vehicle recovery.
PTP 628.2	Transmission system disabled	Transmission control unit fault.
PTP 630.2	Transmission system not calibrated	Calibration fault.
PTP 734.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTP 735.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTP 736.5	Transmission system inoperable	Reverse Brake solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTP 737.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTP 738.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTP 739.5	Transmission system inoperable	Clutch solenoid circuit fault. Restart engine to attempt vehicle recovery.
PTP 810.2	Transmission speed	Countershaft speed sensor fault. Return to Neutral or Park to attempt vehicle recovery.
PTP 523953.2	Transmission lever	Speed control lever circuit fault. Return to Neutral or Park to attempt vehicle recovery.
PTP 523960.31	Operator not in seat	Operator out of seat. Return to seated position.
PTP 524020.31	Transmission lever not in neutral	Return to Neutral or Park to attempt vehicle recovery.
PTP 524228.5	Park electrical	Park sump block solenoid circuit fault.

Continued on next page

OURX935,0000675 -19-22DEC08-1/2

Diagnostic Trouble Codes

PTP 524228.11	Park system	Park sump block valve fault.
PTP 524232.16	Park system	Park brake pressure high. Return to Park to attempt vehicle recovery.
PTP 524248.31	Park system	Motion detected while vehicle in Park. Stop vehicle and cycle gear selector.
PTP 524267.16	Clutch Partially Engaged	Transmission clutch slipping. Return to Neutral or Park to attempt vehicle recovery.
PTP 524267.31	Clutch Partially Engaged	Transmission clutch slipping. Return to Neutral or Park to attempt vehicle recovery.
PTP 524277.0	Engine Overspeed	Reduce engine RPM before performing downshift.
PTP 524279.31	Operator not in seat	Operator out of seat. Return to seated position.
PTP 524280.31	Park system	Motion detected while Park engaged.
PTP 524232.3	Park electrical	Park brake pressure sensor voltage high.
PTP 524232.4	Park electrical	Park brake pressure sensor voltage low.
PTP 524232.17	Park system	Park brake pressure low. Return to Park to attempt vehicle recovery.
PTP 524239.31	Transmission system	Tractor not moving while in gear with engine running. Return to Neutral or Park to attempt vehicle recovery.
PTP 524250.31	Park system	Park brake fault.
PTP 524267.15	Clutch Partially Engaged	Transmission clutch slipping. Return to Neutral or Park to attempt vehicle recovery.
PTP 524271.5	Transmission system inoperable	Transmission clutch circuit fault. Return to Neutral or Park to attempt vehicle recovery.
PTP 524272.5	Transmission system inoperable	Transmission clutch circuit fault. Return to Neutral or Park to attempt vehicle recovery.
PTP 524273.5	Transmission system inoperable	Transmission clutch circuit fault. Return to Neutral or Park to attempt vehicle recovery.
PTP 600006.31	Transmission System	Vehicle controls not operating correctly.

OURX935,0000675 -19-22DEC08-2/2

Suspended Front Axle (SFA) Diagnostic Trouble Codes

Suspended Front Axle (SFA) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
SFA 158.4	Front Suspension System	Supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
SFA 168.4	Front Suspension System	Supply voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
SFA 629.12	Front Suspension System	Suspension control unit fault. Restart engine to attempt vehicle recovery.
SFA 630.2	Front Suspension System	Calibration fault.
SFA 630.13	Front Suspension System	Calibration fault.
SFA 1079.3	Front Suspension System	Supply voltage high. Restart engine to attempt vehicle recovery.
SFA 1079.4	Front Suspension System	Supply voltage low. Restart engine to attempt vehicle recovery.
SFA 2003.9	Communication System	Transmission control unit communication fault. Restart engine to attempt vehicle recovery.
SFA 2005.9	Communication System	Armrest control unit communication fault. Restart engine to attempt vehicle recovery.
SFA 2049.9	Communication System	Cab control unit communication fault. Restart engine to attempt vehicle recovery.
SFA 2071.9	Communication System	Chassis control unit communication fault. Restart engine to attempt vehicle recovery.
SFA 2602.18	Front Suspension System	Hydraulic oil level low. Limit hydraulic use to allow oil reservoir to refill. Check oil level according to Operator's Manual procedure.
SFA 522287.5	Front Suspension System	Unlocking valve solenoid circuit current low. Restart engine to attempt vehicle recovery.
SFA 522287.6	Front Suspension System	Unlocking valve solenoid circuit current high. Restart engine to attempt vehicle recovery.
SFA 522288.5	Front Suspension System	Locking valve solenoid circuit current low. Restart engine to attempt vehicle recovery.
SFA 522288.6	Front Suspension System	Locking valve solenoid circuit current high. Restart engine to attempt vehicle recovery.
SFA 522290.2	Front Suspension System	Suspension calibration failed. Repeat calibration.
SFA 522290.3	Front Suspension System	Position sensor voltage high. Restart engine to attempt vehicle recovery.
SFA 522290.4	Front Suspension System	Position sensor voltage low. Restart engine to attempt vehicle recovery.
SFA 523368.2	Front Suspension System	Control unit fault. Restart engine to attempt vehicle recovery.
SFA 523652.2	Hydraulic System	Incorrect or failed wiring harness connection.
SFA 523902.7	Front Suspension System	Raise motion has stalled.
SFA 523903.7	Front Suspension System	Lower motion has stalled.
SFA 523910.2	Front Suspension System	Control unit fault. Restart engine to attempt vehicle recovery.
SFA 523948.5	Front Suspension System	Raise circuit current low. Restart engine to attempt vehicle recovery.
SFA 523948.6	Front Suspension System	Raise circuit current high. Restart engine to attempt vehicle recovery.
SFA 523949.5	Front Suspension System	Lower control circuit current low. Restart engine to attempt vehicle recovery.
SFA 523949.6	Front Suspension System	Lower control circuit current high. Restart engine to attempt vehicle recovery.
SFA 523950.2	Front Suspension System	Suspension calibration failed. Repeat calibration.
SFA 523950.3	Front Suspension System	Position sensor voltage high. Restart engine to attempt vehicle recovery.
SFA 523950.4	Front Suspension System	Position sensor voltage low. Restart engine to attempt vehicle recovery.
SFA 523950.13	Front Suspension System	Calibration fault.
SFA 523974.2	Front Suspension System	Pressure sensor fault. Suspension calibration failed. Repeat calibration.
SFA 523974.3	Front Suspension System	Pressure sensor voltage high. Restart engine to attempt vehicle recovery.
SFA 523974.4	Front Suspension System	Pressure sensor voltage low. Restart engine to attempt vehicle recovery.
SFA 524016.4	Front Suspension System	Supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
SFA 600006.31	Front Suspension System	Vehicle controls not operating correctly.

OURX935,0000673 -19-23DEC08-1/1

SCV Can Controller SCC Diagnostic Trouble Codes

SCV Can Controller SCC Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
SCC 158.4	Hydraulic System	SCV control unit supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
SCC 168.3	Hydraulic System	SCV control unit supply voltage high. Restart engine to attempt vehicle recovery.
SCC 168.4	Hydraulic System	SCV control unit voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
SCC 629.12	Hydraulic System	SCV control unit fault. Restart engine to attempt vehicle recovery.
SCC 630.13	Hydraulic System	SCVs not calibrated.
SCC 639.12	Communication System	SCV control unit communication fault. Restart engine to attempt vehicle recovery.
SCC 639.14	Communication System	SCV control unit communication fault. Restart engine to attempt vehicle recovery.
SCC 1079.3	Hydraulic System	Optional implement connector voltage high. Check implement wire harness and connector. Restart engine to attempt vehicle recovery.
SCC 1079.4	Hydraulic System	Optional implement connector voltage low. Check implement wire harness and connector. Restart engine to attempt vehicle recovery.
SCC 2005.9	Communication System	Armrest control unit communication fault. Restart engine to attempt vehicle recovery.
SCC 2049.9	Communication System	Cab control unit communication fault. Restart engine to attempt vehicle recovery.
SCC 2071.9	Communication System	Chassis control unit communication fault. Restart engine to attempt vehicle recovery.
SCC 2161.9	Communication System	SCV control unit communication fault with SCV I. Restart engine to attempt vehicle recovery.
SCC 2162.9	Communication System	SCV control unit communication fault with SCV II. Restart engine to attempt vehicle recovery.
SCC 2163.9	Communication System	SCV control unit communication fault with SCV III. Restart engine to attempt vehicle recovery.
SCC 2164.9	Communication System	SCV control unit communication fault with SCV IV. Restart engine to attempt vehicle recovery.
SCC 2165.9	Communication System	SCV control unit communication fault with SCV V. Restart engine to attempt vehicle recovery.
SCC 2166.9	Communication System	SCV control unit communication fault with SCV VI. Restart engine to attempt vehicle recovery.
SCC 2167.9	Communication System	SCV control unit communication fault with SCV VII. Restart engine to attempt vehicle recovery.
SCC 2602.18	Hydraulic System	Hydraulic oil level low. Limit hydraulic use to allow oil reservoir to refill. Check oil level according to Operator's Manual procedure.
SCC 521000.2	Hydraulic System	Front hitch switch circuit fault. Restart engine to attempt vehicle recovery.
SCC 523216.3	Hydraulic System	SCV control unit supply voltage high to SCV I and SCV II. Restart engine to attempt vehicle recovery.
SCC 523216.4	Hydraulic System	SCV control unit supply voltage low to SCV I and SCV II. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
SCC 523217.3	Hydraulic System	SCV control unit supply voltage high to SCV VI. Restart engine to attempt vehicle recovery.
SCC 523217.4	Hydraulic System	SCV control unit supply voltage low to SCV VI. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
SCC 523219.3	Hydraulic System	SCV control unit supply voltage high to SCV III and SCV IV. Restart engine to attempt vehicle recovery.
SCC 523219.4	Hydraulic System	SCV control unit supply voltage low to SCV III and SCV IV. Reduce electrical load or increase engine RPM. Power down and check fuse. Restart engine to attempt vehicle recovery.
SCC 523333.2	Hydraulic System	Hydraulic external switch circuit fault. Restart engine to attempt vehicle recovery.
SCC 523652.2	Hydraulic System	Control unit incorrect or failed wiring harness connection.
SCC 523693.2	Hydraulic System	SCV I command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523693.9	Communication System	SCV I command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523693.19	Hydraulic System	SCV I external command lever fault. Restart engine to attempt vehicle recovery.
SCC 523694.2	Hydraulic System	SCV II command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523694.9	Communication System	SCV II command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523694.19	Hydraulic System	SCV II external command lever fault. Restart engine to attempt vehicle recovery.
SCC 523695.2	Hydraulic System	SCV V command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523695.9	Hydraulic System	SCV V command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523695.19	Hydraulic System	SCV V command lever communication fault. Restart engine to attempt vehicle recovery.

Continued on next page

OURX935,0000732 -19-23DEC08-1/2

Diagnostic Trouble Codes

SCC 523696.2	Hydraulic System	Front hitch command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523696.9	Hydraulic System	Front hitch command lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523696.19	Hydraulic System	Front hitch external command lever fault. Restart engine to attempt vehicle recovery.
SCC 523775.19	Hydraulic System	Single lever control hand presence switch circuit fault. Restart engine to attempt vehicle recovery.
SCC 523776.19	Hydraulic System	Single lever control transport lock circuit fault. Restart engine to attempt vehicle recovery.
SCC 523785.1	Hydraulic System	External control voltage low. Restart engine to attempt vehicle recovery.
SCC 523785.3	Hydraulic System	SCV remote position sensor #2 circuit voltage high. Restart engine to attempt vehicle recovery.
SCC 523785.4	Hydraulic System	SCV remote position sensor #2 circuit voltage low. Restart engine to attempt vehicle recovery.
SCC 523785.7	Hydraulic System	SCV remote position sensor #2 circuit fault. Restart engine to attempt vehicle recovery.
SCC 523786.1	Hydraulic System	External control voltage low. Restart engine to attempt vehicle recovery.
SCC 523786.3	Hydraulic System	SCV remote position sensor #1 circuit voltage high. Restart engine to attempt vehicle recovery.
SCC 523786.4	Hydraulic System	SCV remote position sensor #1 circuit voltage low. Restart engine to attempt vehicle recovery.
SCC 523786.7	Hydraulic System	SCV remote position sensor circuit fault. Restart engine to attempt vehicle recovery.
SCC 523788.2	Hydraulic System	Hydraulic option connector changed from start up. Reference Hydraulic Option Configuration procedure in Operator's Manual.
SCC 523788.14	Hydraulic System	Hydraulic option connector changed from start up. Reference Hydraulic Option Configuration procedure in Operator's Manual.
SCC 523788.31	Hydraulic System	Hydraulic option connector fault. Reference Hydraulic Option Configuration procedure in Operator's Manual.
SCC 523801.19	Hydraulic System	Single lever control auxiliary valve circuit fault. Restart engine to attempt vehicle recovery.
SCC 523804.19	Hydraulic System	Single lever control lateral command circuit fault. Restart engine to attempt vehicle recovery.
SCC 523805.19	Hydraulic System	Single lever control fore-aft command circuit fault. Restart engine to attempt vehicle recovery.
SCC 523910.2	Hydraulic System	SCV control unit fault. Default. settings have been restored. Restart engine to attempt vehicle recovery.
SCC 523923.19	Hydraulic System	SCV I control lever fault. Restart engine to attempt vehicle recovery.
SCC 523923.31	Hydraulic System	SCV I control lever communication fault. Restart engine to attempt vehicle recovery.
SCC 523942.31	SCV VI On	Operator out of seat with SCV VI on. Return to seated position.
SCC 523943.31	SCV V On	Operator out of seat with SCV V on. Return to seated position.
SCC 523944.31	SCV IV On	Operator out of seat with SCV IV on. Return to seated position.
SCC 523945.31	SCV III On	Operator out of seat with SCV III on. Return to seated position.
SCC 523946.31	SCV II On	Operator out of seat with SCV II on. Return to seated position.
SCC 523947.31	SCV I On	Operator out of seat with SCV I on. Return to seated position.
SCC 524015.2	Hydraulic System	SCV III external control unit communication fault. Restart engine to attempt vehicle recovery.
SCC 524015.9	Communication System	SCV III external control unit communication fault.
SCC 524015.19	Hydraulic System	SCV III external control unit fault. Restart engine to attempt vehicle recovery.
SCC 524038.19	Hydraulic System	SCV IV external control unit fault. Restart engine to attempt vehicle recovery.
SCC 524101.19	Hydraulic System	Front hitch control lever fault. Restart engine to attempt vehicle recovery.
SCC 524101.31	Hydraulic System	Front hitch control lever communication fault. Restart engine to attempt vehicle recovery.
SCC 524102.19	Hydraulic System	SCV V control lever fault. Restart engine to attempt vehicle recovery.
SCC 524102.31	Hydraulic System	SCV V control lever communication fault. Restart engine to attempt vehicle recovery.
SCC 524103.19	Hydraulic System	SCV IV control lever fault. Restart engine to attempt vehicle recovery.
SCC 524103.31	Hydraulic System	SCV IV control lever communication fault. Restart engine to attempt vehicle recovery.
SCC 524104.19	Hydraulic System	SCV III control lever fault. Restart engine to attempt vehicle recovery.
SCC 524104.31	Hydraulic System	SCV III control lever communication fault. Restart engine to attempt vehicle recovery.
SCC 524105.19	Hydraulic System	SCV II control lever fault. Restart engine to attempt vehicle recovery.
SCC 524105.31	Hydraulic System	SCV II control lever communication fault. Restart engine to attempt vehicle recovery.
SCC 600006.31	Hydraulic System	Vehicle controls not operating correctly.

OURX935,0000732 -19-23DEC08-2/2

(SSU) Diagnostic Trouble Codes

(SSU) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
SSU 84.9	AutoTrac System Inoperable	Chassis control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 168.3	AutoTrac System Inoperable	Steering system control unit supply voltage high. Restart engine to attempt vehicle recovery.
SSU 168.4	AutoTrac System Inoperable	Steering system control unit supply voltage low. Reduce electrical load or increase engine RPM. Power down and check fuse.
SSU 177.9	AutoTrac System Inoperable	Chassis control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 517.9	AutoTrac System Inoperable	GPS receiver or tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 524.9	AutoTrac System Inoperable	Transmission control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 628.2	AutoTrac System Inoperable	Steering system fault. Restart engine to attempt vehicle recovery.
SSU 628.12	AutoTrac System Inoperable	Steering control unit is programming
SSU 629.12	AutoTrac System Inoperable	Steering control unit fault. Restart engine to attempt vehicle recovery.
SSU 630.13	AutoTrac System Not Calibrated	Calibration fault.
SSU 1079.3	AutoTrac System Inoperable	Steering system supply voltage high. Restart engine to attempt vehicle recovery.
SSU 1079.4	AutoTrac System Inoperable	Wheel angle sensor supply voltage low. Restart engine to attempt vehicle recovery.
SSU 1504.9	AutoTrac System Inoperable	Cab control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 1504.14	Operator Not In Seat	Operator out of seat. Return to seated position.
SSU 1807.2	AutoTrac System Inoperable	Steering wheel position sensors fault.
SSU 1807.3	AutoTrac System Inoperable	Steering wheel position sensor supply voltage high. Restart engine to attempt vehicle recovery.
SSU 1807.4	AutoTrac System Inoperable	Steering wheel position sensor supply voltage low. Restart engine to attempt vehicle recovery.
SSU 1807.5	AutoTrac System Inoperable	Steering wheel position sensor circuit current low. Restart engine to attempt vehicle recovery.
SSU 1807.6	AutoTrac System Inoperable	Steering wheel position sensor circuit current high. Restart engine to attempt vehicle recovery.
SSU 1807.10	AutoTrac System Inoperable	Steering wheel position sensor fault.
SSU 1807.14	AutoTrac System Inoperable	Steering wheel position sensor fault.
SSU 1865.9	AutoTrac System Inoperable	Cab load center communication fault. Restart engine to attempt vehicle recovery.
SSU 522273.0	AutoTrac System Inoperable	Steering system control voltage high. Restart engine to attempt vehicle recovery.
SSU 522273.1	AutoTrac System Inoperable	Steering system control command voltage low. Restart engine to attempt vehicle recovery.
SSU 522387.7	AutoTrac System Inoperable	Steering component fault.
SSU 522394.9	AutoTrac System Inoperable	GPS receiver or tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 522451.0	AutoTrac System Inoperable	Wheel angle sensor voltage high.
SSU 522451.1	AutoTrac System Inoperable	Wheel angle sensor voltage low.
SSU 522451.14	AutoTrac System Inoperable	Wheel angle sensor fault.

Continued on next page

OURX935,0000670 -19-22DEC08-1/3

Diagnostic Trouble Codes

SSU 523349.9	AutoTrac System Inoperable	Armrest control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 523651.2	AutoTrac System Inoperable	Steering control unit fault. Restart engine to attempt vehicle recovery.
SSU 523698.9	AutoTrac System Inoperable	GreenStar display communication fault.
SSU 523768.2	AutoTrac System Not Calibrated	Steering control unit calibration fault. Restart engine to attempt vehicle recovery.
SSU 523768.9	AutoTrac System Inoperable	Front suspension control unit communication fault. Restart engine to attempt vehicle recovery.
SSU 523789.2	AutoTrac System Inoperable	Wheel angle sensor not detected. Restart engine to attempt vehicle recovery.
SSU 523795.2	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523795.11	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523795.12	AutoTrac System Inoperable	Steering component or harness fault.
SSU 523795.13	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523810.0	AutoTrac System Inoperable	Steering valve supply voltage high.
SSU 523810.1	AutoTrac System Inoperable	Steering valve supply voltage low.
SSU 523821.2	AutoTrac System Inoperable	Vehicle identification fault or incorrect harness connection.
SSU 523822.2	AutoTrac System Inoperable	Flow meter sensor fault.
SSU 523822.5	AutoTrac System Inoperable	Flow meter sensor circuit current low.
SSU 523822.6	AutoTrac System Inoperable	Flow meter sensor circuit current high.
SSU 523822.7	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523822.8	AutoTrac System Inoperable	Flow meter sensor fault.
SSU 523822.10	AutoTrac System Inoperable	Vehicle steering detected without steering wheel movement.
SSU 523822.12	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523822.14	AutoTrac System Inoperable	Vehicle steering not detected with steering wheel movement.
SSU 523824.3	AutoTrac System Inoperable	Steering wheel position sensor supply voltage high.
SSU 523824.4	AutoTrac System Inoperable	Steering wheel position sensor supply voltage low.
SSU 523824.5	AutoTrac System Inoperable	Steering wheel position sensor circuit current low.
SSU 523824.6	AutoTrac System Inoperable	Steering wheel position sensor circuit current high.
SSU 523824.10	AutoTrac System Inoperable	Steering wheel position sensor fault.
SSU 523824.14	AutoTrac System Inoperable	Steering wheel position sensor fault.
SSU 523826.0	AutoTrac System Inoperable	Wheel angle sensor voltage high.
SSU 523826.1	AutoTrac System Inoperable	Wheel angle sensor voltage low.
SSU 523826.2	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523826.7	AutoTrac System Inoperable	Steering control unit calibration fault.

Continued on next page

OURX935.0000670 -19-22DEC08-2/3

Diagnostic Trouble Codes

SSU 523826.10	AutoTrac System Inoperable	Vehicle steering detected without steering wheel movement.
SSU 523826.12	AutoTrac System Inoperable	Steering control unit calibration fault.
SSU 523826.14	AutoTrac System Inoperable	Vehicle steering not detected with steering wheel movement.
SSU 524221.9	AutoTrac System Inoperable	GPS receiver yaw rate communication fault.
SSU 600006.31	AutoTrac System	Vehicle controls not operating correctly.

II

OURX935,0000670 -19-22DEC08-3/3

(SV 1-6) Diagnostic Trouble Codes

All though specific SCV number is listed in the table, the following trouble codes may be true of any SCV on the tractor. If an SV code is displayed, make sure you note

exactly which SCV it is and take appropriate action for that specific SCV as described in the solution column for the trouble code.

(SV 1-6) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
SV1 158.3	Hydraulic System	SCV 1 Voltage High. Reference Diagnostic Procedure in Technical Manual.
SV1 158.4	Hydraulic System	SCV 1 Voltage Low. Reference Diagnostic Procedure in Technical Manual.
SV1 2034.9	Communication System	SCV 1 Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.
SV1 4084.7	Hydraulic System	SCV 1 Not in Float Position. Reference Diagnostic Procedure in Technical Manual.
SV1 4084.16	Hydraulic System	SCV 1 Beyond Commanded Position. Reference Diagnostic Procedure in Technical Manual.
SV1 4084.18	Hydraulic System	SCV 1 Failed to Reach Commanded Position. Reference Diagnostic Procedure in Technical Manual.
SV1 4085.7	Hydraulic System	SCV 1 Not in Neutral Position. Reference Diagnostic Procedure in Technical Manual.
SV1 4085.12	Hydraulic System	SCV 1 Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.
SV1 600006.31	Hydraulic System	Vehicle Controls Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.
SV2 158.3	Hydraulic System	SCV 2 Voltage High. Reference Diagnostic Procedure in Technical Manual.
SV1 158.3	Hydraulic System	SCV I supply voltage high. Restart engine to attempt vehicle recovery.
SV1 158.4	Hydraulic System	SCV I supply voltage low. Reduce electrical load or increase engine RPM to attempt vehicle recovery.
SV2 158.4	Hydraulic System	SCV 2 Voltage Low. Reference Diagnostic Procedure in Technical Manual.
SV2 2034.9	Communication System	SCV 2 Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.
SV2 4084.7	Hydraulic System	SCV 2 Not in Float Position. Reference Diagnostic Procedure in Technical Manual.
SV2 4084.16	Hydraulic System	SCV 2 Beyond Commanded Position. Reference Diagnostic Procedure in Technical Manual.
SV2 4084.18	Hydraulic System	SCV 2 Failed to Reach Commanded Position. Reference Diagnostic Procedure in Technical Manual.
SV2 4085.7	Hydraulic System	SCV 2 Not in Neutral Position. Reference Diagnostic Procedure in Technical Manual.
SV2 4085.12	Hydraulic System	SCV 2 Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.
SV2 600006.31	Hydraulic System	Vehicle Controls Not Operating Correctly. Reference Diagnostic Procedure in Technical Manual.
SV1 2034.9 .	Communication System	SCV I command message missing. Restart engine to attempt vehicle recovery.
SV1 4084.16 SV1 158.4	Hydraulic System	SCV I beyond commanded spool position. Cycle external control lever or restart engine to attempt vehicle recovery.
SV1 4084.18 SV1 2034.9 .	Hydraulic System	SCV I commanded spool position not reached. Cycle external control lever or restart engine to attempt vehicle recovery.
SV1 4085.7 SV1 4084.7 SV1 158.3	Hydraulic System	SCV I Neutral position not reached. Cycle external control lever or restart engine to attempt vehicle recovery.
SV1 4085.12 SV1 4084.16 SV1 158.4	Hydraulic System	SCV I control unit fault. Restart engine to attempt vehicle recovery.
SV1 600006.31 SV1 4084.18 SV1 2034.9 .	Hydraulic System	SCV I fault.

OURX935,0000671 -19-22DEC08-1/1

Tractor Electric Control Unit TEC Diagnostic Trouble Codes

Tractor Electric Control Unit TEC Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
TEC 628.12	Implement System	Tractor equipment control unit fault. Restart engine to attempt vehicle recovery.
TEC 629.12	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEC 639.14	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEC 1231.14	Incompatible Device	Improper device detected on implement bus.
TEC 522550.14	Electrical System	Tractor equipment control unit fault. Restart engine to attempt vehicle recovery.
TEC 630.2	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEC 639.12	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEC 1231.12	Implement System	Vehicle controls not operating correctly.
TEC 600006.31	Electrical System	Tractor equipment control unit programming in progress.
TEI 628.12	Implement System	Tractor equipment control unit fault. Restart engine to attempt vehicle recovery.
TEI 629.12	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEI 630.2	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEI 639.12	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEI 639.14	Communication System	Tractor equipment control unit communication fault. Restart engine to attempt vehicle recovery.
TEI 1231.12	Implement System	Vehicle controls not operating correctly.
TEI 1231.14	Incompatible Device	Improper device detected on implement bus.
TEI 522550.14	Electrical System	Tractor equipment control unit fault. Restart engine to attempt vehicle recovery.

OURX935,0000674 -19-22DEC08-1/1

Vehicle Control Unit (VCI) Diagnostic Trouble Codes

Vehicle Load Center (VLC) Diagnostic Trouble Codes		
Diagnostic Trouble Code	Display	Solution
VLC 628.2	Electrical System	Vehicle load center control unit fault.
VLC 629.12	Electrical System	Vehicle load center control unit fault. Restart engine to attempt vehicle recovery.
VLC 1542.4	Electrical System	Vehicle load center voltage low with key off. Restart engine to attempt vehicle recovery.
VLC 1550.5	A/C System	A/C system clutch circuit current low. Check compressor.
VLC 1550.6	A/C System	A/C system clutch circuit current high. Check harness and compressor.
VLC 2030.6	Electrical System	Hood lighting circuit current high.
VLC 2050.9	Communication System	Cab load center control unit communication fault.
VLC 2348.5	Lighting System	High Beam Lights current low. Check bulbs.
VLC 2348.6	Lighting System	High beam lights current high. Wiring fault.
VLC 2350.5	Lighting System	Low beam lights current low. Check bulbs.
VLC 2350.6	Lighting System	Low beam lights current high. Wiring fault.
VLC 2354.5	Lighting System	Front outer hood lights current low. Check bulbs.
VLC 2354.6	Lighting System	Front outer hood lights current high. Wiring fault.
VLC 2356.5	Lighting System	Front inner hood lights current low. Check bulbs.
VLC 2356.6	Lighting System	Front inner hood lights current high. Wiring fault.
VLC 2388.5	Lighting System	Center spot light current low. Check bulbs.
VLC 2388.6	Lighting System	Center spot light current high. Wiring fault.
VLC 522310.6	Electrical System	SCV control unit circuit current high. Wiring fault.
VLC 522311.5	Washer System	Rear washer pump current low.
VLC 522311.6	Washer System	Rear washer pump fault.
VLC 522312.5	Washer System	Front washer pump circuit current low.
VLC 522312.6	Washer System	Front washer pump fault.
VLC 522620.5	Electrical System	Horn circuit current low.
VLC 522620.6	Electrical System	Horn circuit current high.
VLC 600006.31	Electrical System	Vehicle controls not operating correctly.

OURX935,00005DA -19-30JUN09-1/11

Storage

Placing Tractor in Storage

IMPORTANT: If tractor will not be used for more than three months, the following recommendations for storage and removal from storage will minimize corrosion and deterioration.

NOTE: Whenever possible store tractor in a building or under a roof to avoid damage resulting from prolonged exposure to the elements.

1. Lower hitch.
2. Change engine oil and replace filter (if required).

NOTE: Do not add bio-diesel fuel if placing tractor in storage.

3. Drain fuel tank and add back approximately 19 L (5 gal) of fuel.
4. Using plastic bags and either tape or tie-bands, seal air inlets and exhaust, crankcase vent tube, radiator overflow hose, and transmission-hydraulic system fill cap.
5. Remove and store batteries in a cool dry location—(keep batteries charged).¹

¹Disconnect battery ground cable for short-term storage periods (20 to 90 days)

6. Coat all exposed (machined) metal surfaces such as lift cylinders and steering cylinder rods with light coat of grease.
7. Lubricate all grease fittings.
8. Release tension on auxiliary drive belt and remove belt from air conditioner pulley.

If tractor must be stored outside, follow these additional precautions.

1. Cover instrument panel, control levers and seat with sheets of material or cardboard to protect against sun rays.
2. Thoroughly clean tractor touching up any scratched or chipped painted surfaces.
3. Wax or cover entire tractor with waterproof material.
4. Raise tires off the ground and/or cover them to protect from heat and sunlight.

OURX935,0000445 -19-10AUG05-1/1

Removing Tractor from Storage

1. Remove all coverings placed in or on tractor while preparing for storage.

IMPORTANT: To avoid engine damage, make sure crankcase vent tube is unsealed after storage.

2. Unseal all openings sealed during storage.
3. Check auxiliary drive belt for cracking and if serviceable, install auxiliary drive belt on air conditioner pulley.
4. Check all fluid levels.
5. Fill fuel tank.
6. Check tire inflation pressures. (See Wheels, Tires and Treads section.)

7. Install batteries and connect cables.
8. Turn key to **RUN** position for one minute to allow fuel system to prime, then start engine.

NOTE: While operating engine at slow idle, visually check all instruments and indicators to ensure they function properly.

9. Operate engine at slow idle for several minutes.
10. Perform all daily/10 Hour services and any other scheduled services as required. (See Service sections.)
11. Warm up tractor before putting tractor under load.

OURX935,0000446 -19-14JUN05-1/1

Paint Finish Care

Washing tractor regularly will preserve the finish. Wash tractor in indirect sunlight. All cleaning agents should be flushed promptly and not allowed to dry on the paint surface.

IMPORTANT: Do not use hot water, strong soaps or chemical detergents. Use liquid hand, dish or car washing (non detergent) soaps. Cleaning agents containing acid or abrasives should not be used.

Waxing tractor occasionally may be necessary to remove residue from paint finish. Do not use waxes containing abrasive compounds.

Inspect paint surface, during washing or waxing, for chips and scratches. Repaint any areas where paint has been removed. Paint materials are available from your John Deere dealer.

OURX935,0000447 -19-20JAN05-1/1

Specifications

General Specifications

	8245R	8270R	8295R	8320R	8345R
Power:					
(97/68 EC) Rated at 1900 rpm (PS ^a)	197 kW (268 hp)	214 kW (291 hp)	237 kW (322 hp)	256 kW (347 hp)	278 kW (378 hp)
(97/68 EC) Rated at 2100 rpm (PS ^a)	180 kW (245 hp)	199 kW (270 hp)	217 kW (295 hp)	235 kW (320 hp)	254 kW (345 hp)
(ECE R24) Rated at 1900 rpm (PS ^a)	191 kW (259 hp)	207 kW (281 hp)	228 kW (310 hp)	245 kW (333 hp)	265 kW (361 hp)
(ECE R24) Rated at 2100 rpm (PS ^a)	174 kW (237 hp)	192 kW (261 hp)	209 kW (284 hp)	225 kW (307 hp)	242 kW (330 hp)
PTO Power at Rated Speed (SAE ^b)	148 kW (198 hp)	164 kW (220 hp)	180 kW (242 hp)	196 kW (263 hp)	212 kW (284 hp)
Rated Speed	2100 rpm	2100 rpm	2100 rpm	2100 rpm	2100 rpm
Engine Speed at PTO Operating Speed:					
.. 1000 rpm	2000 rpm	2000 rpm	2000 rpm	2000 rpm	2000 rpm
.. 540 rpm	1817 rpm	1817 rpm	1817 rpm	1817 rpm	1817 rpm
Governed Speed Range	900—2200 rpm	900—2200 rpm	900—2200 rpm	900—2200 rpm	900—2200 rpm
Operating Speed Range	1500—2100 rpm	1500—2100 rpm	1500—2100 rpm	1500—2100 rpm	1500—2100 rpm
Slow Idle	900±10 rpm	900±10 rpm	900±10 rpm	900±10 rpm	900±10 rpm
Fast Idle	2200±25 rpm	2200±25 rpm	2200±25 rpm	2200±25 rpm	2200±25 rpm
Engine:					
Type	Diesel	Diesel	Diesel	Diesel	Diesel
Cylinders	In-line 6	In-line 6	In-line 6	In-line 6	In-line 6
Aspiration	Turbocharged and Air-to-Air Aftercooled	Turbocharged and Air-to-Air Aftercooled	Turbocharged and Air-to-Air Aftercooled	Turbocharged and Air-to-Air Aftercooled	Turbocharged and Air-to-Air Aftercooled
Lubrication	Full-Flow Filtration with Bypass	Full-Flow Filtration with Bypass	Full-Flow Filtration with Bypass	Full-Flow Filtration with Bypass	Full-Flow Filtration with Bypass
Displacement	9L (548 in. ³)	9L (548 in. ³)	9L (548 in. ³)	9L (548 in. ³)	9L (548 in. ³)
Bore	118 mm (4.66 in.)	118 mm (4.66 in.)	118 mm (4.66 in.)	118 mm (4.66 in.)	118 mm (4.66 in.)
Stroke	136 mm (5.35 in.)	136 mm (5.35 in.)	136 mm (5.35 in.)	136 mm (5.35 in.)	136 mm (5.35 in.)
Compression Ratio	16.3:1	16.3:1	16.3:1	16.3:1	16.3:1
Capacities:					
Fuel Tank	681 L (180 gal)	681 L (180 gal)	681 L (180 gal)	681 L (180 gal)	681 L (180 gal)
Cooling System	40 L (42.3 qt.)	40 L (42.3 qt.)	40 L (42.3 qt.)	40 L (42.3 qt.)	40 L (42.3 qt.)
Crankcase (1300 MFWD)*	25 L (26.4 qt.)	25 L (26.4 qt.)	25 L (26.4 qt.)	—	—
Crankcase (1500 MFWD or Independent Link Suspension)*	25 L (26.4 qt.)	25 L (26.4 qt.)	28 L (29.5 qt)	28 L (29.5 qt)	28 L (29.5 qt.)
Trans-Hyd System:					
MFWD **	150 L (40 gal)	150 L (40 gal)	150 L (40 gal)	150 L (40 gal)	150 L (40 gal)
Independent Link Suspension **	160 L (42 gal)	160 L (42 gal)	160 L (42 gal)	160 L (42 gal)	160 L (42 gal)
MFWD Axle:					
1300 Axle Differential Case	13.6 L (14.2 qt.)	13.6 L (14.2 qt.)	13.6 L (14.2 qt.)	13.6 L (14.2 qt.)	13.6 L (14.2 qt.)
1500 Axle Differential Case	18.7 L (19.7 qt.)	18.7 L (19.7 qt.)	18.7 L (19.7 qt.)	18.7 L (19.7 qt.)	18.7 L (19.7 qt.)
MFWD Wheel Hub	3.4 L (3.6 qt.)	3.4 L (3.6 qt.)	3.4 L (3.6 qt.)	3.4 L (3.6 qt.)	3.4 L (3.6 qt.)
Independent Link Suspension Wheel Hub	3.8 L (4 qt.)	3.8 L (4 qt.)	3.8 L (4 qt.)	3.8 L (4 qt.)	3.8 L (4 qt.)
* Includes Filter					
** Includes 33 L (8.7 gal.) in the clean oil reservoir					

^a German term for horse power, one PS is the equivalent of .9863 horse power

^b Society of Automotive Engineering

Fuel System:

Injection Pump Type Self Priming, Electronically Injected and Governed—High Pressure Common Rail with Electric Fuel Transfer Pump

Continued on next page

OURX935,0000CE0 -19-04APR11-1/2

Specifications

Air Cleaner Dry-Type with Secondary Element

Cooling System:

Type 70 kPa (0.7 bar) (10 psi) with Centrifugal Pump

Fan Drive Variable Ratio Belt Drive

Thermostats Two Heavy-Duty

Hydraulic System:

Type Pressure/Flow Compensated

PST Transmission Pump — Single Section 34 cc Gear Pump

AutoPowr Transmission Pump — Two Section 18.5 cc Gear Pump

Charge Pump Integrated with Main Hydraulic Pump Maximum Pressure 20 000 kPa (200 bar) (2900 psi)

Main Hydraulic Pump (Steering, Brakes, Hitch and SCVs) Axial Piston Pump

Rated Pump Flow:

.. Standard 63 cm³ 166.6 L/min (44gpm)

.. Optional 85 cm³ 227.1 L/min (60 gpm)

Available Flow at one SCV 132 L/min (35 gpm)

Selective Control Valves (SCVs) 4 Position Electro-Hydraulic

Electrical System:

Type 12 Volt

Alternator 200 amp

Batteries Two 12 Volt

Cold Cranking Amps 1850

Brakes:

Type Power Hydraulically Operated Wet Disk

PowerShift Transmission (PST):

Type Automatic PowerShift, Electronically Controlled, Hydraulically Activated Wet Disk Clutches

Gear Selections 16 Forward – 5 Reverse

AutoPowr:

Type: Hydro-mechanical, hydrostatic module, wet disk clutches and brakes

Shifting: Automatic shifting under load

Speed Selections 40K, Infinitely variable speed, depending on engine load

Power Take Off:

Type Fully Independent

.. Standard 45 mm (1-3/4 in.) 1000 rpm

.. Optional 45 mm (1-3/4 in.) 1000 rpm—35 mm (1-3/8 in.) 1000 rpm—35 mm (1-3/8 in.) 540 rpm Adapter^a

Clutch Multiple Wet-Disk Hydraulically Activated

Sound Level:

Maximum sound level at operator's ear in accordance with Directive 86/188 EEC. Measurement method in accordance with Directive 77/311 EEC, Annex II, with cab closed.

All Models 73 dBa

^aNot available on 8295R, 8320R or 8345R tractors.

OURX935,0000CE0 -19-04APR11-2/2

Specifications

Hitch, Weight, And Wheel Base Specifications

Hitch		8245R	8270R	8295R	8320R	8345R
Measured at Hook End 3-Point Hitch (Cat. 3/3N) with Convertible Cat. 3 Ball/Hook Style Ends (Walterscheid)	Maximum Lift Capacity	9,562 kg (21,081 lbs.)	9,562 kg (21,081 lbs.)	9,562 kg (21,081 lbs.)	N/A	N/A
	OECD ^a Maximum Lift Capacity	6,862 kg (15,130 lbs.)	6,862 kg (15,130 lbs.)	6,862 kg (15,130 lbs.)	N/A	N/A
Measured at Hook End 3-Point Hitch (Cat. 3/3N) with Convertible Cat. 3 Ball/Hook Style Ends and (Walterscheid)	Maximum Lift Capacity	10,788 kg (23,762 lbs.)	10,788 kg (23,762 lbs.)	10,788 kg (23,762 lbs.)	N/A	N/A
	OECD ^a Maximum Lift Capacity	7,665 kg (16,900 lbs.)	7,665 kg (16,900 lbs.)	7,665 kg (16,900 lbs.)	N/A	N/A
Measured at Hook End 3-Point Hitch (Cat. 3/3N) with Convertible Cat. 3 Ball/Hook Style Ends and (Walterscheid)	Maximum Lift Capacity	11,023 kg (24,303 lbs.)	11,023 kg (24,303 lbs.)	11,023 kg (24,303 lbs.)	11,023 kg (24,303 lbs.)	11,023 kg (24,303 lbs.)
	OECD ^a Maximum Lift Capacity	7,847 kg (17,300 lbs.)	7,847 kg (17,300 lbs.)	7,847 kg (17,300 lbs.)	7,847 kg (17,300 lbs.)	7,847 kg (17,300 lbs.)
Measured at Hook End 3-Point Hitch (Cat. 4) with Convertible Cat. 4N/3 Ball/Hook Style Ends (Walterscheid)	Maximum Lift Capacity	11,762 kg (25,932 lbs.)	11,762 kg (25,932 lbs.)	11,762 kg (25,932 lbs.)	11,762 kg (25,932 lbs.)	11,762 kg (25,932 lbs.)
	OECD ^a Maximum Lift Capacity	8,436 kg (18,600 lbs.)	8,436 kg (18,600 lbs.)	8,436 kg (18,600 lbs.)	8,436 kg (18,600 lbs.)	8,436 kg (18,600 lbs.)
Measured at Draft Link End 3-Point Hitch (Cat. 4N/3) with Implement quick Coupler	Maximum Lift Capacity	11,677 kg (25,744 lbs.)	11,677 kg (25,744 lbs.)	11,677 kg (25,744 lbs.)	11,677 kg (25,744 lbs.)	11,677 kg (25,744 lbs.)
	OECD ^a Maximum Lift Capacity	8,301 kg (18,300 lbs.)	8,301 kg (18,300 lbs.)	8,301 kg (18,300 lbs.)	8,301 kg (18,300 lbs.)	8,301 kg (18,300 lbs.)
3 Point Front Hitch ^b		4989 kg (11000 lbs)	4989 kg (11000 lbs)	4989 kg (11000 lbs)	4989 kg (11000 lbs)	4989 kg (11000 lbs)
Base Weight:						
ILS/IVT/1400 lb inner weights/front weight support/Cat4 Walterscheid/3 in 1 with Piton hitch/710/70R42 singles/600/70R30 fronts		12391 kg (27,317 Lb.)	12391 kg (27,317 Lb.)	12391 kg (27,317 Lb.)	12391 kg (27,317 Lb.)	12391 kg (27,317 Lb.)
Overall Length:						
Cat IV Walterscheid hooks, drawbar and front weight support		6050 mm (238.2 in.)	6050 mm (238.2 in.)	6050 mm (238.2 in.)	6050 mm (238.2 in.)	6050 mm (238.2 in.)
Cat IV Walterscheid hooks, drawbar, front weight support and front suitcase weights		6495 mm (255.7 in.)	6495 mm (255.7 in.)	6495 mm (255.7 in.)	6495 mm (255.7 in.)	6495 mm (255.7 in.)
Cat IV quick coupler, drawbar, front weight support and front suitcase weights		6411 mm (252.4 in.)	6411 mm (252.4 in.)	6411 mm (252.4 in.)	6411 mm (252.4 in.)	6411 mm (252.4 in.)
Cat IV Walterscheid hooks, drawbar, front hitch folded up		6194 mm (243.9 in.)	6194 mm (243.9 in.)	6194 mm (243.9 in.)	6194 mm (243.9 in.)	6194 mm (243.9 in.)
Overall Height:						
CommandView™ II cab (does not include GreenStar receiver, beacon light or muffler)		3308 mm (130.2 in.)	3308 mm (130.2 in.)	3308 mm (130.2 in.)	3308 mm (130.2 in.)	3308 mm (130.2 in.)
Wheel Base:						
MFWD		3050 mm (120.1 in.)	3050 mm (120.1 in.)	3050 mm (120.1 in.)	3050 mm (120.1 in.)	3050 mm (120.1 in.)
Independent Link Suspension		3020 mm (118.9 in.)	3020 mm (118.9 in.)	3020 mm (118.9 in.)	3020 mm (118.9 in.)	3020 mm (118.9 in.)

^aOrganization of Economic Cooperation and Development maximum lift is measured at 610 mm (24 in.) behind the hitch point.

^bRequires Independent Link Suspension

CommandView is a trademark of Deere & Company

OURX935,0000CEA -19-16DEC09-1/1

Specifications

Ground Speeds With PST

Engine rpm	Gear	Group 47 710/70R38, 650/65R42, 650/75R38 and 620/70R42		Group 48 800/70R38, 710/70R42, 520/85R46, 620/70R46, and 480/80R50 Tires	
		km/h	mph	km/h	mph
2100	1	1.9	1.2	2	1.2
2100	2	2.5	1.5	2.6	1.6
2100	3	3.3	2.	3.5	2.2
2100	4	4.5	2.8	4.7	2.9
2100	5	5.	3.1	5.3	3.3
2100	6	5.8	3.6	6.1	3.8
2100	7	6.7	4.2	7.1	4.4
2100	8	7.8	4.8	8.2	5.
2100	9	9.	5.6	9.4	5.8
2100	10	10.3	6.4	10.9	6.8
2100	11	12.	7.5	12.6	7.8
2100	12	13.8	8.6	14.6	9.
2100	13	16.3	10.1	17.2	10.7
2100	14	21.8	13.5	23.	14.3
2100	15	29.	18.	30.6	19
	16	41 @ 2210 rpm	26	42 @ 2170 rpm	26
2100	R1	1.8	1.1	1.9	1.2
2100	R2	4.7	2.9	4.9	3.
2300	R3	5.9	3.7	6.2	3.9
1500	R4	10.9	6.8	11.5	7.1
2100	R5	15.25	9.4	16.1	10

OURX935,0000CE2 -19-15DEC09-1/1

Specifications

Ground Speeds—AutoPowr

Travel speed is infinitely variable from 0 to 50 km/h (- (0 to 31.1 mph¹) moving forward or 0 to 20 km/h (0 to 12.4 mph) moving rearward.

IMPORTANT: It is not recommended that tractor be driven greater than 40km/h (25 mph) with dual wheel equipment.

Transmission	Tire Group Size	Minimum engine RPM	Engine Speed in Top gear	Mode	Displayed Speed ± 1 km/h (±.6 mph)
AutoPowr	47	2150	N/A	Manual	42 km/h (26.1 mph)
AutoPowr	47	1511	N/A	Automode 3	42 km/h (26.1 mph)
AutoPowr	48	2150	N/A	Manual	42 km/h (26.1 mph)
AutoPowr	48	1434	N/A	Automode 3	42 km/h (26.1 mph)
Speeds listed below reflect AutoPowr transmission equipped with additional package to reach 50 km/h (31.1 mph)					
AutoPowr	47	2150	N/A	Manual	50 km/h (31.1 mph)
AutoPowr	47	1805	N/A	Automode 3	50 km/h (31.1 mph)
AutoPowr	48	2150	N/A	Manual	50 km/h (31.1 mph)
AutoPowr	48	1713	N/A	Automode 3	50 km/h (31.1 mph)
All values assume base tractor configuration on level ground, with specified tires groups above at manufacturer's recommended tire inflation pressure. All engine rpm values are load dependant					

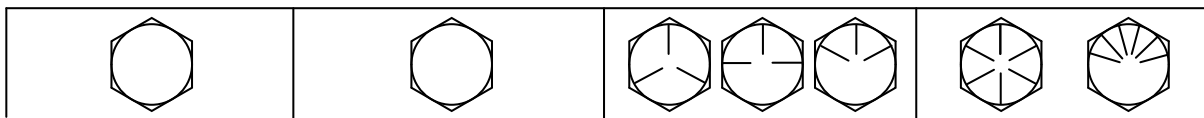
NOTE: Tire sizes used are group nominal. Actual tires sizes can vary up to 2%.

¹AutoPowr transmission must be equipped with additional package to reach 50 km/h (31.1 mph)

OURX935,0000CFD -19-15DEC09-1/1

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.

^aGrade 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.

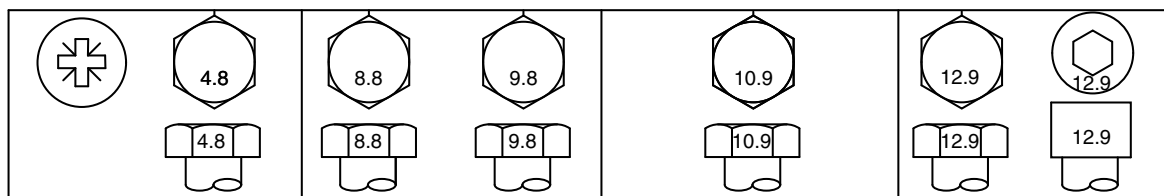
^b"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

^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

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

Identify Zinc-Flake Coated Fasteners

Standard cap screws (A) are a reflective silver color.

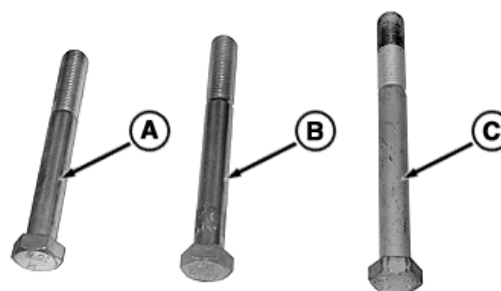
Zinc plated cap screws (B) are a reflective gold color.

Zinc-Flake Coated cap screws (C) are a dull silver color.

NOTE: Zinc-Flake Coated fasteners are tightened to lubricated specifications, unless otherwise noted. (See Torque Value Charts in this group.)

A—Standard Cap Screws
B—Zinc-plated Cap Screw

C—Zinc-Flake Cap Screw (20 mm and larger)



RXA0073812 —UN—03MAR04

OURX935.00005CE -19-13NOV08-1/1

EC Declaration of Conformity

Deere & Company
Moline, Illinois U.S.A.

The person named below declares that

Machine type: Tractor

Model: 8225R, 8245R, 8270R, 8295R, 8320R, and 8345R

fulfills all relevant provisions and essential requirements of the following directives:

DIRECTIVE	NUMBER	CERTIFICATION METHOD
Electromagnetic Compatibility Directive	2004/108/EC	Self-certification
Machinery Directive	2006/42/EC	Self-certification, per EU Commission Working Document ENTR-80, 6 Jan 2008

Name and address of the person in the community authorized to compile the technical construction file:

Henning Oppermann
Deere & Company European Office
John Deere Strasse 70
Mannheim, Germany D-68163
EUConformity@JohnDeere.com

Place of declaration:

Waterloo, Iowa U.S.A.

Name: James W. Wienkes

Date of declaration:

1 July 2009

Title: Manager, Worldwide Large Tractor Engineering, Standards, and Hydraulic Engineering PEC, Waterloo, IA.

Manufacturing unit:

John Deere Waterloo Works



DXCE01—UN—28APR09

OURX935,000018F -19-01DEC10-1/1

Identification Numbers

Identification Plates

Each tractor has the identification plates shown on these pages. The letters and numbers stamped on the plates identify a component or assembly. ALL these characters are needed when ordering parts or identifying a tractor or component for any John Deere product support program.

Also, they are needed for law enforcement to trace your tractor if it is ever stolen. ACCURATELY record these characters in the spaces provided in each of the following photographs. Additionally in a separate and secure location, maintain an up-to-date inventory of all product and component serial numbers.

OURX935,0000733 -19-12APR05-1/1

Record Product Identification Number

Identification data plate (A) is along right-hand tractor frame.

Product Identification Number

* _____ *

PRODUCT IDENTIFICATION NUMBER (PIN): consist of 17 positions without spaces, dashes or other interruptions as follows:

Positions 1-3: World Manufacturer Code (WMC) (e.g. 1RW.

Positions 4-7: is the numeric portion of the tractor model number.

Position 8: Model Identifier suffix (Additional machine information).

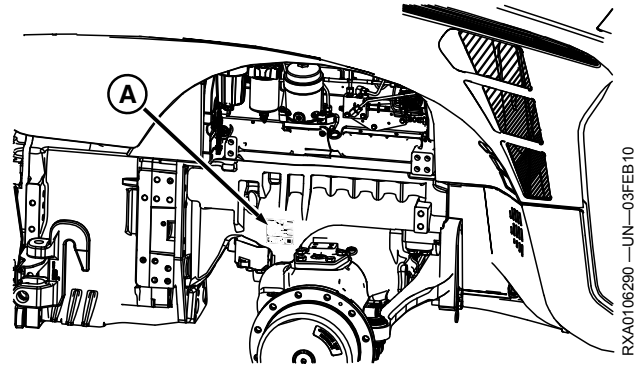
Position 9: is a check letter calculated based on the values and positions of the other sixteen characters.

Position 10: Calendar Year of Manufacture may be a letter or a number which reflects the calendar year (not model year) of manufacture. The value of this character is specified in Table below.

Characters Used To Designate Year Of Manufacture Or Model Year			
Year	Code	Year	Code
2010	A	2012	C
2011	B	2013	D

Position 11: Transmission Option Code indicated in the table.

IVT is a trademark of Deere & Company
AUTOPOWR is a trademark of Deere & Company



A—Identification Data Plate

Configuration and Transmission Option Codes Used in Position 11

D	IVT™/AUTOPOWR™
P	POWERSHIFT

Positions 12: Additional Manufacturing or Product Information provide additional information about the product and when it was built. If the tractor is a track tractor, the character in position 12 will be a "9". Otherwise the character in position 12 will be a numerical zero, "0".

Positions 13-17: Sequential Serial Number will be a serialized number uniquely identifying individual tractors bearing the same model designation.

Additionally: An asterisk (*) shall immediately precede the first character and immediately follow the last character of the PIN to discourage tampering or altering of the PIN.

OURX935,000018D -19-01DEC10-1/1

Record Engine Serial Number

Identification plate location (A) is on left side of engine near starter.

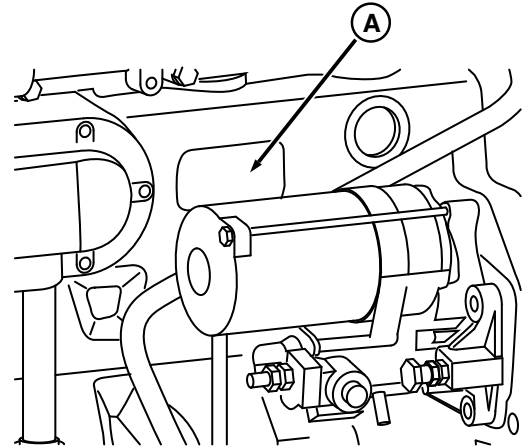
Serial Number

* _____ *

Engine emission tier level is identified by seventh character of the engine the engine serial number.

Emission Tier Level	Seventh Character of Engine Serial Number
U.S. EPA Tier 3 and EU Stage III A	L
U.S. EPA Tier II and EU Stage II	G

A—Engine Serial Number Plate B—Engine Serial Number Plate Location



RXA0082152 —UN—11JUL05

RXA0112371 —UN—29NOV10

OURX935,000018E -19-01DEC10-1/1

Record Cab Serial Number

Identification plate is located under floor mat in front of cab door.

Serial Number

* _____ *



RXA009068 —UN—15SEP08

OURX935,0000812 -19-29DEC08-1/1

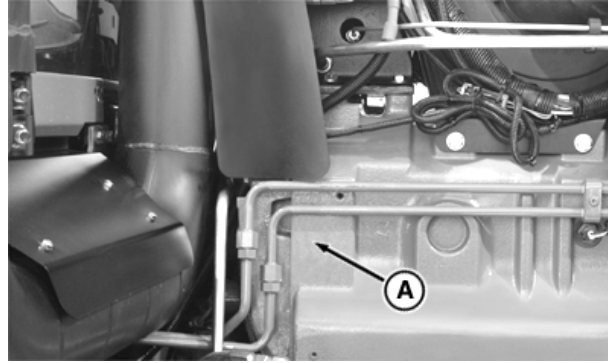
Record PST Transmission Serial Number

Identification number (A) is located on right rear side of transmission below air conditioner compressor.

Serial Number

* _____ *

A—Identification Number



RXA0071134 —UN—01OCT03

Record Transmission Serial Number

OURX935,00004ED -19-14JUN05-1/1

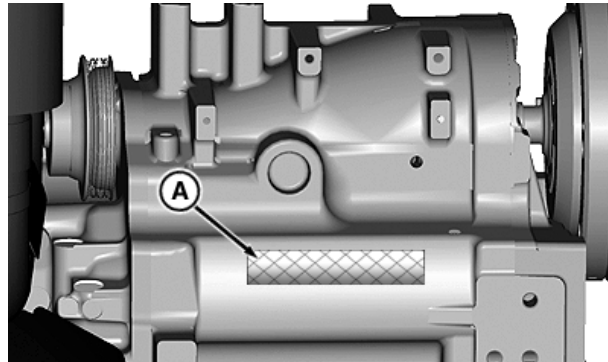
RecordAutoPowr™ Transmission Serial Number

Identification number (A) is located on the transmission right side approximately 15.2 cm (6 in.) below air cleaner mounting bracket.

Serial Number

* _____ *

A—Identification Number



RXA0079746 —UN—10AUG05

Record Transmission Serial Number

AutoPowr is a trademark of Deere & Company

OURX935,000094D -19-12APR09-1/1

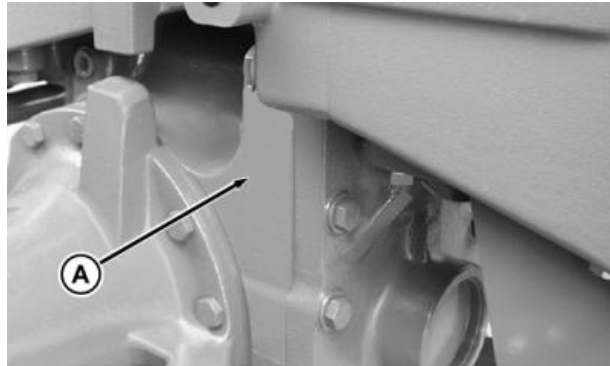
Record 1300 MFWD Axle Serial Number

Identification number (A) is located on right side of the 1300 MFWD axle housing.

Serial Number

* _____ *

A—Identification Number



RXA0071136 —UN—01OCT03

Record MFWD Serial Number

OURX935,0000518 -19-09AUG06-1/1

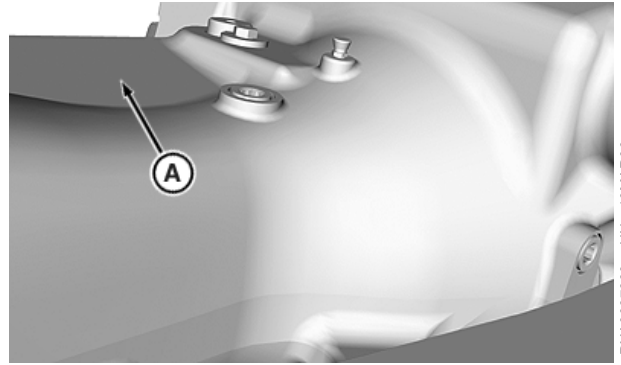
Record 1500 MFWD Axle Serial Number

Identification number (A) is stamped on right-side of the 1500 MFWD axle housing.

Serial Number

* _____ *

A—Identification Number



RXA0087889 —UN—16MAR06

Record MFWD Serial Number

OURX935,0000519 -19-27JUL06-1/1

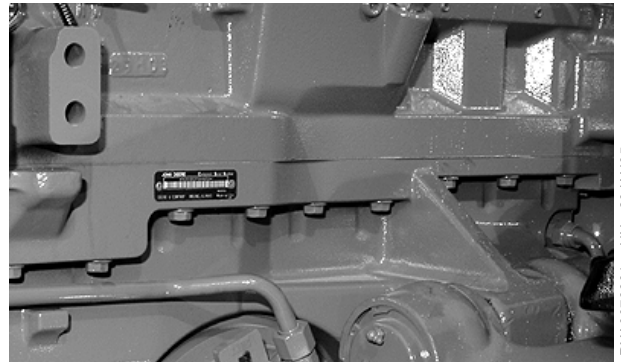
Record Independent Link Suspension Axle Serial Number

Identification number (A) is located on right side of the tractor.

Serial Number

* _____ *

A—Identification Number



RXA0078601 —UN—20JAN05

Record Independent Link Suspension Serial Number

OURX935,0000596 -19-14JUN05-1/1

Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
 - Mark your machine with your own numbering system
 - Take color photographs from several angles of each machine

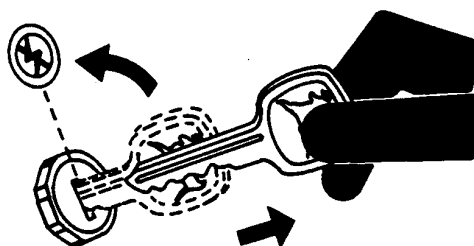


TS1680 —UN—09DEC03

DX,SECURE1 -19-18NOV03-1/1

Keep Machines Secure

1. Install vandal-proof devices.
2. When machine is in storage:
 - Lower equipment to the ground
 - Set wheels to widest position to make loading more difficult
 - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230 —UN—24MAY89

DX,SECURE2 -19-18NOV03-1/1

Lubrication and Maintenance Records

250 Hour Service Records

- Change engine oil and filter

NOTE: The initial break-in service interval of a new or rebuilt wet sleeve engine with Break-In Plus must go at least 100 hours to assure the surface mating of the rings and liners has had an opportunity to occur. The 100 hour minimum applies to all new or rebuilt engines. The maximum service interval is the same as the service interval recommendations listed in Engine Oil and Filter Service Intervals for your engine. To confirm which engine your tractor is equipped with, see Section 145 Record Engine Serial Number in this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in section 90 of this Operator's Manual.

For subsequent oil changes, see Engine Oil and Filter Service Intervals for your engine located in section 90 of this Operator's Manual.

- Check NEUTRAL start system
- Check transmission PARK position
- Check wheel weight bolts and wheel bolts
- Lubricate MFWD or Independent Link Suspension front axle components and U-joints
- Lubricate Independent Link Suspension external fittings
- Check MFWD differential case oil level
- Check manual brakes
- Checking Piton, Ball and Tow Hook Hitches
- Lubricate front hitch components
- Drain fuel tank and sump
- Checking Dual Beam Radar
- Check MFWD and/or Independent Link Suspension wheel hub oil level

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

OURX935,000018B -19-01DEC10-1/1

500 Hour Service Records

- Replace BOTH fuel filters¹

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

¹Or annually whichever comes first.

OURX935,00008D9 -19-05MAR09-1/1

750 Hour Service Records

- Clean MFWD axle vent filter
- Clean fuel tank vent filter

- Check air intake system
- Test coolant condition with test strips and add extender if needed

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

OURX935,00008DA -19-05MAR09-1/1

Annual Service Records

- Replace engine air filters
- Replace cab air and recirculation filters
- Service battery terminals

- Check auxiliary belt
- Inspect seat belts
- Check Independent Link Suspension upper and lower rod and head end accumulator charge pressure

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

OURX935,00008DB -19-05MAR09-1/1

1500 Hour Service Records

- Drain clean oil reservoir
- Change transmission/hydraulic oil and Filter Screen
- Changing transmission filter screen (AutoPowr equipped tractors only)
- Replacing transmission/hydraulic filters
- Clean hydraulic oil suction screen

- Change MFWD differential case oil
- Lubricate Independent Link Suspension internal ball joints
- Change MFWD or Independent Link Suspension hub oil
- Lubricate draft link support shaft bushing

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

OURX935,0000A39 -19-10AUG09-1/1

2000 Hour Service Records

- Adjust engine valve clearance

- Drain, flush and refill cooling system

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

OURX935,00008DD -19-05MAR09-1/1

4500 Hour Service Records

- Replace engine crankshaft damper

Hours					Hours				
Date					Date				
Hours					Hours				
Date					Date				

OURX935,00008DE -19-05MAR09-1/1

Glossary

Glossary of Terms

Alternating Current	AC	Electrical current that reverses its direction at regularly recurring intervals
Air Conditioning	A/C	System used for conditioning the air in the cab
Accessory	ACC	Secondary electrical system
Air Quality System	AQS	System used to control conditioned air in the cab
Armrest Control Unit	ACU	Armrest control used to control tractor functions
Cold Cranking Amperes	CCA	Refers to a battery's capability to perform during cold weather operation
Circulator Motor		Symbols for circulator motor speeds
	O	Medium Speed
	++	Fastest Speed
Central Control Unit	CCU	Computerized system for tractor monitoring
Component Technical Manual	CTM	Technical manual developed for the servicing of major components
Direct Current	DC	Electrical current flowing in one direction only
Engine Control Unit	ECU	Computerized system used to govern engine speed
Electro-Hydraulic	EH	Refers to a hydraulic valve function that is controlled electrically
Electro-Hydraulic Depth Control	EHDC	Abbreviation
Electro-Hydraulic Selective Control Valve	EH SCV	Selective control valve operated with electrical solenoids
Gallons Per Minute	gpm	Amount of fluid over a period of one minute
High Intensity Discharge	HID	Type of Xenon working light used for front lighting
Hitch Control Unit	HCU	Computerized system used to control hitch functions
Hitch Slip Command	HSC	Computerized system used to supplement hitch draft control
Instrument Control Unit	ICU	Computerized system controlling tractor warning functions
Ignition	IGN	Control for starting and stopping the tractor
Independent Link Suspension	ILS	Front axle suspension
Implement Management System	IMS	Computerized system used to perform multi-functional tractor tasks
International Standards Organization	ISO	Standards organization
Mechanical Front Wheel Drive	MFWD	A powered front axle which is driven mechanically from the transmission
Number	No.	Abbreviation
Powershift Control Unit	PCU	Computerized system used to control transmission shift functions
Powershift Transmission	PST	Abbreviation
Power Take-Off	PTO	Abbreviation
Pressure Control Valve	PCV	Valve used to control pressure within a system
Product Identification Number	PIN	Serial number relating to tractor identification
Revolutions Per Minute	rpm	Abbreviation
Society of Automotive Engineers	SAE	Standards Organization
Selective Control Valve	SCV	Device used to control remote hydraulic functions
Selective Control Unit	SCU	Computerized system used to control selective control valve functions for selective control valves 1, 2, and 3
Selective Control Option	SCo	Controller for selective control valves 4 and 5
Slow Moving Vehicle	SMV	Warning sign on the rear of the tractor
Set-Up Panel	SUP	Operator control panel used to set selective control valve function

RX15494,0000146 -19-22MAR04-1/1

Index

	Page		Page
A		B	
Abbreviations.....	155-1	Axle, Independent Link Suspension	
AC Compressor Belt		Lubricating external fittings	102-6
Inspecting.....	105-7	Lubricating internal ball joints.....	106-9
Replacing.....	110-4	Axle, MFWD	
Active seat.....	25-2	Lubricating	102-4
ACU - Armrest Control Unit		Lubricating U-Joints	102-5
Diagnostic Trouble Codes.....	130-2	B	
Adjusting		Back Flushing	
Engine Valve Clearance.....	107-1	Optional fuel water separator (if equipped).....	110-10
Aiming Head lights.....	120-9	Ball-type tow hitch	
Air		Wear, checking for signs of.....	102-11
Intake	104-2	Ballast	
Trailer brakes	40-10, 40-11	Determining ballasted tractor weight.....	75-8
Air Brake Belt		General weight split guidelines	75-2
Replacing.....	110-4	Information and guidelines	75-1
Air conditioner condensor		Maximum load per wheel	75-11
Cleaning.....	110-2	PTO horsepower.....	75-2
Air Conditioning		Suggestions for different types of	
Checking.....	110-3	implements used with MFWD tractors	75-7
Air conditioning, operating		Types	75-3
Standard	25-5	Battery	
Air pressure		Charging	35-4
Group 42.....	80-5	Service.....	105-6
Group 43.....	80-6	Battery Handling, Safety	
Group 44.....	80-7	Safety, Battery Handling	05-12
Group 47.....	81-2	Beacon light.....	20-7
Group 47--continued.....	81-3	Belts.....	110-4
Group 48.....	81-4	Bluetooth	
Air suspension seat.....	25-1	Premium Radio	25-19
Alternator Belt		Bolt and screw torque values	
Replacing.....	110-4	Metric	140-7
Annual		Unified inch	140-6
Batteries.....	105-6	Brake Control Unit	
Cleaning, inspecting and replacing		Diagnostic Codes.....	130-5
primary engine air filter.....	105-1	Brake light bulb	
Inspecting auxiliary drive belt.....	105-7	Replacing.....	120-10
Inspecting cab air filters	105-2	Brake pedals, individual	
Inspecting recirculation filters.....	105-2	Using.....	42-10
Inspecting seat belts	105-7	Brakes	
Area Counter		Checking.....	102-8
Setting.....	16-17	Trailer	
ASU - Active Seat Control Unit		Air.....	40-10, 40-11
Diagnostic Trouble Codes.....	130-4	Brakes, using	
ATC Diagnostic Trouble Codes	130-4	AutoPowr	40-8
Automatic PowerShift feature	41-5	BRC Diagnostic Trouble Codes.....	130-5
Automatic Temperature Control (ATC)		Break-in checks	30-1
Operating	25-6	Break-in Plus engine oil.....	90-3
AutoTrac Assisted Steering System	25-28, 40-12	Business Band and Antenna	
Auxiliary Controls.....	16-21	Installing.....	25-22
Auxiliary drive belt	110-4	C	
Auxiliary outlet	25-23	CAB	
Axle		Diagnostic Codes.....	130-4
Lubricating			
Independent Link Suspension			
U-joints.....	102-7		
MFWD Oil Level.....	102-7		

Continued on next page

	Page		Page
Cab Air Filters		Position, adjusting.....	25-4
Inspecting or replacing.....	105-2	CommandCenter	
Cab Control Unit		ATC.....	25-6
Diagnostic Codes.....	130-7	Center Region.....	16-3, 16-4
CAB Diagnostic Trouble Codes.....	130-7	Cold start up.....	16-1
Cab heat, operating		Left Region.....	16-3, 16-4
Standard.....	25-5	Light indicators.....	20-1
Cab Roof Lights (Front, Side And Rear) Cab		Page Lay out.....	16-3, 16-4
Roof Lights		Right Region.....	16-3, 16-4
Replacing.....	120-9	Warm start up.....	16-1
Cab Sync Mode		CommandCenter Lighting	
Back Lighting.....	16-15	Dim Mode.....	16-15
Cancel Button.....	16-2	CommandCenter Menu.....	16-1
Capacities.....	140-1	Display	
Changing		Setting Language.....	16-11
Engine oil and filter.....	102-1	Settings	
MFWD differential case oil.....	106-8	Highlight Color.....	16-8
MFWD wheel hub oil.....	106-11	Regional.....	16-9, 16-10
Checking		Time Zone Page.....	16-11
Air conditioning system.....	110-3	Compact Disc (CD)	
Coolant level (coolant de-aeration tank.....)	101-1	Premium radio.....	25-16
Coolant level (coolant recovery tank).....	100-3	Compartment, storage.....	25-31
Engine oil and filter.....	100-1	Configuring Tractor	
Manual brakes.....	102-8	GPS.....	25-25
MFWD differential case oil level.....	102-7	Radar.....	25-25
MFWD or Independent Link Suspension		Connections	
wheel hub oil level.....	102-14	GreenStar.....	25-24, 25-27
Neutral start system--PST transmission.....	102-2	ISO 11783.....	25-24
Neutral start system—AutoPowr transmission.....	102-2	ISO 11786.....	25-24
Tires.....	100-1	Control console	
Transmission PARK position.....	102-3	IVT (CommandArm).....	15-5
Transmission/hydraulic oil level.....	100-2	Powershift.....	15-5
Weep hole.....	110-9	Controls	
Wheel and weight bolts.....	102-3	Console, front.....	15-1
Checking Dual Beam Radar Sensor		Foot operated speed control.....	15-7
250 Service.....	102-13	Controls identification	
Cleaning		IVT/AutoPowr.....	42-1
Inspecting, and replacing primary engine		Coolant	
air filter.....	105-1	100 hour (initial).....	101-1
MFWD axle vent filter.....	104-1	Additional Information.....	90-11
Optional fuel water separator (if equipped).....	110-13	Diesel engine.....	90-9
Radiator, coolers and air conditioning condensor ..	110-2	John Deere COOL-GARD II COOLANT	
Clevis assembly.....	70-3	EXTENDER.....	90-10
ClimaTrak		Level, checking.....	100-3
Operating.....	25-6	Testing.....	90-12, 104-3
Cold weather starting.....	35-1	Warm temperature climates.....	90-10
Engine		Coolant temperature gauge.....	15-4
Without starting aid.....	35-2	Cooler	
Engine Coolant Heater.....	35-3	Cleaning.....	110-2
Command Center Menu		Cooling system	
Display.....	16-18	Draining, flushing and refilling.....	107-1
Diagnostics.....	16-23	Corner Post Display.....	15-1
Readings.....	16-12	Corner post display (Primary Display Unit)	
Home		Coolant temperature gauge.....	15-4
Settings Service Interval.....	16-16	Engine oil pressure gauge.....	15-4
CommandARM		Fuel gauge.....	15-4
Hitch		Courtesy Light	
Drop Rate Settings.....	50-7	Replacing bulb.....	120-11
Upper Limit Settings.....	50-5	Cruise, field.....	40-6

Continued on next page

	Page		Page
D		Tread setting for 320 tires on duals with 3105 mm (118.5 in.) axle	81-9
Defrost, operating		Tread setting for 480 tires on duals with 3105 mm (118.5 in.) axle	81-9
Standard	25-5	Tread setting for 520 tires on duals with 3105 mm (118.5 in.) axle	81-9
Deluxe Radio		Tread setting for 620/70R42 tires on duals with 3105 mm (118.5 in.) axle	81-10
Operating	25-9	Tread setting for 620/70R46 tires on duals with 3105 mm (118.5 in.) axle	81-10
Setting clock and alarm.....	25-10	Tread setting for 650/65R42 tires on duals with 3105 mm (118.5 in.) axle	81-10
World tuner	25-11	Tread setting for 650/85R38 tires on duals with 3105 mm (118.5 in.) axle	81-10
Diagnostic Addresses		Tread setting for 710/70R38 tires on duals with 3105 mm (118.5 in.) axle	81-9, 81-12
Message Center.....	16-13	Tread setting for 710/70R42 tires on duals with 3105 mm (118.5 in.) axle	81-12
Diagnostic Trouble Codes		Tread setting for 800 tires on duals with 3105 mm (118.5 in.) axle	81-9, 81-12
ACU - Armrest Control Unit.....	130-2		
ASU - Active Seat Control Unit	130-4	E	
ATC Automatic Temperature Control	130-4	Electrical outlet	25-23
BRC Brake Control Unit.....	130-5	Electrical rear view mirror	
CAB Cab Control Unit.....	130-7	Rear view mirror	
Diesel fuel.....	90-1, 90-4	Mirror remote rear view	25-29, 25-30
Differential lock	40-9	Electrical system	
Digital indicators		Introduction	120-1
Tachometer, ground speed, transmission	15-4	Emergency exit.....	40-3
Dim Mode		Engine	
CommandCenter.....	16-15	Air filters.....	105-1
Display		Cold weather starting	
Clock Format.....	16-9, 16-10	Without starting aid.....	35-2
Control		Coolant Heater	35-3
Cancel Button.....	16-2	Crankshaft damper	109-1
Enter Button	16-2	Emissions certification	35-2
Menu Button.....	16-2	Oil.....	102-1
Shortcut Buttons.....	16-2	Oil 100 hour initial	101-1
Thumb Wheel.....	16-2	Operating	35-1, 35-2
Country	16-9, 16-10	Stopping.....	35-2
Date Format	16-9, 16-10	Engine Coolant Heater	35-3
Mounting	16-2	Engine oil	
Numeric Format	16-9, 16-10	Break-In Plus	90-3
Units of Measure.....	16-9, 16-10	Engine oil and filter service intervals	90-7, 90-8
Display, corner post	15-1	Engine oil pressure gauge.....	15-4
Distance Counter		Engine RPM Droop	
Setting.....	16-17	IVT	42-16
Dome light bulb		Enter Button.....	16-2
Replacing	120-10	Extrernity warning light bulb	
Draining		Replacing	120-13
Air brake tank.....	100-2		
Fuel tank sump	102-13	F	
Water separator	100-4	Fan Belt	
Drawbar		Removing and Installing.....	110-6
Load limitations	70-1	Fender settings	
Drop Down Boxes.....	16-6	1300 MFWD.....	80-15, 80-17
Dual Front Tire, Fender and Steering Stop		1500 MFWD	80-18
Settings			
1500 MFWD			
Bolt On Duals	80-21		
Clamp On Duals	80-22		
Independent Link Suspension			
Bolt On Duals	80-20		
Clamp On Duals	80-22		
Duals			
Hub extensions	81-11		
Rear wheel tread setting	81-11		

Continued on next page

	Page		Page
1500 MFWD and Independent Link Suspension ..	80-15	Hardware torque values	
Independent Link Suspension.....	80-16, 80-19	Metric	140-7
MFWD	80-16	Unified inch	140-6
Field Cruise	40-6	Head lights	
Fieldlights, programming	20-3	Aiming	120-9
Filters		Heated leather seat	
Cab air		Heated seat switch.....	25-4
Inspecting or replacing	105-2	HID Bulbs	
Engine air	105-1	Replacing	120-7
Engine oil	101-1, 102-1	HID light bulbs	
Recirculation (Cab)		Handling	120-6
Inspecting or replacing	105-2	High/low beam, operating	20-5
Flood light bulb, replacing		Highlight Color	
Front grille	120-6	Selecting	16-8
Floodlights, programming	20-3	Hitch	
Foot Throttle	15-7	Attaching implement	50-13
Front grill flood light bulb, replacing	120-6	Center link.....	50-16
Front grille lights		Controls.....	50-9
Adjusting	120-8	Controls and switches	
Front Hitch		Set-up and use	50-1
250 hour service	102-13	External raise and lower switches, using	50-9
Front hitch, using	50-23	Lift links	50-16
Front Tires		Manual lowering.....	50-10
1300 MFWD Settings.....	80-17	Pickup	50-21
1500 MFWD Settings.....	80-18	Raise/lower switches	
Independent Link Suspension		Rear.....	15-8
Settings	80-16, 80-19	Wagon	50-20
MFWD Settings.....	80-16	Hitch Command Lever	
Fuel		Using	50-2
Diesel	90-1, 90-4	Hitch Control	
Lubricity.....	90-2	Quick Reference	50-1
Replace filters	103-1	Hitch conversion	50-17
System	35-2	Hitch, front, using.....	50-23
Tank	90-2	Hitch, Trailer	
Tank sump.....	102-13	Manually Operated	
Fuel level gauge	15-4	Wear, checking for signs of	102-9
Fuses		Remote controlled	
Location	120-1	Wear, checking for signs of	102-10
		Tow Hitch (ball-type)	
		Wear, checking for signs of	102-11
		Tow Hitch (piton fixed)	
		Wear, checking for signs of	102-11
		Tow Hitch (tow-hook)	
		Wear, checking for signs of	102-12
		Home Page	
		Configuring.....	16-14
		Hood	95-1
		Hook (pick-up hitch)	
		Wear, checking for signs of	102-12
		Horn, operating	25-7
		Hub extensions	
		Rear duals.....	81-11
		Hydraulic	
		Hoses.....	60-4
		Warm-up	40-4
		Hydraulic system	
		TouchSet controls	
		Operator presence sensor.....	60-10
		SCV control levers, using	60-7

Continued on next page

	Page		Page
SCV Lever positions		Downhill operation in slippery	
Extend.....	60-8	conditions	42-12, 42-13
Extend detent.....	60-8	Options, setting	42-14
Float.....	60-9	Putting tractor in motion	42-8
Neutral.....	60-8	Reverse-Forward set speed ratio, adjusting	42-7
Retract.....	60-9	Selector examples	42-12
Retract detent	60-9	Set speeds, adjusting (tractor stationary)	42-4
Total flow demand, determining.....	60-6	Set speeds, guidelines and examples	42-5
I			
Implement Width		IVT Transmission	
Setting.....	16-17	Engine RPM Droop	42-16
Independent Link Suspension	85-4	IVT/AutoPowr	
Adjust toe-in	80-10	Controls identification.....	42-1
External axle fittings.....	102-6	Creeper mode, using	42-9
Fender settings	80-15, 80-16, 80-19	Digital display	42-9
Front tire settings	80-16, 80-19	Operating	42-3
Internal ball joints.....	106-9	Stopping tractor.....	42-11
Operating tractor	40-5	IVT/AUTOPOWR	
Steering stop.....	80-16, 80-19	Enabling mode, using	42-17
Steering stop settings	80-12	L	
Tightening front wheel bolts	80-8	Left-hand reverser	
Tire combinations.....	80-2	IVT	42-2
Turning radius	80-16, 80-19	Lights	
Upper and lower rod and head end		Adjusting front grille lights	120-8
accumulator charge pressure.....	105-7	Aiming head lights.....	120-9
Information indicators	15-2	Identification.....	20-1
Input Box	16-6	Replacing brake light bulb.....	120-10
Input Fields	16-6	Replacing cab roof front, side and rear	
Bar Graph	16-6	light bulbs	120-9
Check Box.....	16-6	Replacing dome light bulb.....	120-10
Drop Down Box.....	16-6	Replacing extremity warning light bulb	120-13
Input Box.....	16-6	Replacing front grille flood light bulbs	
Softkeys	16-6	(stdandard lighting.....)	120-6
Inspecting		Replacing HID light bulbs.....	120-7
Auxiliary drive belt.....	105-7	Liquid ballast.....	75-14
Or replacing cab air filters	105-2	Load center fuses	120-1
Or replacing recirculation filters	105-2	Lubricant	
Seat Belts.....	105-7	Mixing.....	90-13
Instructional seat	25-3	Storage	90-13
Intelligent Power Management.....	40-7	Lubricating	
Intelligent Total Equipment Control (ITEC)		Draft link support shaft bushing	106-11
Clearing sequence	45-11	Front hitch components	102-13
Description and display	45-1	Hitch components	100-3
Functions		Independent Link Suspension axle U-joints.....	102-7
IVT Transmission	45-13	Independent Link Suspension	
Operating	45-9	axle--external fittings.....	102-6
Introduction to		Independent Link Suspension axle--tie	
Electrical system	120-1	rod internal ball joints	106-9
iPOD		MFWD axle	102-4
Premium radio.....	25-17	MFWD U-joints.....	102-5
ISO		Lubrication	
ISO 11783.....	16-18	Checking engine oil and filter.....	100-1
ISOBUS	16-18	Lubricity of diesel fuel	90-2
IVT		M	
Adjusting set speeds to match varying		Maintaining	
load conditions	42-6	Optional fuel water separator (if equipped).....	110-11

Continued on next page

	Page		Page
Maintenance intervals.....	95-2		
Maintenance records.....	150-1		
Map Light		P	
Replacing bulb.....	120-12	Page Layout.....	16-3, 16-4
Menu.....	16-3, 16-4	Paint care.....	135-2
Message Center.....	16-3, 16-4	Park brake (AUTOPOWER), releasing.....	85-6
Bus Information.....	16-13	Park brake (Powershift transmission), releasing.....	85-5
Control Unit Information.....	16-13	Pick-up hitch	
Diagnostic Addresses.....	16-13	Check hook for wear.....	102-12
Messages.....	16-13	Pickup hitch.....	50-21
Trouble Codes.....	16-13	Power hop.....	75-12
Metric bolt and screw torque values.....	140-7	Power Strip (Auxiliary).....	25-23
MFWD.....	40-9	Premium Radio	
1300 front tire settings.....	80-17	Auxiliary Mode.....	25-12
Fender settings.....	80-16	Bluetooth.....	25-19
Front tire settings.....	80-16	Compact Disc.....	25-16
Lubricating axle.....	102-4	Compact disc player.....	25-12
Steering stop.....	80-16	Operating.....	25-12
Steering stops settings.....	80-11	Operating through CommandArm.....	25-21
Tightening front wheel bolts.....	80-8	Setting Alarm.....	25-15
Tire combinations.....	80-2	Setting clock.....	25-14
Toe-in check.....	80-9	USB Mode.....	25-20
Turning radius.....	80-16	Using iPod.....	25-17
MFWD (1300 Axle)		World Tuner.....	25-18
Adjusting toe-in.....	80-9	Product identification.....	145-1
MFWD (1500 Axle)		PST Transmission	
Adjusting toe-in.....	80-10	Setting forward and reverse startup gears.....	41-4
MFWD and Independent Link Suspension		PTO	
Front wheel bolts tightening.....	80-8	Changing Stub Shaft.....	70-8
MFWD Axle		Operating.....	70-6
Lubricating U-Joints.....	102-5		
Mired machine, freeing.....	85-8	Q	
Mirror		Quick coupler.....	50-14
Side (Rear View).....	25-29, 25-30		
Mixing lubricants.....	90-13	R	
Monitor Bracket Mounts.....	25-29	Radar	
		Configuring Tractor.....	25-25
N		Radiator	
Navigating System.....	16-7	Checking.....	100-3
Navigational Tools.....	16-2	Checking coolant level (coolant	
Neutral start system.....	102-2	de-aeration tank.....	101-1
		Cleaning.....	110-2
O		Coolant Testing.....	104-3
Oil		Radio, Deluxe	
Filter.....	102-1	Changing world tuner.....	25-11
Gear case.....	90-14	Clock, setting.....	25-10
Transmission.....	90-14	Operating deluxe radio.....	25-9
Operating Premium Radio with CD Player.....	25-12	Radio, Premium	
Operator presence sensor.....	60-10	Bluetooth.....	25-19
Optional fuel water separator		Operating.....	25-12
Back flushing.....	110-10	Operating Compact Disc.....	25-15
Cleaning.....	110-13	Operating through CommandArm.....	25-21
Maintaining.....	110-11	Setting Alarm.....	25-15
		Setting Clock.....	25-14
		Troubleshooting.....	125-15
		USB Mode.....	25-20
		Using iPod.....	25-17

Continued on next page

	Page		Page
World tuner	25-18	Service	
Rear Hitch		10 hour or daily	
Raise/Lower Switches.....	15-8	Checking coolant level (coolant recovery tank)...	100-3
Rear wheel	81-5	Checking tires.....	100-1
Recirculation Air Filters		Checking transmission/hydraulic oil level.....	100-2
Inspecting or replacing.....	105-2	Draining air brake tank	100-2
Recommended tire pressures		Draining water separator	100-4
Group 42	80-5	Lubricating hitch components.....	100-3
Group 43	80-6	100 hour (initial)	
Group 44	80-7	Changing engine oil and filter.....	101-1, 102-1
Group 47	81-2	Checking coolant level (coolant	
Group 47--continued	81-3	de-aeration tank.....	101-1
Group 48	81-4	1500 hour	
Remove and install		Changing MFWD differential case oil	106-8
Fan belt	110-6	Changing MFWD wheel hub oil.....	106-11
Replacing		Lubricating draft link support shaft bushing.....	106-11
Brake light bulb	120-10	Lubricating Independent Link	
Courtesy light bulb	120-11	Suspension axle--tie rod internal	
Dome light bulb	120-10	ball joints.....	106-9
Engine crankshaft damper.....	109-1	1500 hours	
Extremity Warning light bulb	120-13	Cleaning hydraulic oil suction screen	106-5
Front grille flood light bulbs	120-6	Draining clean oil reservoir.....	106-1, 106-5
Fuel filter elements.....	103-1	Draining differential	106-1
HID bulbs	120-7	Draining Independent Link Suspension.....	106-5
Map light bulb.....	120-12	Draining IVT™/AutoPowr™ transmission	106-3
Reservoir		Draining PowerShift transmission	106-2
Windshield washer	25-8	250 hour	
Reverser, left-hand		Changing engine oil and filter.....	102-1
IVT	42-2	Checking manual brakes.....	102-8
Right Region Common Softkeys		Checking MFWD differential case oil level	102-7
Advanced Settings (Next)	16-5	Checking MFWD or Independent Link	
Back.....	16-5	Suspension wheel hub oil.....	102-14
Cancel.....	16-5	Checking neutral start system--PST	
Save (Enter).....	16-5	transmission	102-2
		Checking neutral start system—Au-	
S		toPowr Transmission	102-2
Safety		Checking tow--hook wear.....	102-12
Handling Halogen light bulbs	120-5	Checking transmission PARK position	102-3
Handling HID light bulbs	120-6	Checking wear ball type tow hitch	102-11
Safety chain.....	85-3	Checking wear manually operated hitch	102-9
Safety Signs		Checking wear piton fixl type tow hitch	102-11
Warning, electronic auxiliary control		Checking wear remote controlled tow hitch.....	102-10
detected label.....	10-5	Checking wheel and weight bolts	102-3
Warning, electronic implement detected label	10-5	draining fuel tank sump	102-13
SCV		Lubricating front hitch components	102-13
Configuring.....	60-1	Lubricating Indendent Link Suspension	
Feature mode.....	60-1	axle external fittings.....	102-6
Independent mode	60-1	Lubricating Independent Link	
Standard mode	60-1	Suspension axle U-joints	102-7
Seat		Lubricating MFWD axle	102-4
Active	25-2	Lubricating MFWD U-joints	102-5
Air suspension	25-1	4500 hour	
Seat Belts		Replacing engine crankshaft damper.....	109-1
Inspecting.....	105-7	500 hour	
Seat belts, using	40-2	Replacing fuel filter elements	103-1
Sensor		750 hour	
Operator presence	60-10	Cleaning axle vent filter	104-1
Serial numbers	145-1	Cleaning fuel tank vent filter	104-1
		Servicing air intake system.....	104-2

Continued on next page

	Page		Page
testing coolant	104-3	Hitch Load Depth	16-3
Annual		Hitch Lower Limit	16-3
Cleaning, inspecting, and replacing		Hitch Transport Lock	16-3
primary engine air filter	105-1	Hitch Upper Limit	16-3
Inspecting cab air filters	105-2	SCV	16-3
Inspecting recirculation filters	105-2	SCV Lock	16-3
Annually		Transmission	16-3
Auxiliary drive belt	105-7	Shortcut Buttons	16-2
Batteries	105-6	Snap to Connect Fitting (STC)	
Inspecting seat belts	105-7	STC	110-1
Service alarm interval		Softkey	16-3, 16-4
Setting	16-18	Specifications	140-1
Service alert indicator	15-2	Stand Alone Mode	
Service Interval		Back Lighting	16-15
Setting	16-16	StarFire Recievers	
Service intervals	95-2	Installation	25-26
Service records	150-1	Starting engine	35-1
Servicing		Steering stops	
Air intake system	104-2	1300 MFWD	80-17
Batteries	105-6	1500 MFWD	80-18
Servicing and Connecting Snap to Connect		Independent Link Suspension	80-16, 80-19
Fittings	110-1	Independent Link Suspension settings	80-12
Setting		MFWD	80-16
Area Counter	16-17	MFWD settings	80-11
Clock Format	16-9, 16-10	Steering wheel and column, adjusting	25-7
Country	16-9, 16-10	Steps	25-32
Date Format	16-9, 16-10	Stop indicator	15-2
Distance Counter	16-17	Stopping engine	35-2
Implement Width	16-17	Storage compartment	25-31
Language	16-9, 16-10	Storing lubricants	90-13
Numeric Format	16-9, 16-10	Sway blocks	50-11
Units of Measure	16-9, 16-10	Switches	
Setting Alarm		Hitch, raise/lower	
Premium radio	25-15	Rear	15-8
Setting Cab Back Lighting			
Cab Sync Mode	16-15		
CommandCenter Display	16-15		
Stand Alone Mode	16-15		
Setting Cab Lighting			
Display Main Page	16-15		
Setting Back Lighting	16-15		
Setting Clock			
Deluxe Radio	25-10		
Premium radio	25-14		
Setting Country			
CommandCenter Display Page	16-11		
Setting Language			
CommandCenter Display Page	16-11		
Setting Radio Alarm			
Deluxe	25-10		
Setting Service Interval			
CommandCenter	16-16		
Setting Time	16-11		
Setting Time Zone			
CommandCenter Display	16-11		
Seven-terminal outlet	20-8		
Shortcut Button			
Engine	16-3		
Hitch Drop Rate	16-3		

T

Tachometer, digital indicator	15-4
Tank, fuel	90-2
Testing	
Coolant	104-3
Thumb Wheel	16-2
Tire	
Inflation pressures	80-4
Tire combinations	
Independent Link Suspension	80-2
MFWD	80-2
Tire pressure	
Group 42	80-5
Group 43	80-6
Group 44	80-7
Group 47	81-2
Group 47--continued	81-3
Group 48	81-4
Tires	
Checking	100-1
Clamp-on dual, usage	80-22, 81-12
Toe-in	
MFWD Check	80-9

Continued on next page

	Page	Page
Toe-In		
1300 MFWD Axle Adjustment.....	80-9	
Independent Link Suspension.....	80-10	
MFWD 1500 Axle Adjustment.....	80-10	
Torque charts		
Metric.....	140-7	
Unified inch.....	140-6	
Tow hitch (piton fix)		
Wear, checking for signs of.....	102-11	
Towing		
Loads.....	85-2	
Tractor.....	85-4	
Tractor storage.....	135-1	
Trailer brakes		
Air.....	40-10, 40-11	
Trailer hitch.....	50-20	
Manually Operated		
Wear, checking for signs of.....	102-9	
Remote Controlled		
Wear, checking for signs of.....	102-10	
Tow Hitch (ball-type)		
Wear, checking for signs of.....	102-11	
Tow Hitch (piton fixed)		
Wear, checking for signs of.....	102-11	
Tow Hitch (tow-hook)		
Wear, checking for signs of.....	102-12	
Wear, checking for signs of.....	102-10	
Transmission		
IVT		
Adjusting set speeds to match varying		
load conditions.....	42-6	
Downhill operation in slippery		
conditions.....	42-12, 42-13	
Options, setting.....	42-14	
Putting tractor in motion.....	42-8	
Reverse-Forward set speed ratio, adjusting.....	42-7	
Selector examples.....	42-12	
Set speeds, adjusting (tractor stationary).....	42-4	
Set speeds, guidelines and examples.....	42-5	
IVT/AutoPower		
Controls.....	42-1	
Creeper mode, using.....	42-9	
Operating.....	42-3	
Stopping tractor.....	42-11	
IVT/AUTOPOWER		
Enabling mode, using.....	42-17	
Oil and filter.....	100-2	
Operating.....	41-1	
Warm-up.....	40-4	
Transmission oil.....	90-14	
Transmission, digital indicator.....	15-4	
Transporting		
Driving on roads.....	85-1	
Tractor, towing		
Park brake, releasing (AUTOPOWER).....	85-6	
Park brake, releasing (Powershift transmission).....	85-5	
With ballast.....	85-1, 85-2	
Tread setting		
Duals.....	81-11	
Rear wheel.....	81-11	
Tread settings		
320 tires on duals with 3015 mm (118.5 in.		
) axle.....	81-9	
480 tires on duals with 3015 mm (118.5 in.		
) axle.....	81-9	
520 tires on duals with 3015 mm (118.5 in.		
) axle.....	81-9	
620/70R42 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-10	
620/70R46 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-10	
650/65R42 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-10	
650/85R38 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-10	
710/70R38 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-12	
710/70R38 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-9	
710/70R42 tires on duals with 3015 mm		
(118.5 in.) axle.....	81-12	
800 tires on duals with 3015 mm (118.5 in.		
) axle.....	81-9, 81-12	
Rear drive wheel tread settings for single wheels...	81-8	
Trouble Codes		
Message Center.....	16-13	
Troubleshooting		
Depth control.....	125-9	
Electrical.....	125-10	
Engine.....	125-1	
Hitch.....	125-6	
Hydraulics.....	125-5	
Independent Link Suspension.....	125-14	
Operator enclosure.....	125-12	
Premium radio.....	125-15	
Selective control valves.....	125-8	
Tractor operation.....	125-13	
Transmission.....	125-4	
Turn signal, operating.....	20-5	
Turning radius		
1300 MFWD.....	80-17	
1500 MFWD.....	80-18	
Independent Link Suspension.....	80-16, 80-19	
MFWD.....	80-16	
U		
Unified inch bolt and screw torque values.....	140-6	
USB Mode		
Premium radio.....	25-20	
V		
Valve Clearance		
Adjusting Engine.....	107-1	

Continued on next page

Page

W

Wagon hitch.....	50-20
Warnings	
Auxiliary Controls.....	16-21
Display.....	16-2
ISO.....	16-18
Water separator.....	100-4
Weep hole	
Checking.....	110-9
Weights.....	75-13
Wheel	
Adjustment	
10-Bolt wheel.....	81-7
12-Bolt wheel.....	81-7
Hop.....	75-12
Rear.....	81-5
Rear drive wheel tread settings for single wheels...	81-8
Slip.....	75-18
Weight.....	75-14
Wheels	
Eight position wheel settings.....	80-13
Wiper and washer, operating	
Rear window.....	25-8
Windshield.....	25-8
World Tuner	
Premium Radio.....	25-18

Z

Zinc-Flake	
Coated Fasteners.....	140-7

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

DX,IBC,D -19-04JUN90-1/1

