

544K
Loader
(Serial No. - —642664)
Engine 6068HDW74



OPERATOR'S MANUAL
544K Loader (S.N. —642664)
OMT231639 ISSUE F1 (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.

Worldwide Construction
And Forestry Division
PRINTED IN U.S.A.

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Emissions Control Warranty Statement 2019 through 2021

DXLOGOV1 —UN—28APR09



JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emission Control Information" label located on the engine. If the engine is operated in the United States or Canada and the engine label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine complies with US EPA regulations for stationary emergency diesel engines", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the engine label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines" also refer to the "California Emissions Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

Continued on next page

DX,EMISSIONS,CARB -19-26AUG20-3/8

RG29280 —UN—02FEB17

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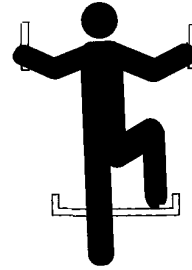
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Safety—Operating Precautions

Use Steps and Handholds Correctly

Prevent falls by facing the machine when you get 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.



TX,STEPS -19-09FEB11-1/1

T133468 —UN—15APR13

Start Only From Operator's Seat

Avoid unexpected machine movement. Start engine only while sitting in operator's seat. Ensure that all controls and working tools are in proper position for a parked machine.

Never attempt to start engine from the ground. Do not attempt to start engine by shorting across the starter solenoid terminals.



TX,SOFOS -19-20JAN11-1/1

T133715 —UN—15APR13

Use and Maintain Seat Belt

Use seat belt when operating machine. Remember to fasten seat belt when loading and unloading from trucks and during other uses.

⚠ CAUTION: Prevent personal injury. Check condition of seat belt and mounting hardware before operating machine. Replace if worn, frayed, or damaged.

Replace seat belt at least every 3 years, regardless of condition.



USE SEAT BELT

TX,SEAT,BELT -19-27JUL20-1/1

TX1165594 —19—23JUL14

⚠ DANGER

Start only from seat in park or neutral.
Starting in gear kills.

T140195

⚠ DANGER

To avoid injury, securely brace lift arm before disassembly of valve or piping.

T140191

⚠ WARNING

AVOID INJURY FROM RELEASE OF HIGH PRESSURE OIL

Always discharge ride-control accumulator before disassembly of hydraulic lines.
See Operator's Manual for instructions.

T140192

⚠ CAUTION

- AVOID DEATH OR SERIOUS INJURY - Read and understand Operator's Manual before operating this machine.
- Operate only from seat.
- Before leaving seat:
 - Lower bucket to ground.
 - Lock transmission selector in neutral.
 - Set park brake.
 - Turn pilot hydraulic switch to locked position.
 - Stop engine (press red STOP button on keypad).
- Do not permit riders.
- Avoid contact with overhead obstacles when operating or hauling machine.

ENGINE START AND STOP PROCEDURE

START AND WARM-UP

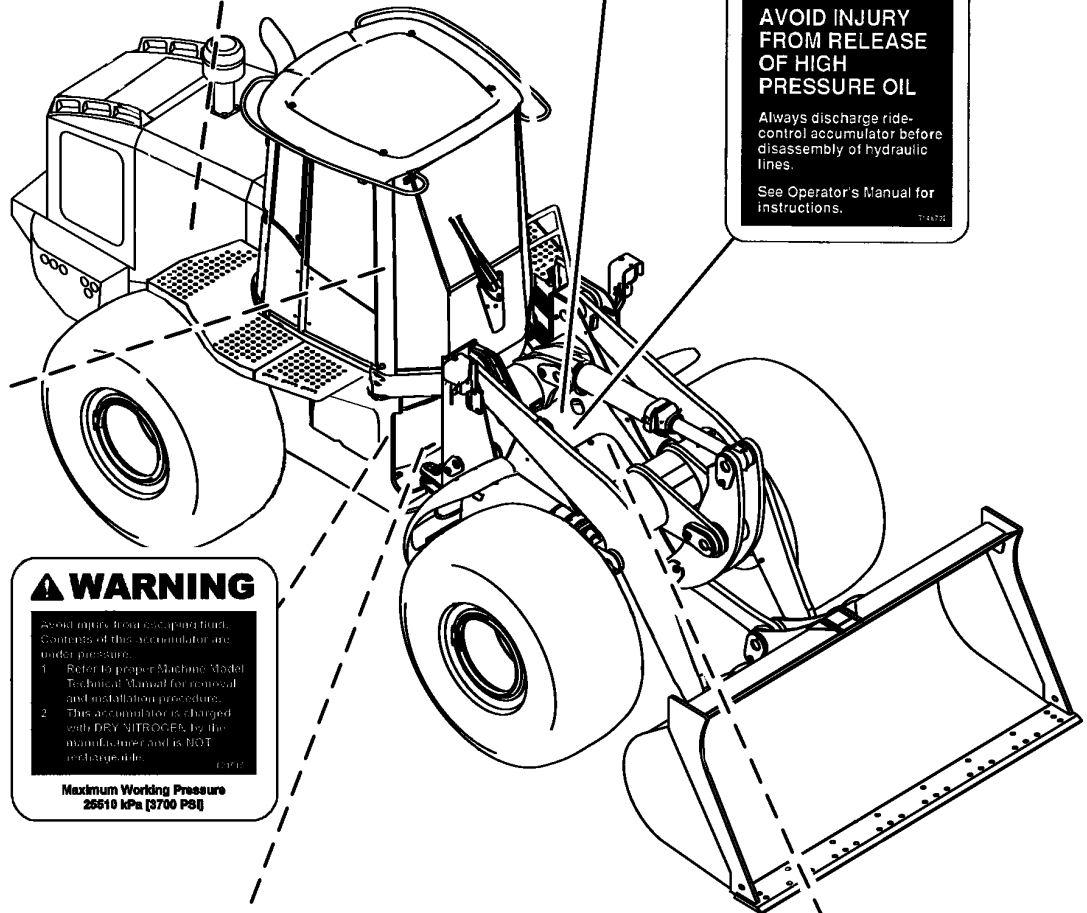
1. Press green START button on keypad once. If security mode is enabled, enter security code and press \leftarrow . Then press and hold the green START button until the engine starts.
2. The starter will disengage if not started after 30 seconds. Allow 1 minute between attempts.
3. Warm up at half speed and DO NOT accelerate rapidly during warm-up.

STOPPING

1. Operate at half speed NO LOAD for 2 minutes before stopping.
2. Set speed to low idle and stop engine. Push red STOP button on keypad.

ENGINE STALL

1. Remove load, restart immediately.
2. Run 30 seconds at half speed before adding load.



⚠ WARNING

Avoid injury from escaping fluid. Contents of this accumulator are under pressure.

1. Refer to proper Machine Model Technical Manual for removal and installation procedure.
2. This accumulator is charged with DRY NITROGEN by the manufacturer and is NOT rechargeable.

Maximum Working Pressure
25610 kPa (3700 PSI)

⚠ WARNING

Crushing injury may result in hinge area if machine is turned.
Make sure people are clear of machine before starting engine or moving steering wheel.
Attach locking bar before performing service near center of machine or transporting on a truck.

T140436

⚠ WARNING

Avoid injury from escaping fluid. Contents of this accumulator are under pressure.

1. Refer to proper machine model Technical Manual for disassembly or charging instructions and equipment required.
2. Charge with DRY NITROGEN only.

Maximum Working Pressure
27579 kPa (4000 PSI)

TX1042469

Right Side Shown

DP99999,00000D1 -19-26SEP11-2/2

TX1042469 —19—26AUG08

Switch Module Functions

Most switches on the module are equipped with light emitting diodes (LEDs) to indicate current switch setting. Press switch momentarily to advance to next setting. Press and hold switch for 2—3 seconds to return to OFF from any other setting.

1—Engine Start Switch: This switch has three settings:

- Press and release switch until left LED is ON to energize ignition and apply power to control units and display unit.
- After display unit has initialized, press and hold switch to start engine. Both LEDs are on when engine is cranking. Left LED is on when engine is running.
- When engine stop switch is pressed, engine stops and both LEDs go OFF.

2—Engine Stop Switch: Press switch to shut off engine. If vehicle speed is greater than 0.5 km/h (0.3 mph), engine stops and ignition power remains on until speed is less than 0.5 km/h (0.3 mph). To turn off ignition power while vehicle is still moving, press and hold switch.

3—Beacon Light Switch—If Equipped: Press and release switch until LED is on to turn on beacon light. Press and hold switch until LED is off to turn off light.

4—Hazard Light Switch: Press and release switch until LED is on to turn on 4-way flashers. Press and hold switch until LED is off to turn off flashers.

5—Pilot Enable/Boom Down Switch: Switch has three settings:

- Press and release switch until LED is on to unlock pilot controllers for normal operation.
- Press and hold switch until LED is off to lock pilot controllers and disable hydraulic control levers.
- Press and hold switch while moving boom control lever forward to lower boom with engine off and ignition on.

6—Park Brake Switch: Press and hold switch until LED on switch and indicator on display unit light to engage park brake. Press and hold switch until LED on switch and indicator on display unit go off to release park brake.

7—Return-to-Dig Switch: Switch has three settings:

- Press and release switch until one LED is on to activate return-to-dig.
- Press and release switch until two LEDs are on. This setting is not currently used.
- Press and hold switch until both LEDs are off to turn return-to-dig off.

8—Automatic Transmission Switch: Switch has three settings:

- Press and release switch until left LED is on to engage transmission in AUTO 1-D mode. Transmission starts in first gear. As speed increases, transmission shifts up to gear selected. As load increases or speed decreases, transmission downshifts as required.

- Press and release switch until both LEDs are on to engage transmission in AUTO 2-D mode. Transmission starts in second gear and shifts up or down as required.
- Press and hold switch until both LEDs are off to engage transmission in MANUAL mode. Transmission operates in gear selected by operator.

9—Ride Control Switch—If Equipped: Switch has three settings:

- Press and release switch until one LED is on to turn ride control ON (full time mode).
- Press and release switch until two LEDs are on to set ride control to AUTO mode. Ride control functions same as in ON mode except that it is only active when ground speed is greater than setpoint. Default setpoint is approximately 5.6 km/h (3.5 mph).
- Press and hold switch until both LEDs are off to turn ride control OFF.

10—Clutch Cut-off Switch: Switch has four settings:

⚠ CAUTION: Prevent possible injury from unexpected machine movement. When stopping on inclines, press switch until all LEDs are OFF to disable clutch cut-off before releasing brake pedal. This feature prevents the machine from rolling downhill during transmission re-engagement cycle.

NOTE: Park brake also disengages transmission clutches. Release park brake before operating.

- Press and release switch until one LED is on to turn on Level Slope setting. Clutch releases with low brake pedal pressure.
- Press and release switch until two LEDs are on to turn on Small Slope setting. Clutch releases with medium brake pedal pressure.
- Press and release switch until three LEDs are on to turn on Steep Slope setting. Clutch releases with high brake pressure.
- Press and hold switch until all LEDs are off to disable clutch cut-off.

Clutch cut-off feature disengages transmission and thus directs more engine power to hydraulic system. This provides increased breakout force, useful in situations such as truck loading.

11—Boom Height Kickout Switch: Switch has two settings:

- Press and release switch until one LED is on to activate boom height kickout. Pull boom control lever to full rear detent position. Lever returns to neutral position when boom reaches a preset height from ground.
- While LED is on, kickout height can be reset as follows. Move boom to desired kickout height, then press and hold switch to reset kickout height. LED flashes and audible alarm sounds to indicate position has been set.

Display Unit—Main Menu—Machine Settings—Counters

This display provides the operator with a means to select multiple counters for use when loading more than one product. Up to five counters can be selected.

On machines equipped with the payload scale system, a running total of the weight added for each counter selection is maintained.

At machine settings menu, page 2, press DOWN button to highlight COUNTERS.

Press SELECT button to activate the COUNTERS screen.

Press UP button to increase the number of counters selected.

Press DOWN button to decrease the number of counters selected.

Press SELECT button to store the desired number of counters.

DP99999,000004B -19-12DEC08-1/1

Display Unit—Main Menu—Diagnostics

The diagnostics menu provides a limited set of tools and is intended for use by service personnel and machine operators for diagnostic and troubleshooting functions.

Press DOWN button (4) at main menu to highlight DIAGNOSTICS.

Press SELECT button (3) to display diagnostics menu page 1.

Diagnostics menu page 1 menu items on display include:

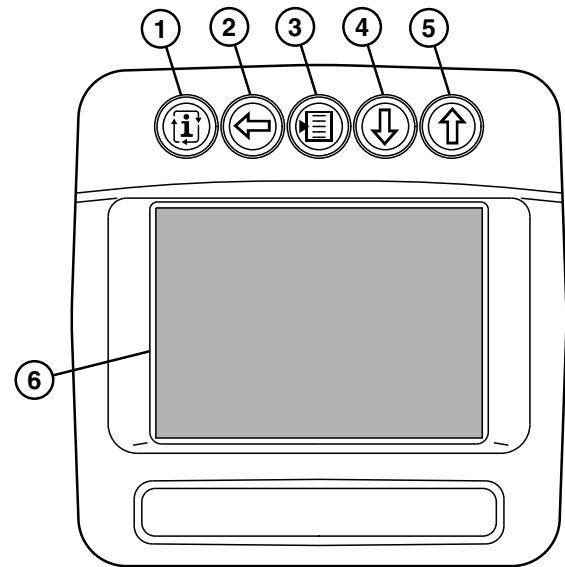
1. MACHINE ID
2. BATTERY MONITOR
3. ENGINE SENSORS
4. TRANSMISSION / AXLE
5. HYDRAULIC SENSORS
6. MACHINE SENSORS
7. FNR SELECTOR

Press DOWN button to highlight MORE, then press SELECT button to display diagnostic menu page 2.

Diagnostics menu page 2 menu items on display include:

1. CAB SWITCHES
2. SWITCH MODULE
3. JOYSTICK STEERING
4. TIRE PRESSURE
5. OBJECT DETECT
6. AUTO DIFF LOCK
7. PAYLOAD SCALE

Press DOWN button to highlight desired menu item, then press SELECT button to display the menu.



Display Unit

- | | |
|-----------------|---------------|
| 1—INFO Button | 4—DOWN Button |
| 2—BACK Button | 5—UP Button |
| 3—SELECT Button | 6—Display |

Press BACK button (2) to return to main menu.

DP99999,000004C -19-12DEC08-1/1

TX1051892—UN—25NOV08

Display Unit—Main Menu—Security—Manage Transport PIN

The owner can assign and manage a temporary transport personal identification number (PIN) for use by maintenance personnel during service or while transporting machine.

When a transport PIN is assigned, owner also specifies a length of time from 1—8 hours that the PIN is valid. This time is actual machine operating hours which counts down only when machine is running.

The machine can be started any number of times using the transport PIN. Once the transport PIN time expires, the machine will continue to run until the engine stop switch is pressed. Thereafter, the engine will not restart unless a valid owner or operator PIN is entered.

If an owner or operator PIN is entered before transport PIN time expires, the time is reset to zero.

A valid transport PIN can be from 1—8 numeric characters in length. Leading zeros are acceptable and recognized.

Access transport PIN management function as follows:

Press DOWN button at main menu to highlight SECURITY, then press SELECT button.

OWNER LOGIN screen appears.

Enter current owner PIN on sealed switch module (SSM), then press return key on SSM.

SECURITY menu appears.

Press DOWN button to highlight MANAGE TRANSPORT PIN, then press SELECT button.

TRANSPORT PIN menu appears.

Transport pin menu items on display include:

1. CLEAR TRANSPORT PIN
2. CHANGE TRANSPORT PIN
3. CHANGE TRANSPORT PIN TIME

Press DOWN button to highlight desired action.

To clear transport PIN:

Press DOWN button to highlight CLEAR TRANSPORT PIN.

Press SELECT button to clear PIN.

PIN is cleared and verification message pops up on screen.

To change or enter new transport PIN:

Press DOWN button to highlight CHANGE TRANSPORT PIN.

Press SELECT button and CHANGE TRANSPORT PIN screen appears.

Enter new transport PIN on SSM keypad, then press return key or press BACK button to exit without change.

To set or change transport PIN time:

Press DOWN button at TRANSPORT PIN menu to highlight CHANGE TRANSPORT PIN TIME.

CHANGE TRANSPORT PIN TIME screen appears.

Press UP button to increase valid time or DOWN button to decrease time.

Press SELECT button to store desired PIN time.

DP99999,000010E -19-12DEC08-1/1

Display Unit—Main Menu—Security—Delayed Operator Logout

This function is used to set the time interval allowed for logout after the machine is shut off. Once the logout time expires, the operator must enter a PIN to restart the machine.

This feature simplifies the procedure and reduces the restart time when operator must periodically shut down machine for short wait times.

The delayed operator logout time can only be reset by owner.

To change delayed operator logout time:

At SECURITY menu, press DOWN button to highlight DELAYED OPERATOR LOGOUT, then press SELECT button.

Press DOWN button to highlight desired delay time.

Press SELECT button to store new time.

DP99999,000010F -19-12DEC08-1/1

- If security system has been enabled by owner, operator logon screen appears on display unit. Operator must enter valid personal identification number (PIN) in order to start machine.

Enter PIN using one of the following methods:

- Enter PIN on numeric keyboard (5) on sealed switch module (SSM). Press enter key (6) on SSM to unlock engine control unit and allow operator to start machine.
 - Enter PIN using buttons on display unit as follows:
 - Press UP or DOWN button to start process of entering PIN.
 - Press UP button to increment number shown. If pressed when “9” is shown, display will wrap around to “0”.
 - Press DOWN button to decrement number shown. If pressed when “0” is shown, display will wrap around to “9”.
 - Press SELECT button to store current digit.
 - Continue entering remaining digits of PIN.
 - When PIN is correctly displayed, press BACK button to enter PIN and unlock engine control unit to allow operator to start machine.
- Push horn button (1) to sound horn to alert bystanders that machine is being started. Observe display unit to see that park brake indicator is on.

IMPORTANT: After a false start, DO NOT press engine start switch until engine stops or starter damage may occur.

If engine fails to start after two or three tries, press engine stop switch. Wait 2 minutes, then try again.

Engine cannot be started by towing or pushing. Permanent damage to transmission will result.

- Press and hold engine start switch. Release switch when engine starts.

Starter will disengage if engine does not start within 30 seconds. A WAIT TO START pop-up message appears on the display unit. Release engine start switch and wait 60 seconds before trying again.

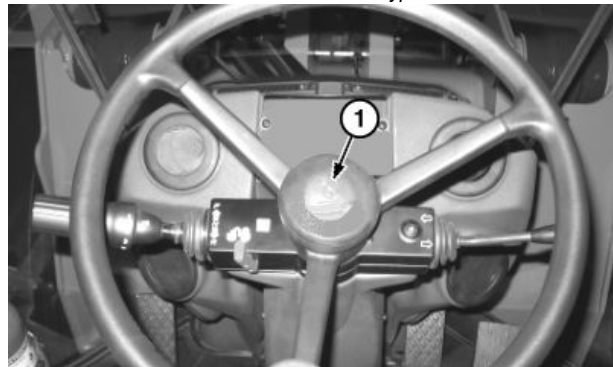
- If engine fails to start after two or three tries, press engine stop switch (4). Wait 2 minutes before trying again.

IMPORTANT: If STOP indicator light does not go out within 10 seconds after starting engine, STOP THE ENGINE. Find and correct the cause.

If engine stops when operating under load, remove load. Restart engine immediately. Run 30 seconds at 1/2 speed before adding load.



SSM Numeric Keypad



Horn Button



Horn Button (Joystick Steering Control—if equipped)

1—Horn Button
5—Numeric Keyboard

6—Enter Key

- Operate machine at less than normal loads and at half speed until engine warms up.

DP99999,0000019 -19-20JAN10-2/2

TX1046008A —UN—24JUL08

TX1039888A —UN—04APR08

TX1062356A —UN—13AUG09

Auxiliary Control

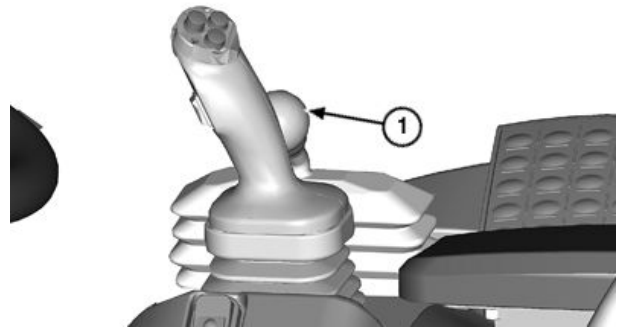
NOTE: There are several control lever configurations available on John Deere four wheel drive loaders. Please verify the configuration of your machine before reviewing operating instructions.

Three and Four Function Hydraulic Control

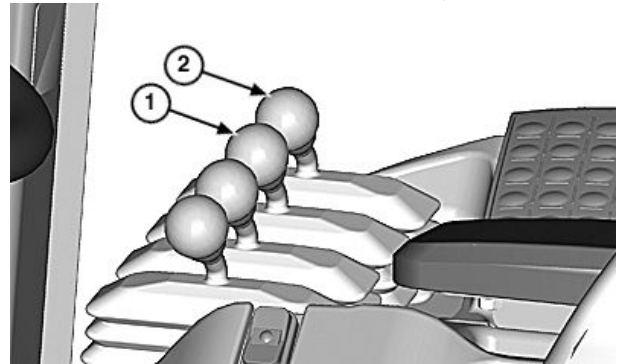
Operate third and fourth function control levers (1 and 2) to control the attachment. See your auxiliary hydraulic attachment operator's manual for more information.

1—Third Function Auxiliary Control Lever

2—Fourth Function Auxiliary Control Lever



Third Function Auxiliary Control Lever (shown with joystick bucket and boom control)



Third and Fourth Function Auxiliary Control Levers (shown with two lever bucket and boom control)

TX1067920A—UN—19NOV09

TX1063326A—UN—21OCT09

JH91824,00008A7 -19-02JAN14-1/1

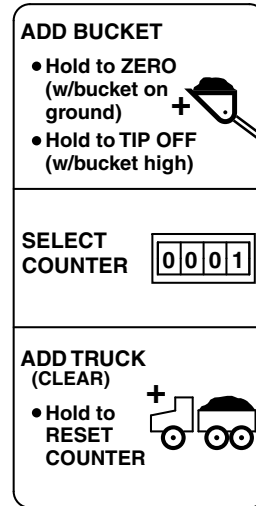
To check zero:

- Empty bucket and roll bucket back to stops.
- Lower bucket to ground.
- Press and hold ADD BUCKET button on counter switch for at least 1 second.
- PERFORM ZERO LIFT screen appears on display unit.
- Raise empty bucket to full height.
- ZERO UPDATED screen appears on display unit.

TF44157,0000BE0 -19-18JUN13-2/5

Weigh Load

1. Perform warmup and check zero.
2. Set counter to desired value using SELECT COUNTER button on counter switch.
3. Check truck counter on display unit and reset to zero, if desired, by pressing and holding ADD TRUCK button on counter switch for at least 1 second.
4. Reset long total if desired. See Display Unit—Main Menu—Payload Scale—Long Total. (Section 2-1.)
5. Pick up material and roll bucket back to stops.
6. Raise load smoothly past trigger point at normal engine speed. Display unit beeps and active weight screen appears.
7. Active weight screen shows current bucket weight, current truck total weight, and new total truck weight including current bucket.
8. Active weight screen remains on display unit for 8—12 seconds, depending on setting entered when system was activated.
 - In REMOTE ADD mode, press ADD BUCKET button on counter switch while display is on screen to add current load to weight totals.
 - In AUTO ADD mode, weight will be automatically added to totals within a preset time.
 - To keep active weight screen on display, press INFO button on display unit while screen is displayed.
9. Empty bucket onto truck. Continue weighing and loading until truck is full.
10. When truck is nearly full, tip off procedure may be performed if desired to load truck to an exact value. See Tip Off in this section.
11. When truck is fully loaded, momentarily press ADD TRUCK button on counter switch. This increments



truck counter on display unit and resets truck total to zero. This function does not reset long total.

Add Load

This function adds the lifted weight to the current truck total and to the long total. This function can be set to occur automatically or upon remote switch input.

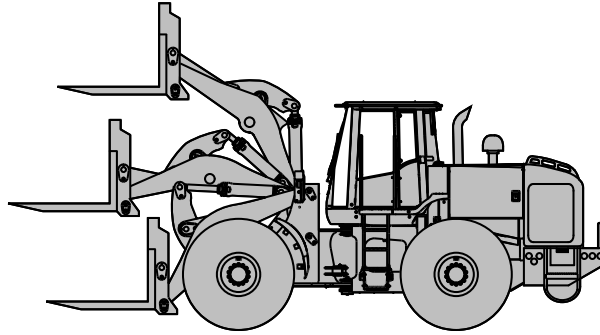
- To add lifted weight automatically, see Display Unit—Main Menu—Payload Scale—Auto Add. (Section 2-1.)
Set AUTO ADD mode to ON. Set AUTO ADD TIME to allow enough time for operator to see active weight screen.
- To add lifted weight manually, momentarily press ADD BUCKET button on counter switch while active weight screen is on display unit.
- To view long total, see Display Unit—Main Menu—Payload Scale—Long Total. (Section 2-1.)

Continued on next page

TF44157,0000BE0 -19-18JUN13-3/5

TX1044805 —19—10JUL08

Fork Attachment



TX101538A—UN—21NOV06

LOADING

- Center forks and carriage before lifting.
- Inspect load to ensure stability when lifted.
- Never attempt to lift load with one fork.
- Approach load slowly and squarely with fork tips level. Move forks slowly under load with load positioned equally on forks. Continue to drive forward until load is against backrest of forks.

UNLOADING

- Always use a signal person if you cannot see the placement area for the load. Make certain area is clear of all objects.
- Lower load to ground and tilt forks to a level position. Back away carefully to disengage forks.

ELEVATED LOADS

- Slowly raise load with a slight back tilt to cradle load. Never tilt load forward unless load is over landing area and ready to be set down.
- If there is any indication of load instability during the lift such as movement, leaning, or swaying, stop lifting immediately. Lower load and restock.
- As load approaches desired height, slow the lift speed to a minimum. Continue the lift until load is slightly higher than the landing point.
- After load is securely in place, retract forks clear of load and lower forks to traveling height before moving.

DRIVING ON A SLOPE

⚠ CAUTION: Prevent possible injury from machine rollover, do not turn on slopes. Do not drive across slopes under any circumstances.

Driving up or down slope WITH load on forks:

- Lower load near to ground.
- Keep mast tilted back to retain load. Slowly drive straight up or back straight down slope.

Driving up or down slope WITHOUT load on forks:

- Lower forks near to ground.
- Keep mast tilted back.
- Slowly drive straight down or back straight up slope.

LIFTING CAPACITY

To maintain stability, only lift loads equal to or less than mast capacity or rated operating capacity of machine, whichever is less. For machine lifting capacities see Specifications. (Section 4-6.)

TRAVELING

- Operate machine controls from operator seat only.
- While driving, carry load low for good visibility and machine stability.
- Downshift with care. A sudden deceleration could shift or topple load.
- A sudden reversal of travel direction could tip load or overturn the machine. Come to a gradual stop before reversing directions.
- Slow travel speed when making turns to avoid an overturn.
- Use low gear for hillside or ramp operation. Never coast downhill with transmission in neutral. The machine could go out of control and tip over.
- Reduce speed when driving over rough terrain, carrying a heavy load, or working in a congested area. Avoid rocks, curbs, and ditches.

OPERATING TIPS

⚠ CAUTION: Forks or boom may move suddenly, causing serious injury to you or others. To avoid injury observe the following precautions.

- Never use the fork attachment as a working platform.
- Know locations of bystanders in the working area at all times.
- DO NOT touch, lean on, or reach through the mast, boom or lift mechanism or permit others to do so. Never climb on the mast, boom, or attachments.
- NEVER allow anyone to stand or pass under the raised forks, mast, carriage, boom, or attachments.
- Reduce speed and sound horn at blind intersections, exits, and when approaching pedestrians.

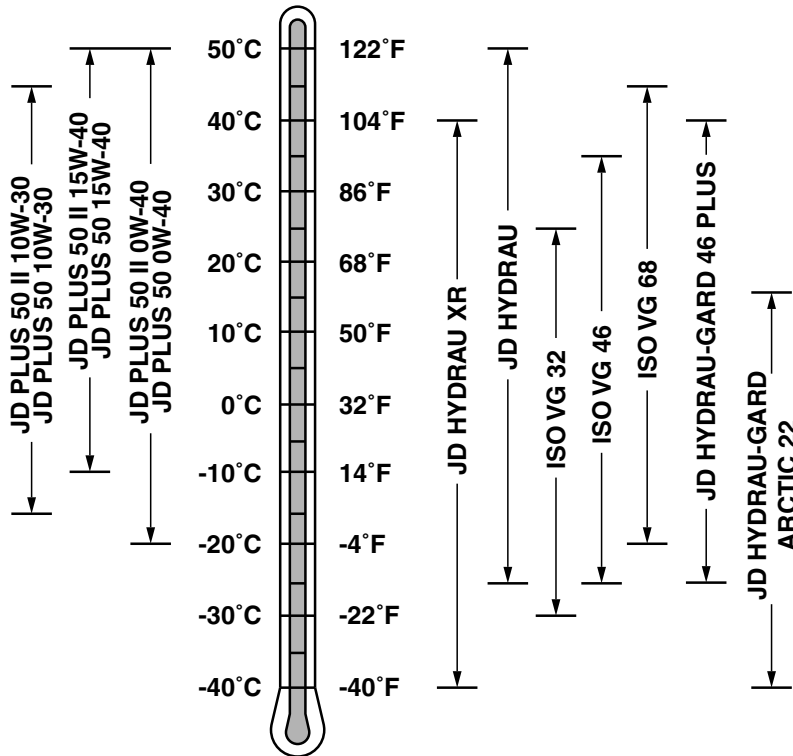
FORK INSPECTION

The forks are the main load bearing components of the mast. Forks must be maintained and checked periodically to assure safe operation.

Continued on next page

ML82895.00004B4 -19-01NOV11-1/2

Hydraulic Oil



TX1180348

Oil Viscosities for Ambient Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

IMPORTANT: Avoid machine damage. Do not mix fluids of different type or brand. Do not mix zinc-free and zinc-based fluids. Mixing fluids can result in additive fall-out and lubricant degradation. Zinc-free oils are not approved for use.

4000 Hour Change Interval

The following oils are preferred:

- John Deere Hydrau™
- John Deere Hydrau™ XR
- John Deere Plus-50™ II
- John Deere Plus-50™
- John Deere Hydrau-Gard™ 46 Plus¹

2000 Hour Change Interval

Other oils may be used if they meet one or more of the following:

- Minimum API classification CI-4
- Anti-Wear Hydraulic Oils (AWHO):
 - ISO 11158 Category HV
 - DIN 51524-3

Cold weather operation only:

John Deere Hydrau-Gard™ 22 Arctic¹

¹Fluid is not available in the United States or Canada.

Hydrau is a trademark of Deere & Company
 Plus-50 is a trademark of Deere & Company
 Hydrau-Gard is a trademark of Deere & Company

MB60223,000003D -19-01JUL19-1/1

TX1180348—JUN—18DEC14

Diesel Engine Oil and Filter Service Intervals

The oil and filter service intervals in the following table should be used as guidelines. Actual service intervals also depend on operation and maintenance practices. It is suggested to use oil analysis to determine the actual useful life of the oil and to aid in selection of the proper oil and filter service interval.

Oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of the diesel fuel.

Diesel fuel sulfur level will affect engine oil and filter service intervals. Higher fuel sulfur levels reduce oil and filter service intervals as shown in the table.

- Use of diesel fuel with sulfur content less than 0.10% (1000 mg/kg) is strongly recommended.
- Use of diesel fuel with sulfur content 0.10% (1000 mg/kg) to 0.50% (5000 mg/kg) may result in REDUCED oil and filter change intervals as shown in the table.
- BEFORE using diesel fuel with sulfur content greater than 0.50% (5000 mg/kg), contact your John Deere dealer.
- DO NOT use diesel fuel with sulfur content greater than 1.00% (10 000 mg/kg).

IMPORTANT: When using biodiesel blends greater than B20, reduce the oil and filter service interval by 50% or monitor engine oil based on test results from Oilscan.

Oil types in the table include:

- John Deere Plus-50™ II and John Deere Plus-50
- “Other Oils” include John Deere Torq-Gard Supreme™, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, or ACEA E4 oils.

Use of lower specification oils in Tier 3 engines may result in premature engine failure.

NOTE: The 500 hour extended oil and filter change interval is only allowed if all the following conditions are met:

- Engine equipped with an extended drain interval oil pan
- Use of diesel fuel with sulfur content less than 0.50% (5000 mg/kg)
- Use of John Deere Plus-50™ II or John Deere Plus-50 oil
- Use of an approved John Deere oil filter

	U.S. Tier 3 and EU Stage III A - PowerTech Plus™				U.S. Tier 3 and EU Stage III A - PowerTech™		
	Oil Pan Size (L/kW)				Oil Pan Size (L/kW)		
Oil pan capacity	Greater than or equal to 0.10	Greater than or equal to 0.12	Greater than or equal to 0.14	Greater than or equal to 0.22	Greater than or equal to 0.10	Greater than or equal to 0.12	Greater than or equal to 0.14
Fuel Sulfur	Less than 0.10% (1000 mg/kg)				Less than 0.10% (1000 mg/kg)		
Plus-50	375 hours	500 hours	500 hours	500 hours	375 hours	500 hours	500 hours
Other Oils	250 hours	250 hours	250 hours	250 hours	250 hours	250 hours	250 hours
Fuel Sulfur	0.10 - 0.20% (1000 - 2000 mg/kg)				0.10 - 0.20% (1000 - 2000 mg/kg)		
Plus-50	300 hours	300 hours	500 hours	500 hours	300 hours	400 hours	500 hours
Other Oils	200 hours	200 hours	250 hours	250 hours	200 hours	200 hours	250 hours
Fuel Sulfur	0.20 - 0.50% (2000 - 5000 mg/kg)				0.20 - 0.50% (2000 - 5000 mg/kg)		
Plus-50	250 hours	250 hours	300 hours	500 hours	275 hours	350 hours	500 hours
Other Oils	150 hours	150 hours	200 hours	250 hours	150 hours	175 hours	250 hours
Fuel Sulfur	0.50 - 1.00% (5000 - 10 000 mg/kg)				0.50 - 1.00% (5000 - 10 000 mg/kg)		
Plus-50	Contact John Deere Dealer (dealer refers to DTAC solutions)				187 hours	250 hours	250 hours
Other Oils	Contact John Deere Dealer (dealer refers to DTAC solutions)				125 hours	125 hours	125 hours

The service interval of “Other Oils” may be extended only if oil analysis is performed to determine the actual service life, to a maximum not to exceed that of Plus-50.

Plus-50 is a trademark of Deere & Company
 Torq-Gard Supreme is a trademark of Deere & Company
 PowerTech Plus is a trademark of Deere & Company
 PowerTech is a trademark of Deere & Company

DX,ENOIL13 -19-03AUG09-1/1

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- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

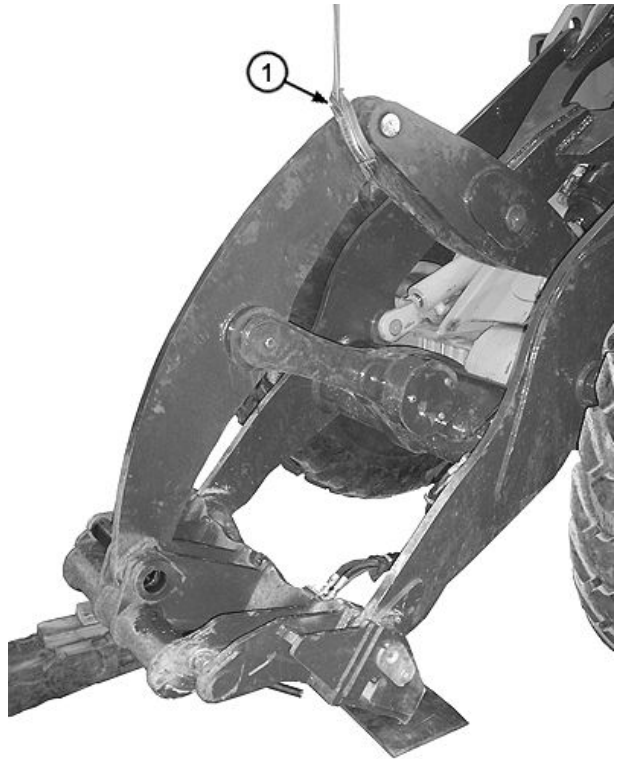
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Pin Removal—If Equipped With Powerllec™ Linkage

⚠ CAUTION: Avoid injury from sudden linkage movement. Support powerllec bell crank before removing any pins.

Before removing any pin on the Powerllec™ linkage, the bell crank (1) must be supported with hoist. See your authorized dealer for further details.

1—Bell Crank



T202191B—UN—28SEP04

Powerllec is a trademark of Deere & Company

DP99999.000011D -19-11OCT10-1/1

Maintenance—As Required

17.5R25 L2*, L3*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	207 kPa 2.07 bar 30 psi	290 kPa 2.90 bar 42 psi	331 kPa 3.31 bar 48 psi	372 kPa 3.72 bar 54 psi	427 kPa 4.27 bar 62 psi	448 kPa 4.48 bar 65 psi
	Other	Pressure	200 kPa 2.00 bar 29 psi	276 kPa 2.76 bar 40 psi	352 kPa 3.52 bar 51 psi	400 kPa 4.00 bar 58 psi	448 kPa 4.48 bar 65 psi	503 kPa 5.03 bar 73 psi	—
Rear Empty Tire		Load	3357 kg 7400 lb.	3561 kg 7850 lb.	3992 kg 8800 lb.	4128 kg 9100 lb.	4536 kg 10 000 lb.	5216 kg 11 500 lb.	5901 kg 13 010 lb.
17.5R25 L2*, L3*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	200 kPa 2.00 bar 29 psi	234 kPa 2.34 bar 34 psi	248 kPa 2.48 bar 36 psi	310 kPa 3.10 bar 45 psi	379 kPa 3.79 bar 55 psi	448 kPa 4.48 bar 65 psi
	Other	Pressure	276 kPa 2.76 bar 40 psi	303 kPa 3.03 bar 44 psi	352 kPa 3.52 bar 51 psi	372 kPa 3.72 bar 54 psi	—	—	—
Front Loaded Tire		Load	4899 kg 10 800 lb.	5761 kg 12 700 lb.	6668 kg 14 700 lb.	7484 kg 16 500 lb.	8482 kg 18 700 lb.	9389 kg 20 700 lb.	10 297 kg 22 700 lb.
550/65R25 L2*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	248 kPa 2.48 bar 36 psi	303 kPa 3.03 bar 44 psi	345 kPa 3.45 bar 50 psi	400 kPa 4.00 bar 58 psi	448 kPa 4.48 bar 65 psi	503 kPa 5.03 bar 73 psi
	Goodyear	Pressure	310 kPa 3.10 bar 45 psi	338 kPa 3.38 bar 49 psi	365 kPa 3.65 bar 53 psi	400 kPa 4.00 bar 58 psi	476 kPa 4.76 bar 69 psi	—	—
Rear Empty Tire		Load	3334 kg 7350 lb.	3924 kg 8650 lb.	4286 kg 9450 lb.	4785 kg 10 550 lb.	5715 kg 12 600 lb.	6804 kg 15 000 lb.	8165 kg 18 000 lb.
550/65R25 L2*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	200 kPa 2.00 bar 29 psi	228 kPa 2.28 bar 33 psi	262 kPa 2.62 bar 38 psi	324 kPa 3.24 bar 47 psi	400 kPa 4.00 bar 58 psi	503 kPa 5.03 bar 73 psi
	Goodyear	Pressure	200 kPa 2.00 bar 29 psi	310 kPa 3.10 bar 45 psi	345 kPa 3.45 bar 50 psi	324 kPa 3.24 bar 47 psi	—	—	—
Front Loaded Tire		Load	4763 kg 10 500 lb.	5579 kg 12 300 lb.	6713 kg 14 800 lb.	7484 kg 16 500 lb.	8255 kg 18 200 lb.	9480 kg 20 900 lb.	9902 kg 21 830 lb.
20.5R25 L2*, L3*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	200 kPa 2.00 bar 29 psi	234 kPa 2.34 bar 34 psi	290 kPa 2.90 bar 42 psi	345 kPa 3.45 bar 50 psi	427 kPa 4.27 bar 62 psi	448 kPa 4.48 bar 65 psi
	Other	Pressure	200 kPa 2.00 bar 29 psi	248 kPa 2.48 bar 36 psi	324 kPa 3.24 bar 47 psi	372 kPa 3.72 bar 54 psi	427 kPa 4.27 bar 62 psi	503 kPa 5.03 bar 73 psi	—
Rear Empty Tire		Load	4377 kg 9650 lb.	4763 kg 10 500 lb.	4990 kg 11 000 lb.	5579 kg 12 300 lb.	6260 kg 13 800 lb.	6668 kg 14 700 lb.	8890 kg 19 600 lb.
20.5R25 L2*, L3*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	200 kPa 2.00 bar 29 psi	200 kPa 2.00 bar 29 psi	248 kPa 2.48 bar 36 psi	310 kPa 3.10 bar 45 psi	352 kPa 3.52 bar 51 psi	448 kPa 4.48 bar 65 psi
	Other	Pressure	276 kPa 2.76 bar 40 psi	303 kPa 3.03 bar 44 psi	324 kPa 3.24 bar 47 psi	372 kPa 3.72 bar 54 psi	—	—	—
Front Loaded Tire		Load	5647 kg 12 450 lb.	6668 kg 14 700 lb.	7711 kg 17 000 lb.	8709 kg 19 200 lb.	9979 kg 22 000 lb.	11 521 kg 25 400 lb.	11 703 kg 25 800 lb.
650/65R25 L3*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	248 kPa 2.48 bar 36 psi	303 kPa 3.03 bar 44 psi	352 kPa 3.52 bar 51 psi	414 kPa 4.14 bar 60 psi	490 kPa 4.90 bar 71 psi	503 kPa 5.03 bar 73 psi
	Goodyear	Pressure	186 kPa 1.86 bar 27 psi	234 kPa 2.34 bar 34 psi	290 kPa 2.90 bar 42 psi	338 kPa 3.38 bar 49 psi	400 kPa 4.00 bar 58 psi	476 kPa 4.76 bar 69 psi	—
Rear Empty Tire		Load	4491 kg 9900 lb.	5307 kg 11 700 lb.	5897 kg 13 000 lb.	6486 kg 14 300 lb.	6963 kg 15 350 lb.	8573 kg 18 900 lb.	9344 kg 20 600 lb.
650/65R25 L3*	Michelin	Pressure	200 kPa 2.00 bar 29 psi	248 kPa 2.48 bar 36 psi	290 kPa 2.90 bar 42 psi	324 kPa 3.24 bar 47 psi	352 kPa 3.52 bar 51 psi	448 kPa 4.48 bar 65 psi	503 kPa 5.03 bar 73 psi

Continued on next page

OUT4001.0000404 -19-18DEC13-2/3

- i. If observed detection zone differs significantly from specified detection zone, see your John Deere dealer.

DP99999,00001D8 -19-19JUN13-2/2

Check Transmission Oil Level

IMPORTANT: Prevent possible transmission damage. DO NOT operate engine when transmission oil level is low.

1. Before starting engine, check oil level on sight gauge (1). If oil level is higher than HOT area on sight gauge, there is sufficient oil to start the engine.
2. If necessary, remove filler cap (2) and add oil. See Transmission, Park Brake, and Axle Oil. (Section 3-1.)
3. Start engine.
4. Press and release clutch cutoff switch to disable clutch cutoff function (indicator lights off).
5. Press and release auto transmission switch to engage transmission in MANUAL mode (indicator lights off).
6. Engage service brakes and release park brake.
7. Move forward, neutral, or reverse (FNR) lever or switch to F (forward) and select gear 3.

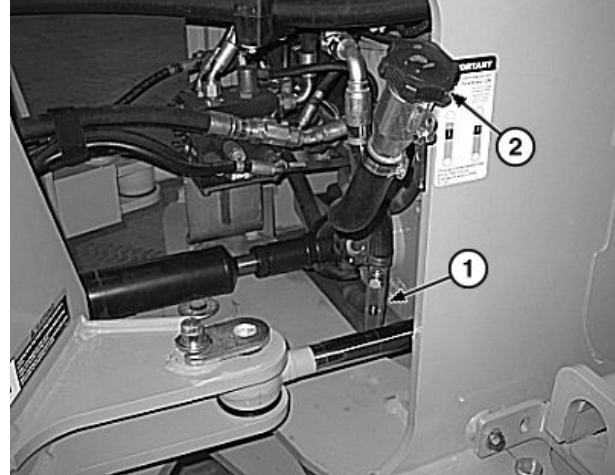
Operate engine at fast idle for 30 seconds. Reduce engine speed to slow idle and place FNR lever or switch in neutral (N), for 15 seconds.

Repeat this step until transmission oil reaches normal operating temperature, approximately 80 °C (175 °F).

8. Move FNR lever or switch to N (neutral). Lower all equipment to ground.
9. Press and hold park brake switch until indicator on switch and icon on display unit are ON. Release service brakes.
10. Allow 2 minutes for oil level to stabilize.
11. Check oil level with engine at slow idle. Oil level is correct when in HOT area on sight gauge.
12. If necessary, add oil. See Transmission, Park Brake, and Axle Oil. (Section 3-1.)

1—Sight Gauge

2—Filler Cap



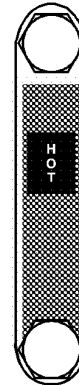
TX1041320A —UN—01MAY08

IMPORTANT

Check transmission oil level with Park Brake "ON".

Minimum level prior to engine start

Operating range following loader operation (low idle oil temp 80 °C [175 °F])



**Change transmission filter every 2000 hours.
Change oil every 2000 hours.**

TX1042729A —19—22MAY08

MD04263,0000409 -19-22MAY09-1/1

Maintenance—Every 250 Hours

Take Engine Oil Sample

See your authorized dealer.

OUT4001,000039B -19-14MAR12-1/1

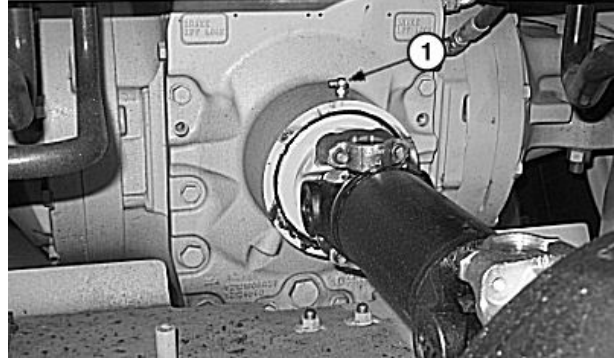
Lubricate Front and Rear Axle Shaft Seals

⚠ CAUTION: Prevent possible injury from unexpected machine movement. Park machine on level surface. Turn engine off and lower bucket to ground before lubricating.

NOTE: Grease daily when operating in severe conditions such as deep mud, water, or snow.

Lubricate grease fittings (1) on front and rear axle with five shots of grease. See Grease. (Section 3-1.)

1— Grease Fitting



TX1041651A—UN—01MAY08

DP99999,0000096 -19-23MAY11-1/1

Clean Front and Rear Axle Oil Recirculation Screens—If Equipped

NOTE: Clean recirculation screens after axle oil is drained.

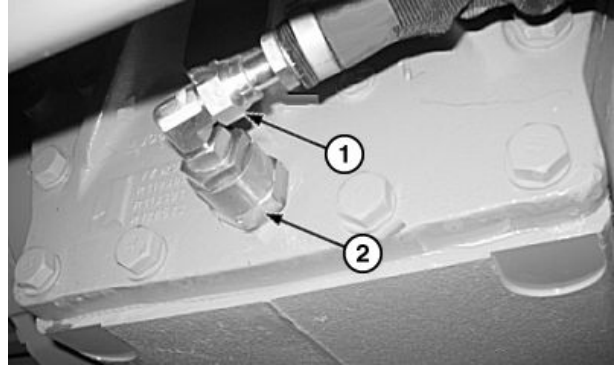
1. Place container under axle and disconnect hose (1) from screen fitting (2).
2. Remove screen fitting.

NOTE: Fitting and screen are a one piece design. Thoroughly clean and reuse screen.

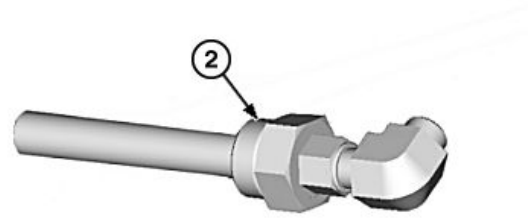
3. Clean screen with solvent.
4. Install screen fitting.
5. Connect hose to fitting.
6. Fill axle with oil.

1—Hose

2—Screen Fitting



Oil Recirculation Hose and Fitting



Screen Fitting

DP99999,000013E -19-22JAN12-1/1

TX1028428A —JUN—22AUG07

TX1044528A —JUN—24JUN08

Rerun Transmission Clutch Calibration

See an authorized John Deere dealer.

OUO6435,000223D -19-06SEP17-1/1

Adjust Engine Valve Lash (Clearance)

See your authorized John Deere dealer.

OUO6435,000223C -19-29DEC11-1/1

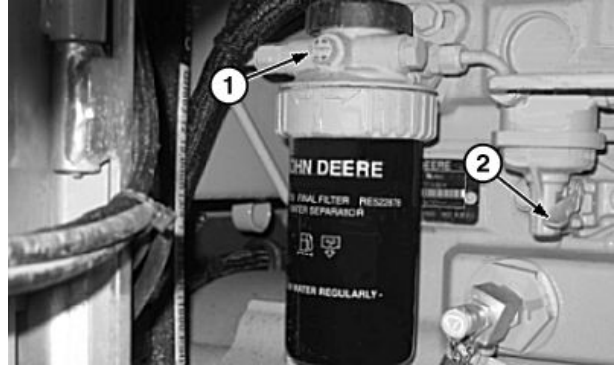
Bleed Fuel System

NOTE: Dispose of waste properly.

1. Loosen bleed screw (1) by turning knob counterclockwise.
2. Operate primer lever (2) until fuel flow from bleed screw is free of air bubbles.

NOTE: If there is no fuel flow, push primer lever toward engine and crank engine slightly to reposition camshaft. Repeat step 2.

3. Tighten bleed screw.
4. Push primer lever toward engine as far as possible.



1—Bleed Screw

2—Primer Lever

DP99999,0000114 -19-23JUN08-1/1

TX1044573A—UN—23JUN08

Bleed Fuel System With Low Pressure Fuel Pump—If Equipped

NOTE: This procedure must be performed after each fuel filter change and when the engine has run out of fuel.

Air can enter fuel system when changing fuel filters or when machine has run out of fuel. Air in the fuel system could prevent the engine from starting. This machine is equipped with an electric priming pump. If engine does not start, prime fuel system as follows:

1. Press and release engine start switch to energize ignition system and fuel pump. Let pump run for 60 seconds to prime fuel system.
2. After 60 seconds, press engine start switch to start the engine.
3. Run engine for 5 minutes.

JW40272,00004B3 -19-25FEB09-1/1

Check Fire Extinguisher—If Equipped

NOTE: Dry powder has a tendency to pack in the bottom of an extinguisher.

Before using extinguisher, turn it upside down and shake it until you feel the powder move.

NOTE: The fire extinguisher must be charged or replaced after any use.

Check gauge on fire extinguisher (1). If extinguisher is not fully charged, charge or replace it.

1—Fire Extinguisher



TX1041664A—UN—01MAY08

DP99999,000009A -19-02OCT08-1/1

Replacing Halogen Bulbs

IMPORTANT: To get the correct lighting pattern, lens must be installed so the word **TOP** is on top when lamp is installed so wider section is on top when lamp is installed.

Before disassembling, remember how bezel and lens are installed with respect to mounting stud.

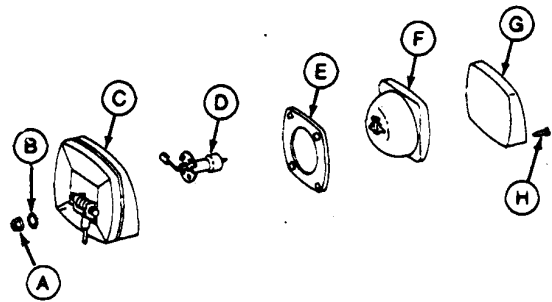
1. Remove four screws (H) to remove bezel (G) and lens (F).
2. Disconnect wiring lead and release retainer clip to remove bulb (D).
3. To disconnect ground wiring lead, push tab up, then pull connector from terminal.

IMPORTANT: Do not touch the halogen bulb with bare hands. Oil and moisture may cause premature bulb failure. Clean bulb using a soft, oil-free cloth and alcohol.

4. Install new bulb so square notch is aligned with square tab on reflector back.
5. Install retainer clip into locking tabs on reflector back.
6. Connect wiring leads. Check wiring leads are free of clip.
7. Install lens assembly (F) in housing (C) making sure wires are not crimped, or keeping lens assembly from seating on gasket.
8. Install bezel so wider section is on top. Sealing flange must be inside housing on all four sides before tightening screws.
9. Tighten screws alternately. Do not overtighten as screws may strip out plastic.

A—Flange Nut
B—Lock Washer
C—Housing
D—Bulb

E—Gasket
F—Lens Assembly
G—Bezel
H—Screw



T5894AG1—UN—17APR89

T5894A11—UN—20OCT88

T6249AU—UN—19OCT88

CED,OUO1021,128 -19-22DEC08-1/1

Miscellaneous—Operational Checkout

Operational Checkout

Use this procedure to make a quick check of machine operation by doing a walk-around inspection and performing specific checks from the operator seat.

Complete visual checks (oil levels, oil condition, external leaks, loose hardware, linkage, wiring, etc.) before performing checkout.

Most checks will require machine systems to be at normal operating temperatures and a level area with adequate

space to operate machine. Some checks may require varied surfaces.

No special tools are necessary to perform the checkout.

If no problem is found, go to next check. If a problem is indicated, an additional check or repair procedure will be suggested.

ER93822,0000205 -19-21MAY13-1/45

Diagnostic Trouble Code Check

ER93822,0000205 -19-21MAY13-2/45

Display and Clear Trouble Codes

Always check for diagnostic trouble codes and correct them before performing the operational checkout.

Check for active and stored diagnostic trouble codes (DTCs).

Diagnostic trouble codes can be displayed by using one of the following methods.

- Advanced Display Unit (ADU)
 - To access DTCs using the ADU, see Display Unit—Main Menu—Codes. (Section 2-1.)
- Service ADVISOR™ Diagnostic Application
 - To access DTCs using Service ADVISOR™ diagnostic application, see your authorized John Deere dealer.

LOOK: Are diagnostic trouble codes present?

YES: Correct all diagnostic trouble codes before proceeding.

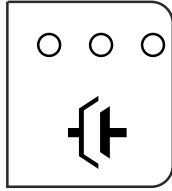
NO: Continue with operational checkout.

Service ADVISOR is a trademark of Deere & Company

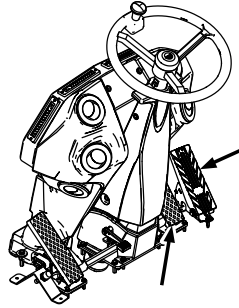
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ER93822,0000205 -19-21MAY13-3/45

Torque Converter and Engine Power Check



T194311 —UN—11SEP03



TX1045806 —UN—17JUL08

CAUTION: Prevent possible injury from machine movement. Perform this check in an open area away from other people and machinery.

Wear seat belt while operating machine.

Fasten seat belt.

Release park brake.

Disable clutch cut-off by pushing clutch cut-off switch on sealed switch module (SSM) until all LEDs are off.

Using the advanced display unit (ADU), set the fan speed to 100%. To set fan speed, see your authorized John Deere dealer.

Apply service brakes so machine does not move.

Shift transmission to 3rd forward.

Push accelerator pedal until it contacts stop bolt. Record engine speed that appears in display window.

LOOK: Is torque converter stall speed within following range?

- No. 1 fuel: 2100—2200 rpm
- No. 2 fuel: 2145—2210 rpm

Put transmission in neutral and run for 15 seconds to cool oil.

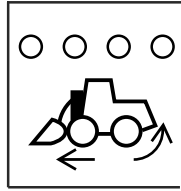
YES: Check complete.

NO: If stall speed is outside range, see your authorized John Deere dealer.

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ER93822.0000205 -19-21MAY13-20/45

Spin Control Check (If Equipped)



T194320 —UN—11SEP03

Push spin control switch until mode 1 is enabled (left LED on).

Release park brake and shift transmission into first gear forward.

Drive machine in an open clear area with engine at fast idle.

Hold hydraulic control lever in bucket roll back position. Observe engine speed drop.

NOTE: The engine fast idle speed will remain at the lower speed setting until transmission is shifted to neutral or spin control is disabled (all LEDs off).

Release hydraulic control lever and push spin control switch until function is disabled (all LEDs off).

Hold hydraulic control lever in bucket roll back position. Observe engine speed drop as hydraulic system is at high standby pressure.

Repeat check with spin control switch at modes 2—4.

LOOK/LISTEN: Does engine fast idle speed decrease to specification for each mode?

Spin Control—Specification

Engine—Mode 1 (one LED on)—Speed.....	2000 rpm
Engine—Mode 2 (two LEDs on)—Speed.....	1850 rpm
Engine—Mode 3 (three LEDs on)—Speed.....	1700 rpm
Engine—Mode 4 (four LEDs on)—Speed.....	1575 rpm

YES: Go to next check.

NO: See your authorized John Deere dealer.

ER93822.0000205 -19-21MAY13-35/45

Proportional Fan Check

See your authorized John Deere dealer.

LOOK/FEEL: Observe fan speed.

Push BACK, then SELECT, to manually set the fan speed to 100%.

LOOK/FEEL: Is the fan speed higher than at 0%?

YES: Check complete.

NO: See your authorized John Deere dealer.

ER93822.0000205 -19-21MAY13-36/45

Reversing Fan Check (If Equipped)



T194319 —UN—11SEP03

Push the reversing fan switch to enable manual mode. (LED on.)

NOTE: Reversing fan function cannot be operated twice within one minute. Wait one minute before attempting to reverse fan direction again.

LISTEN/LOOK: Does fan reverse direction and operate at full speed for 15 seconds?

Fan will change directions and operate at normal speed.

YES: Check complete.

NO: See your authorized John Deere dealer.

Continued on next page

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Transmission

Symptom	Problem	Solution
Transmission Clutch Slippage	Low oil level	See Transmission, Park Brake, and Axle Oil. (Section 3-1.)
	Wrong oil grade	See Transmission, Park Brake, and Axle Oil. (Section 3-1.)
	Restricted transmission pump suction screen	Remove and clean screen.
Machine Will Not Move	Diagnostic trouble code (DTC) related problem	See your authorized John Deere dealer.
	Applied park brake (electrical problem)	Check park brake fuse.
		Check operation of park brake.
	Low oil level	Check transmission oil level.
	Clutch cut-off activated	Check that brake pedal is fully released.
	No power to transmission control unit	Check transmission control switched 5 A fuse.
		Check monitor and transmission control unswitched fuse.
	Park brake hydraulic malfunction	Check operation of park brake.
	Shift switch malfunction	Check that display window shows correct gear when shift switch is moved.
Broken drive shafts	Inspect drive shafts and universal joints for external damage.	
Machine Does Not Engage	Clutch cutoff activated	Check that brake pedal is fully released.
	Shift switch problem	Check diagnostic trouble codes to define problem.
Machine Will Not Shift Correctly	Speed sensor disconnected or malfunction	Check electrical connectors on transmission speed sensors.
	Low oil level	Add oil.
Transmission Shifts Too Slow	Low oil level (aeration of oil)	Add oil.

Continued on next page

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Miscellaneous—Troubleshooting

Symptom	Problem	Solution
	Heater valve remaining open	Inspect, repair, adjust or replace heater valve or cable.
	System refrigerant (R134A) charge low	Inspect system for leaks.
	Evaporator fins frosting or freezing	Freeze control switch capillary tube not positioned correctly in evaporator core.
Air Conditioner Runs Constantly, Too Cold	Freeze control switch capillary tube not positioned in evaporator correctly	Reposition capillary tube in evaporator core
Interior Windows Continue To Fog	Fresh air filter clogged	Clean or replace filter.
	Air conditioning system off	Turn air (ON/OFF) switch ON.

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Heater System		
Symptom	Problem	Solution
Heater System Does Not Operate	Blower motor fuse	Replace fuse.
	Blower speed switch	Check switch.
Heater Does Not Warm Interior Of Cab	Fresh air filter clogged	Clean or replace filter.
	Recirculating air filter clogged	Clean or replace filter.
	Heater hose kinked, pinched or collapsed	Reroute or re-index hoses, replace collapsed hoses.
	Heater core fins clogged with dirt or dust	Clean heater fins.
	Heater valve remaining closed	Inspect, repair, adjust or replace heater valve or cable.
	Temperature control switch failed	Inspect, repair or replace switch.
Interior Windows Continue To Fog	Fresh air filter clogged	Clean or replace filter.
	Air conditioning system off (if equipped)	Turn air conditioner ON/OFF switch ON.

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Miscellaneous—Specifications

Item	Measurement	Specification
F—Machine-to-Ground	Clearance	400 mm 15.7 in.
G—Overall Machine	Length	7.75 m 25 ft. 5 in.
	Weight	13 291 kg 29 302 lb.
H—Maximum Digging Depth	Depth	221 mm 8.7 in.
J—Maximum Rollback at Full Height	Angle	50°
K—Bucket Dump at Full Height	Angle	46°
L—Maximum Rollback at Ground Level	Angle	37°

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