624K 4WD Loader

(PIN: E642635—658064)

JOHN DEERE

OPERATOR'S MANUAL

624K 4WD Loader

OMT260575 ISSUE L3 (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.

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

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty in 2025 through 2027 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

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

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

EMISSIONS WARRANTY EXCLUSIONS:

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

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

JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts and labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

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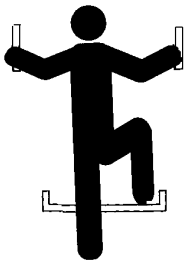
Continued on next page

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.



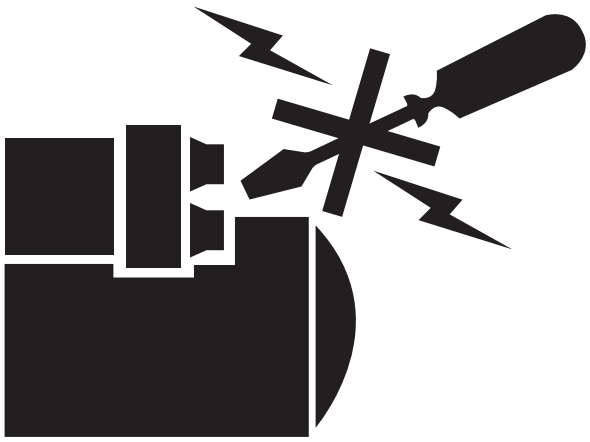
T133468—UN—15APR13

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

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.



TX1314398—UN—29JUN21

Operate Only From Operators Seat

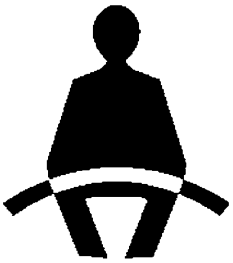
TX,SOFOS-19-29JUN21-1/1

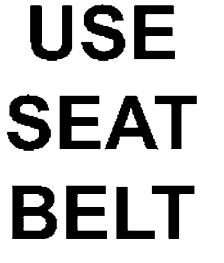
Use and Maintain Seat Belt

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.

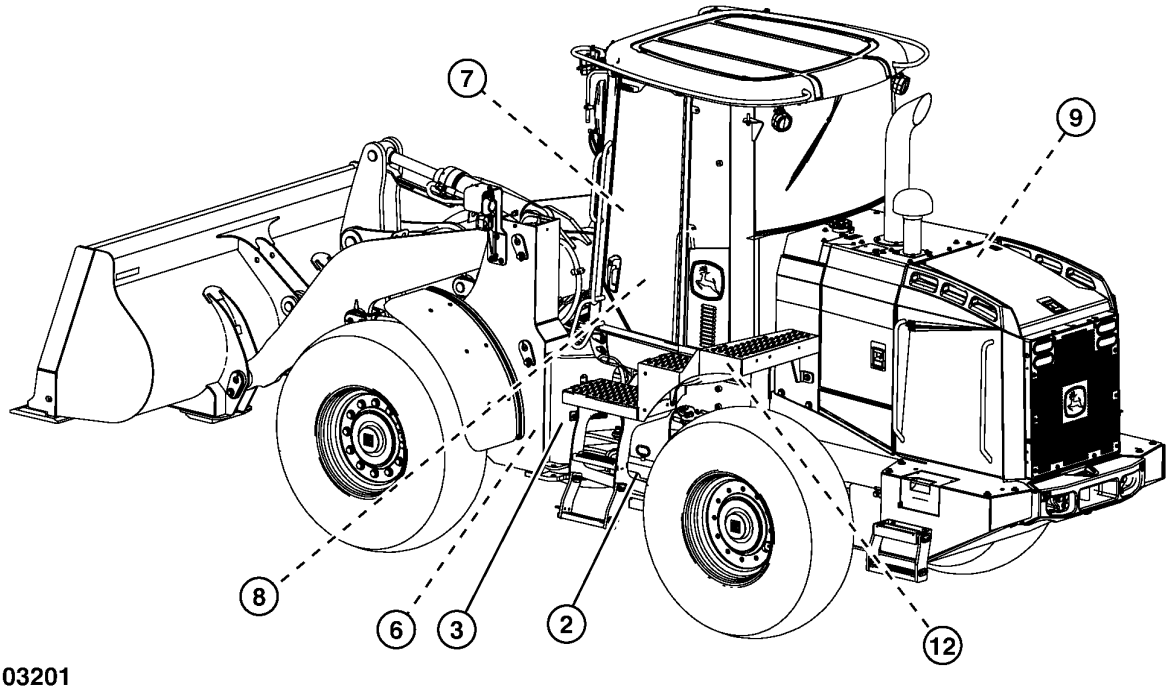




TX1165594—19—23JUL14

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

Safety Signs



TX1103201

TX1103201—UN—20JAN12

Left Side Shown

2—WARNING, Always Install Boom Lock
3—WARNING, Install Articulation Lock
6—WARNING, Prevent Machine Movement
7—WARNING, Seat Belt Should Be Worn At All Times
8—CAUTION, Secondary Steering—If Equipped
9—WARNING, Pressurized System
12—WARNING, Avoid Injury From Escaping Fluid

Continued on next page

LB82152,0000993-19-20JAN12-1/15

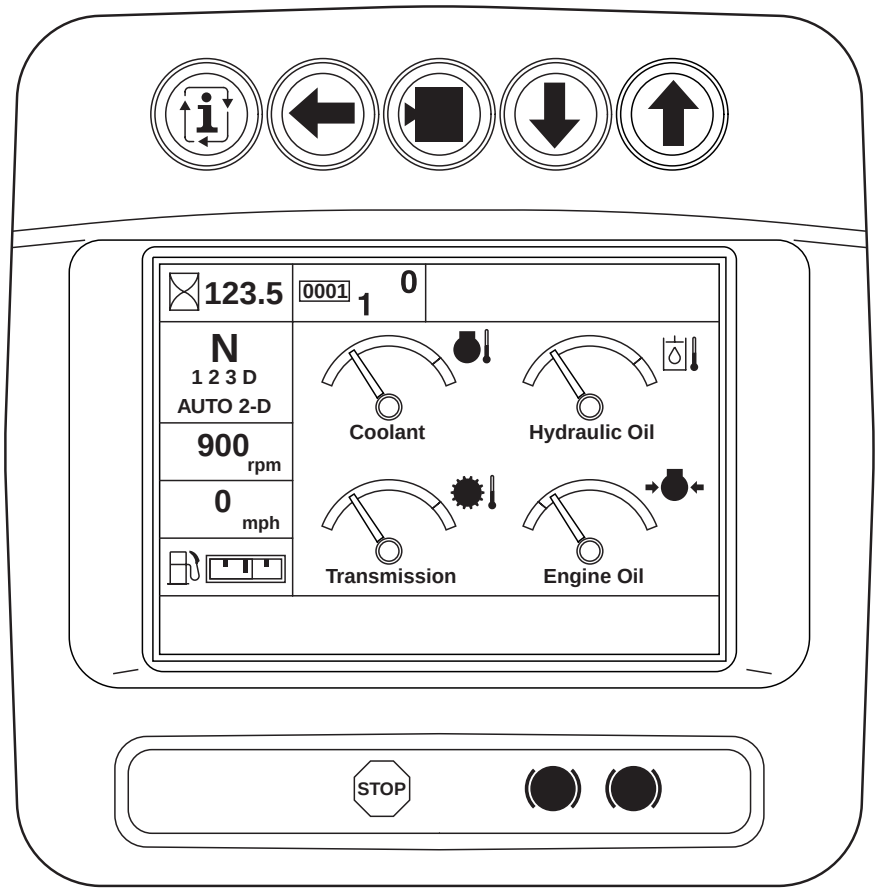
Sealed Switch Module (SSM)

TX1039287A—UN—16JUL08

1—Engine Start Switch
2—Engine Stop Switch
3—Beacon Light Switch—If Equipped
4—Hazard Light Switch
5—Pilot Enable/Boom Down Switch
6—Park Brake Switch
7—Return-to-Dig (RTD) Switch
8—Automatic Transmission Switch
9—Ride Control Switch—If Equipped
10—Clutch Cut-Off Switch
11—Boom Height Kickout Switch
12—Return-to-Carry (RTC) Switch
13—Automatic Differential Lock Switch—If Equipped
14—Spin Control Switch—If Equipped
15—Pin Disconnect Switch—If Equipped
16—Air Conditioner Switch
17—Heated Outside Mirrors Switch—If Equipped
18—Front Washer Switch
19—Front Wiper Switch
20—Drive and Marker Light Switch
21—Lockup Torque Converter Switch—If Equipped
22—Rear Axle Disconnect Switch—If Equipped
23—Rear Washer Switch
24—Rear Wiper Switch
25—Cab Work Light Switch

OUT4001,000095A-19-16NOV21-1/1

Display Unit—Normal Display



TX1046105

TX1046105—UN—02FEB10

Display Unit Normal Display

When the engine start switch is pressed the first time, ignition switch power is turned on and applied to the control units and the display unit. The display unit performs a display check sequence as follows:

1. Alarm sounds for approximately 3 seconds.
2. John Deere screen is displayed momentarily.
3. Eight indicators at the bottom of display unit light momentarily.
4. Backlighting on buttons at top of display unit comes on.
5. If security system has been enabled by owner, operator logon screen appears on display unit. Operator must enter valid personal identification number (PIN).
6. If radar object detection (ROD) system is enabled, display screen shows camera image for 2 seconds. If ROD system is not enabled, display screen will be black for 2 seconds.
7. Display screen populates with normal display items. Gauge pointers position to current input values.

After the display check is complete:

- Park brake indicator and STOP indicator remain on.
- STOP indicator flashes.
- Engine oil pressure gauge pointer indicates zero.
- Engine oil pressure gauge and warning indicator are highlighted in red and flash until engine is started.

OUT4001,000058D-19-26MAY10-1/1

Display Unit—Main Menu—Settings—Camera Mode

On machines equipped with the radar object detection (ROD) system, the **CAMERA MODE** menu allows the operator to choose from the following four camera operating modes:

- **MANUAL—**Camera is off. Operator can turn on camera by pressing INFO button on display unit.
- **REVERSE—**Monitor display changes to the camera view when the transmission is engaged in reverse gear. (This mode is the default selection for machines equipped with "Camera Only" option.)
- **OBJECT—**Monitor display changes to the camera view when an object is detected by the ROD system. (This mode is removed if "Camera Only" option is enabled.)
- **IN REVERSE WITH OBJECT—**Monitor display changes to the camera view when transmission is engaged in reverse gear or when an object is detected by the ROD system. This mode is the default selection for machines equipped with the ROD system. (This mode is removed if "Camera Only" option is enabled.)

At SETTINGS menu, press UP button or DOWN button to highlight MORE, then press SELECT button to display SETTINGS menu page 2.

Press UP button or DOWN button to highlight CAMERA MODE.

Press SELECT button to display CAMERA MODE menu. Current mode is on when a checkmark is displayed next to it.

Press UP button or DOWN button to highlight desired camera operating mode.

Press SELECT button to activate chosen mode.

Press BACK button to return to previous menu.

OUT4001,0000594-19-14JUN10-1/1

Display Unit—Main Menu—Settings—Operator Configuration

The **OPERATOR CONFIGURATION** menu shows the configuration that is currently active and provides the capability for multiple users of the machine to store their personal settings, if security is enabled. If security is not enabled, the operator can store settings that are different than the factory installed settings.

It also lets operator choose between activating the factory installed settings, their own personal settings (if security is enabled) or settings that were stored by an operator of the machine (if security was not enabled). For information on the machine's security system, see Display Unit—Main Menu—Security in this section.

At SETTINGS menu, press UP button or DOWN button to highlight MORE, then press SELECT button to display SETTINGS menu page 2.

Press UP button or DOWN button to highlight OPERATOR CONFIGURATION.

Press SELECT button to display OPERATOR CONFIGURATION menu.

OPERATOR CONFIGURATION menu items on display include:

CURRENTLY ACTIVE: FACTORY—FACTORY will display for factory installed settings. PIN(1,2,3,4,5,6,7,8,9, or 10) will display for current operator's personal identification number (PIN) settings that were stored, if security is enabled on machine. PIN 0 will display if settings have been stored by the last operator when security was NOT enabled on machine.

1. **STORE TO USER SETTINGS—**If selected, a pop-up will appear stating STORED and all configuration settings for the user operating the machine will be stored to their PIN, if security is enabled. If security is not enabled and this is selected, the configuration settings for the user operating the machine will be stored to PIN 0. Settings will not be stored until machine is shut down.
2. **RETRIEVE USER SETTINGS—**If selected, a pop-up will appear first stating the conditions that the machine has to be in for this setting to activate:
   PARK BRAKE MUST BE APPLIED
   THROTTLE MUST BE AT IDLE
   Once conditions are met, the settings saved to the current operator's PIN will be activated on machine, if security is enabled. If security is not enabled, the settings saved to PIN0 will be activated.
3. **RESTORE TO FACTORY SETTINGS—**If selected, the factory installed configuration settings will be activated.

Press UP button or DOWN button to highlight desired settings mode.

Press SELECT button to activate chosen mode.

Press BACK button to return to previous menu.

OUT4001,00006C3-19-05JAN12-1/1

Display Unit—Main Menu—Payload Scale—If Equipped

Machines equipped with the Embedded Payload Scale (EPS) system provide the operator with the capability to check the **PAYLOAD SCALE** menu to display weight of each bucket lifted and to accumulate the total weight of material loaded onto a truck. The system also accumulates the total weight lifted (long total) since the last time the total was cleared.

The PAYLOAD SCALE menu also provides access to diagnostic and setup menus and data displays primarily for use by service personnel.

The submenus under MAIN MENU that appear on display (6) include:

1. **CODES**
2. **SETTINGS**
3. **DIAGNOSTICS**
4. **PAYLOAD SCALE**
5. **SECURITY**
6. **EXHAUST FILTER**
7. **SOFTWARE DELIVERY**

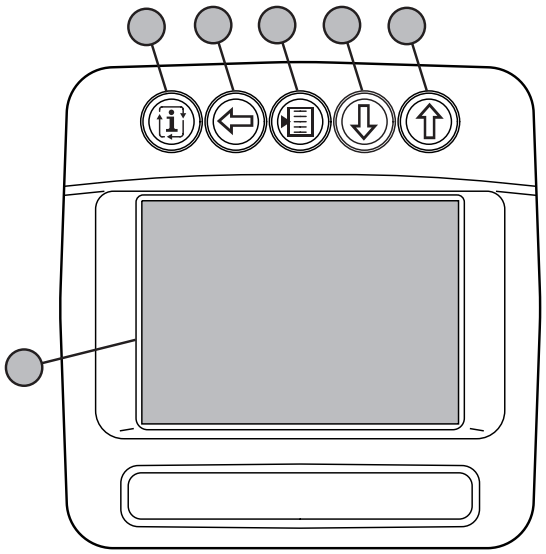
Press DOWN button (4) at MAIN MENU to highlight PAYLOAD SCALE.

Press SELECT button (3) to display PAYLOAD SCALE menu.

PAYLOAD SCALE menu items on display include:

1. **LONG TOTAL**
2. **DISPLAY UNITS**
3. **AUTO ADD**
4. **DIAGNOSTICS**
5. **SETUP**

Press DOWN button to move to desired menu item.



TX1051892—UN—25NOV08

Display Unit

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

Press SELECT button to activate chosen menu item.

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

Press INFO button (1) to return to runtime screen at any time.

OUT4001,00005AA-19-05OCT11-1/1

Display Unit—Main Menu—Payload Scale—Long Total

The **LONG TOTAL** menu displays the total weight of material that has been lifted since the last time the long total was reset.

At PAYLOAD SCALE menu, press UP button or DOWN button to highlight LONG TOTAL.

Press SELECT button to display LONG TOTAL screen.

The value displayed on the screen updates as more buckets of material are lifted and dumped.

With EXIT highlighted, press SELECT button to close the screen with no changes.

If desired, press DOWN button to highlight CLEAR and press SELECT button to reset the total.

Press BACK button to return to previous menu.

OUT4001,00005AB-19-26APR10-1/1

Display Unit—Main Menu—Software Delivery—Software Update

The **SOFTWARE UPDATE** menu is for receiving Service ADVISOR™ Remote (SAR) software downloads and installations to the machine. Downloads can take place with the engine running and machine operating. However, installation of the software can only process if the engine is not running and park brake applied. If conditions exist that will not allow the download or installation to happen, screens will appear on the monitor advising what needs to be done in order to continue. For more information, contact your authorized John Deere dealer.

At SOFTWARE DELIVERY menu, press SELECT button to display SOFTWARE UPDATE menu.

NOTE: To avoid delays, it will be helpful at this point to make sure engine is not running, park brake is applied, and the SOFTWARE TERMS AND CONDITIONS have been read before continuing. (Find SOFTWARE TERMS AND CONDITIONS at the beginning of this manual.)

Press SELECT again and the SOFTWARE UPDATE menu will display a series of screens depending on the status of the update and the status of the machine.

If update is already downloaded, the monitor will display the following screen:

DOWNLOAD COMPLETE

READY TO INSTALL

After 3 seconds, the monitor will then display a SOFTWARE LICENSE AGREEMENT screen stating:

PRESS SELECT TO ACCEPT THE TERMS AND CONDITIONS DEFINED IN THE OPERATOR'S MANUAL AND TO BEGIN LOADING THE NEW SOFTWARE UPDATE

Once SELECT is pressed, installation will take place if all conditions are acceptable. A warning screen will appear for 5 seconds stating:

WARNING

DO NOT PRESS STOP BUTTON ONCE SOFTWARE UPDATE HAS STARTED

The following screen will then appear:

SOFTWARE INSTALLATION MAY TAKE 10 MINUTES

SCREEN MAY BE BLANK

When completed, the monitor will display:

SOFTWARE INSTALLATION COMPLETED SUCCESSFULLY

PLEASE CYCLE POWER

— — — — — — — — — — — — — — — — — — —

Service ADVISOR is a trademark of Deere & Company

The machine is set at the factory to auto approve software downloads, but if the dealer or technician has changed this setting to notify operator before downloading, the following screen will appear:

NEW SOFTWARE AVAILABLE FOR DOWNLOAD

1. APPROVE DOWNLOAD
2. REJECT DOWNLOAD

Press UP or DOWN button to highlight desired function.

Press SELECT button to activate chosen function.

Press BACK button to return to previous menu.

If APPROVE DOWNLOAD is selected, a pop-up will appear on the monitor for 5 seconds stating:

SOFTWARE DOWNLOADING

NORMAL MACHINE OPERATION MAY CONTINUE

(Monitor will go back to the runtime screen after the pop-up disappears and normal machine operation may continue while the software is being downloaded.)

If REJECT DOWNLOAD is selected, a pop-up will appear on the monitor for 5 seconds stating:

SOFTWARE DOWNLOAD REJECTED

(Monitor will go back to the runtime screen after the pop-up disappears and normal machine operation may continue.)

NOTE: To get rejected software downloaded at some other time, dealer interaction will be necessary.

To change the setting back to auto approve software downloads, contact your authorized John Deere dealer.

— — — — — — — — — — — — — — — — — — —

If software download was sent when machine power was off, upon cycle start up and initial display check, an alarm will beep and runtime screen will have a pop-up displayed stating:

SOFTWARE DOWNLOAD IS AVAILABLE

“SELECT” TO DOWNLOAD

“BACK” TO ASK LATER

If software is ready to install upon cycle start up and initial display check, an alarm will beep and runtime screen will have a pop-up displayed stating:

SOFTWARE READY TO INSTALL

“SELECT” TO GO TO SOFTWARE UPDATE MENU

“BACK” TO ASK LATER

OUT4001,00006BF-19-12NOV10-1/1

Security System

The security system is designed to impede theft or unauthorized use of the machine. The system prevents the machine from starting until the operator correctly enters a valid security code when prompted during the startup sequence.

IMPORTANT: The default owner PIN set at factory is 1111. To maintain security, machine owner must change default PIN to another value. Owner must assign operator PINs as required and not provide owner PIN to anyone else.

The system provides for one master owner personal identification number (PIN) and up to ten operator PINs. Each PIN consists of up to eight numeric characters. Leading zeros are acceptable. For example, 001, 01, and 1 are each unique PINs.

The machine owner can perform any of the following security system functions:

- **Enable or disable security system.** See Display Unit—Main Menu—Security—Security. (Section 2-1.)
- **Change owner PIN.** See Display Unit—Main Menu—Security—Change Owner PIN. (Section 2-1.)
- **Manage and assign operator PINs.** See Display Unit—Main Menu—Security—Manage Operator PINs. (Section 2-1.)
- **Manage and assign transport PIN.** Transport PIN is for use by maintenance personnel and automatically expires after a preset time of 1—8 hours. See Display Unit—Main Menu—Security—Manage Transport PIN. (Section 2-1.)
- **Change operator logout delay time.** Logout delay time is a specified period of time after machine shutdown during which operator may restart machine without entering PIN. Time is either 0, 5, or 60 minutes. See Display Unit—Main Menu—Security—Delayed Operator Logout. (Section 2-1.)

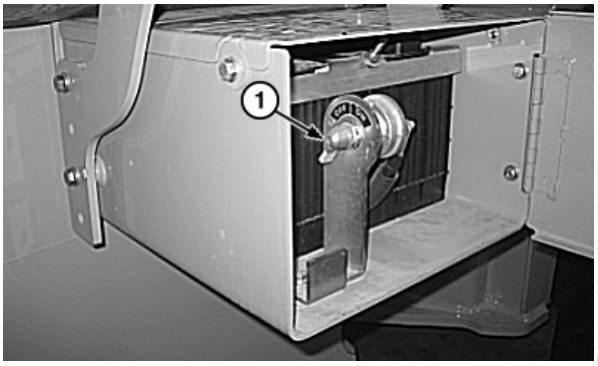
DP99999,0000112-19-17JUL08-1/1

Battery Disconnect Switch

Turn battery disconnect switch (1) clockwise to turn ON machine electrical system.

Turn switch counterclockwise to turn OFF machine electrical system.

1—Battery Disconnect Switch



Battery Disconnect Switch

OUT4001,00005F3-19-18OCT11-1/1

Joystick Bucket and Boom 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.

NOTE: To lower boom with engine stopped, pilot enable/boom down switch (9) must be pressed and held down while moving control lever forward.

Move control lever forward to boom lower position (1) to lower boom.

Move control lever rearward to boom raise position (3) to raise boom.

Move control lever right to bucket dump position (5) or to fast bucket dump position (6) to dump bucket.

Move control lever left to bucket rollback position (7) to roll back bucket backward.

Some boom and bucket functions can be operated simultaneously by moving lever between positions. For example: to lower boom and dump bucket, move lever between positions (1) and (5). Other functions will not operate together. For example: raising boom and rolling bucket back.

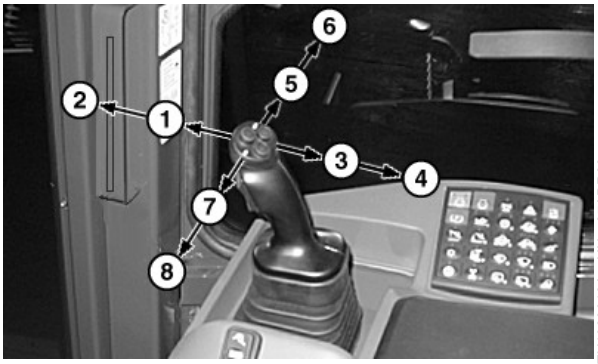
Return-to-Carry (RTC)—Set RTC switch (10) to ON (LED illuminated). Push control lever fully forward to detented boom float position (2). The boom stops at a preset height and lever returns to neutral position automatically.

NOTE: RTC mode overrides boom float mode. Push RTC switch to OFF setting to allow boom float to operate. Boom float does not work when boom height is less than preset distance from ground.

Boom Float—This function allows oil to flow in and out both ends of cylinders so the bucket can follow the contour of the ground. Set RTC switch to OFF. Push control lever fully forward to detented boom float position (2) to activate boom float function. Manually release lever from this position when desired.

Return-to-Dig (RTD)—Set RTD switch (11) to ON (left LED illuminated). Move control lever fully left to detented RTD position (8). Bucket returns to preset dig position.

Boom Height Kickout—Set boom height kickout switch (12) to ON (LED illuminated). Pull control lever fully rearward to detented boom height kickout position (4). Lever remains in this position until boom reaches a preset height, then returns to neutral automatically.



Single Lever Hydraulic Control

Hydraulic Switches

1—Boom Lower Position
2—Boom Float Position
3—Boom Raise Position
4—Boom Height Kickout Position
5—Bucket Dump Position
6—Fast Bucket Dump Position
7—Bucket Rollback Position
8—RTD Position
9—Pilot Enable/Boom Down Switch
10—RTC Switch
11—RTD Switch
12—Boom Height Kickout Switch

OUT4001,0000635-19-21OCT13-1/1

Counter Switch Operation

This machine includes a counter switch (1), located on the right side of the operator's seat near the boom and bucket control levers. The switch consists of three individual buttons. The ADD BUCKET button and the ADD TRUCK button are used on machines equipped with the Embedded Payload Scale (EPS) system.

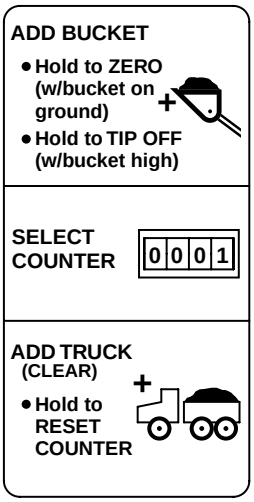
The SELECT COUNTER button allows the operator to select from up to five different counters which can correspond to five different aggregates. The operator can choose how many counters are selected. See Display Unit —Main Menu—Settings—Counters. (Section 2-1.)

The counter currently selected is displayed on the display unit in the box to the right of the hour meter. Press and release the ADD TRUCK button to increment the counter by one. Press and hold the ADD TRUCK button to reset the counter.

1—Counter Switch

TX1045645A—UN—15JUL08

Counter Switch



TX1044805—19—10JUL08

Counter Switch Label

OUT4001,00005F9-19-18OCT11-1/1

Operating Loader Coupler—If Equipped

CAUTION: Prevent possible injury from unexpected machine motion. The attachment could fall if not properly installed to loader coupler. Operator must be aware of all bystanders at the worksite.

1. Position machine on firm, level ground. Lower boom. Stop machine.
2. Press pin disconnect switch (1) to retract coupler pins. LED illuminates, pin disconnect indicator on the display unit illuminates, and audible alarm sounds every 10 seconds.
3. Operate bucket control to move coupler frame forward.
4. Drive forward. Guide top of coupler frame into attachment mounting hooks.
5. Raise boom. Tilt mounting frame rearward until attachment is against coupler.
6. Press pin disconnect switch again to extend coupler pins. LED, audible alarm, and pin disconnect indicator on the display unit will turn off.

NOTE: If attachment is not properly latched, disconnect and attach again.

7. Raise boom. Visually inspect attachment to verify that loader coupler pin plate is pressed against the loader coupler structure and that the pins are engaged in attachment mounting holes.

Pin Disconnect Switch

1—Pin Disconnect Switch

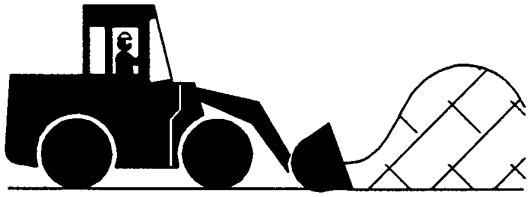
JH91824,00006A1-19-18OCT11-1/1

Using the Loader Bucket

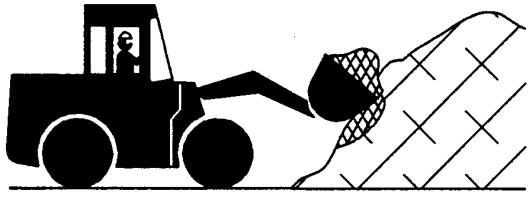
1. Place bucket in the return-to-dig (RTD) position and lower to ground.

NOTE: Bucket and boom can be positioned while machine is on-the-go.

2. Select 1st or 2nd gear depending on ground condition.
3. Move forward into the material.
4. Raise and curl bucket to hold load.



Moving Forward Into Material



Bucket Raise and Curl

Continued on next page

DP99999,000005F-19-10DEC13-1/3

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590, ASTM D975, or EN 15940 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 40 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20 °C (–4 °F) or elevations above 1675 m (5500 ft.).

Cloud Point should be below the expected lowest ambient temperature or **Cold Filter Plugging Point** (CFPP) should be a maximum 10°C (18°F) below the fuel cloud point.

Fuel lubricity should pass a maximum scar diameter of 0.52 mm as measured by ASTM D6079 or ISO 12156-1. A maximum scar diameter of 0.45 mm is preferred.

Diesel fuel quality and sulfur content must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Materials such as copper, lead, zinc, tin, brass and bronze should be avoided in fuel handling, distribution and storage equipment as these metals can catalyze fuel oxidation reactions which can lead to fuel system deposits and plugged fuel filters.

E-Diesel fuel

DO NOT use E-Diesel (Diesel fuel and ethanol blend). Use of E-Diesel fuel in any John Deere machine may void the machine warranty.

CAUTION: Avoid severe injury or death due to the fire and explosion risk from using E-Diesel fuel.

[1] See DX,ENOIL12,OEM, DX,ENOIL12,T2,STD, or DX,ENOIL12,T2,EXT for more information on Engine Oil and Filter Service Intervals.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV, and Stage V Engines Above 560 kW

- Use ONLY diesel fuel with a maximum of 500 mg/kg (500 ppm) sulfur content.

Sulfur Content for Interim Tier 4, Final Tier 4, Stage III B, Stage IV Engines, and Stage V Engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000—2000 mg/kg (1000—2000 ppm) REDUCES the oil and filter change interval.
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 2000—5000 mg/kg (2000—5000 ppm) REDUCES the oil and filter change interval.[1]
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

DX,FUEL1-19-01NOV22-1/1

Diesel Fuel Specifications

The engine in this machine is designed to operate only with ultra low sulfur diesel (ULSD) fuel. Use of fuel other than ULSD will reduce the efficiency and durability of the engine, will harm and permanently damage the engine's advanced emissions control systems, reduce fuel economy, and possibly prevent the engine from running at all. Emission-related warranties are likely to be rendered void by the use of fuel that does not meet these specifications.

TX,FUEL,SPECS-19-26OCT20-1/1

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Failure to follow applicable coolant standards and drain intervals can result in severe engine damage that may not be covered under warranty. Warranties, including the emissions warranty, are not conditioned on the use of John Deere coolants, parts, or service.

Preferred Coolants

The following pre-mix engine coolants are preferred:

- **John Deere COOL-GARD™II**
- **John Deere COOL-GARD II PG**

COOL-GARD II pre-mix coolant is available in several concentrations with different freeze protection limits as shown in the following table.

COOL-GARD II Pre-Mix	Freeze Protection Limit
COOL-GARD II 20/80	-9°C (16°F)
COOL-GARD II 30/70	-16°C (3°F)
COOL-GARD II 50/50	-37°C (-34°F)
COOL-GARD II 55/45	-45°C (-49°F)
COOL-GARD II PG 60/40	-49°C (-56°F)
COOL-GARD II 60/40	-52°C (-62°F)

Not all COOL-GARD II pre-mix products are available in all countries.

Use COOL-GARD II PG when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolant is also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

IMPORTANT: When mixing coolant concentrate with water, do not use less than 40% or greater than 60% concentration of coolant. Less than 40% gives inadequate additives for corrosion protection. Greater than 60% can result in coolant gelation and cooling system problems.

Other Coolants

Other ethylene glycol or propylene glycol base coolants may be used if they meet the following specification:

- Pre-mix coolant meeting ASTM D6210 requirements
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

If coolant meeting one of these specifications is unavailable, use a coolant concentrate or pre-mix coolant that has a minimum of the following chemical and physical properties:

- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity
- Is formulated with a nitrite-free additive package
- Is formulated with a 2-ethylhexanoic acid (2-EHA) free additive package
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion

Water Quality

Water quality is important to the performance of the cooling system. Deionized or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

Coolant Drain Intervals

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

When COOL-GARD II or COOL-GARD II PG is used, the drain interval is 6 years or 6000 hours of operation.

If a coolant other than COOL-GARD II or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.[1]

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.

COOL-GARD is a trademark of Deere & Company

[1] *Coolant analysis may extend the service interval of other "Coolants" to a maximum not to exceed the interval of Cool-Gard II coolants. Coolant analysis means taking a series of coolant samples at 1000 hour increments beyond the normal service interval until either the data indicate the end of useful coolant life or the maximum service interval of Cool-Gard II is reached.*

DX,COOL3-19-25AUG20-1/1

Fuel Tank

CAUTION: Fuel is flammable and may ignite if spilled on hot engine. To prevent injury, handle fuel carefully. If the engine is hot or running, DO NOT fill the fuel tank. DO NOT smoke while you fill fuel tank or work on fuel system.

To avoid condensation, fill the fuel tank at the end of each work day. Shut off engine before filling.

Specification

Fuel Tank—Capacity	352.0 L 93.0 gal.

LB82152,0000A19-19-18JAN12-1/1

Fluid Analysis Program Test Kits and 3-Way Coolant Test Kit

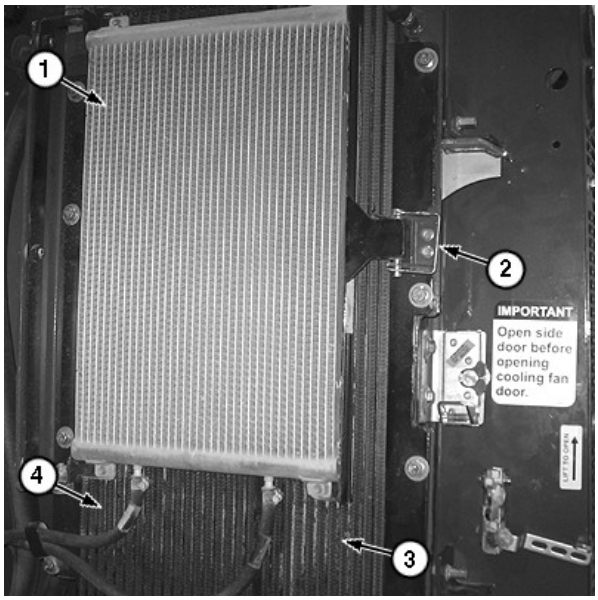
Fluid Analysis Program Test Kits and the 3-Way Coolant Test Kit are John Deere fluid sampling products to help you monitor machine maintenance and system condition. The objective of a fluid sampling program is to ensure machine availability when you need it and to reduce repair costs by identifying potential problems before they become critical.

Engine, hydraulic, power train, and coolant samples should be taken from each system on a periodic basis, before a filter or fluid change interval. Certain systems require more frequent sampling. Consult your authorized John Deere dealer on a maintenance program for your specific application. Your authorized John Deere dealer has the sampling products and expertise to assist you in lowering your overall operating costs through fluid sampling.

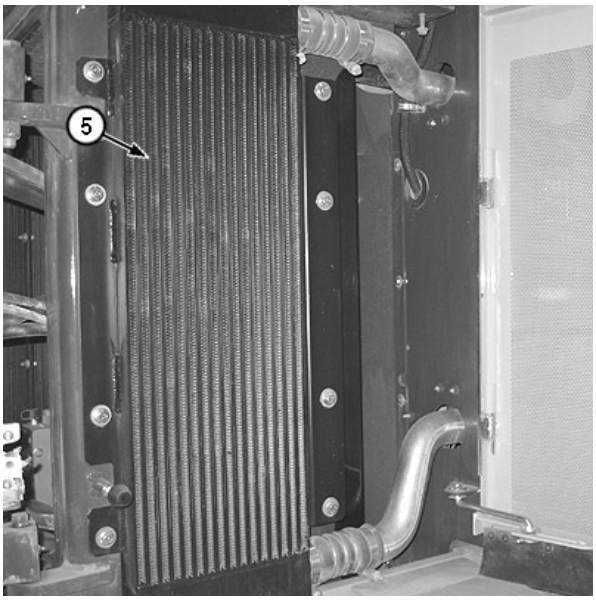
TX1003513A—UN—20FEB06

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

Clean Cooler Cores

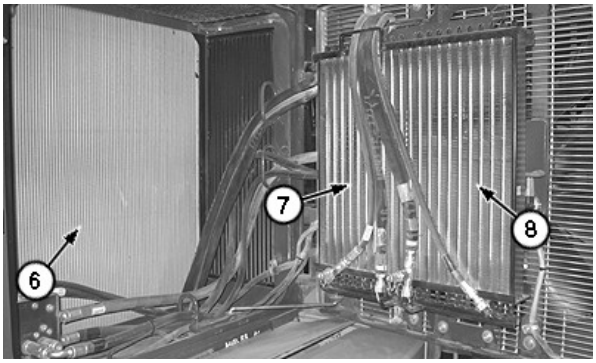


Left Cooler Compartment

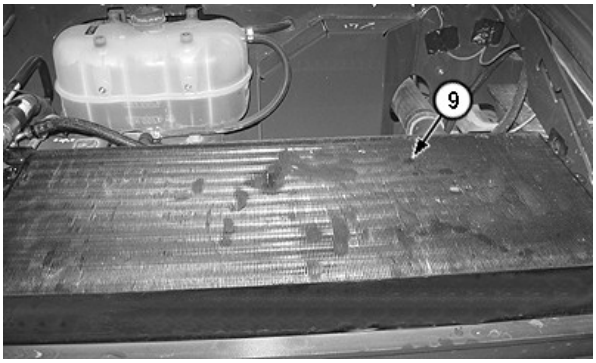


Right Cooler Compartment

1. Open left and right cooler doors, fan grille door, and top cooler door. See Cooling System Doors. (Section 3-2.)
2. Behind the left cooler door is the fuel cooler (1). Unlatch clip (2) and swing out fuel cooler to access the hydraulic oil cooler (3) and the transmission oil cooler (4).
3. Behind the right cooler door is the charge air cooler (5).
4. Behind the fan grille door is the radiator (6). If machine is equipped with axle oil coolers, they will be attached to the fan grille door. The rear axle oil cooler (7) is on the left and is identified by the red banded hoses. The front axle oil cooler (8) is on the right and is identified by the green banded hoses.
5. Below the top cooler door is the air conditioner condenser (9).
6. If dust or debris is light, clean coolers by blowing air through the fins. Do not exceed pressure of 600 kPa (6 bar) (90 psi). Blow air straight through fins to avoid bending them.
7. If compressed air fails to clean the coolers, use a high pressure washer with soap and water. Do not exceed pressure of 4800 kPa (48 bar) (700 psi). Direct water straight through fins to avoid bending them.
8. Close cooler doors.



Fan Grille Compartment

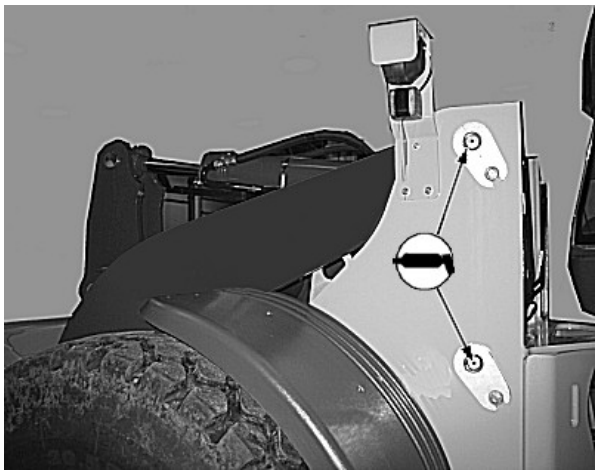


Top Cooler Compartment

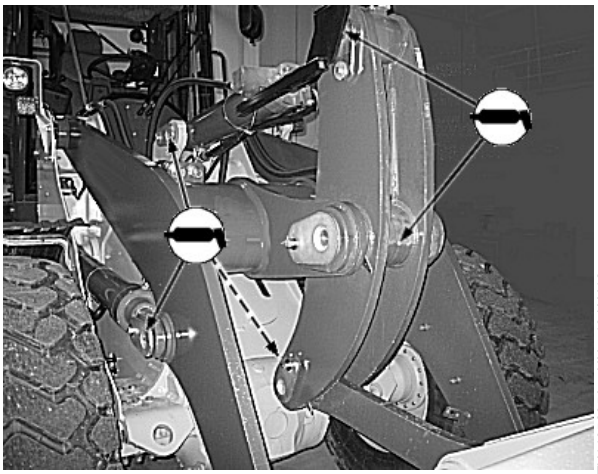
1—Fuel Cooler
2—Clip
3—Hydraulic Oil Cooler
4—Transmission Oil Cooler
5—Charge Air Cooler
6—Radiator
7—Rear Axle Oil Cooler (if equipped)
8—Front Axle Oil Cooler (if equipped)
9—Air Conditioner Condenser

LB82152,0000A21-19-11JAN12-1/1

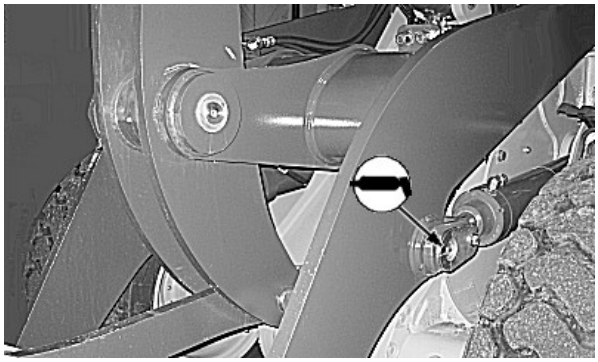
Lubricate Loader Linkage and Cylinder Pivots—Z-Bar Linkage



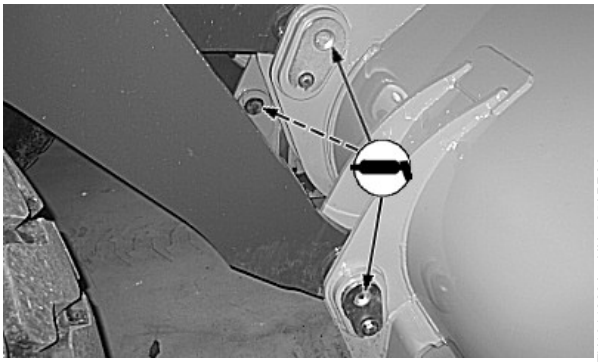
4 Points, Left Side Shown



5 Points, Right Side Shown



1 Point, Left Side Shown



3 Points, Right Side Shown

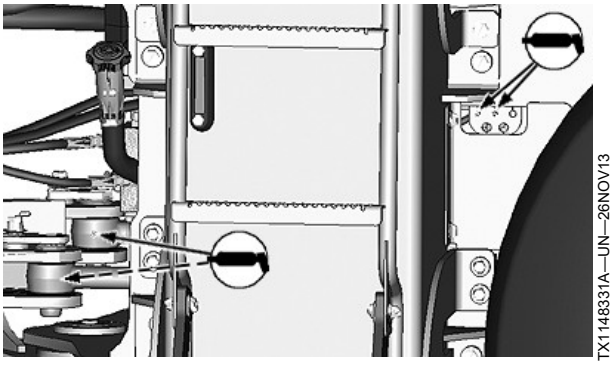
NOTE: This procedure does not apply to machines equipped with NeverGrease™ pivots.

CAUTION: Prevent possible injury from unexpected machine movement. Install articulation locking bar before lubricating.

NOTE: Lubricate every 10 hours when operating in severe conditions such as deep mud, water, or snow.

Lower bucket flat on ground.

Lubricate 17 points (shown) until grease escapes around seals. See Grease. (Section 3-1.)



Steering Cylinders—4 Points

NeverGrease is a trademark of Deere & Company

LB82152,0000A44-19-26NOV13-1/1

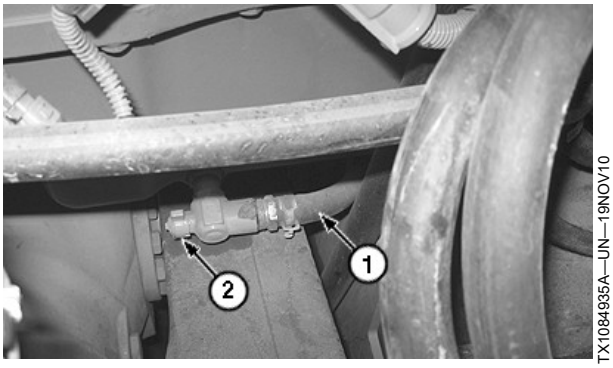
Drain and Refill Engine Oil and Replace Filter

1. Run engine to warm oil. Park machine on a level surface. Lower equipment to ground and stop engine.
2. Place a container under engine oil drain hose (1) that is routed to an opening on front side of fuel tank.
3. On left side of machine, open engine service door and side shield. Open engine oil drain valve (2) and drain oil into container. Dispose of waste oil properly. Close engine oil drain valve.
4. Turn engine oil filter (3) counterclockwise and remove from base. Clean mounting surface on base.
5. Apply thin film of oil to gasket of new filter.
6. Install new filter. Turn filter clockwise by hand until gasket touches mounting surface. Tighten filter 3/4 turn more using filter wrench.
7. Remove fill tube cap (5) and fill engine with oil. See Diesel Engine Oil—Interim Tier 4 and Stage III B Engines. (Section 3-1.)

Specification

Engine Oil With Filter—Capacity. . . . . 19.0 L
5.0 gal.

8. Install fill tube cap. Start engine and run at slow idle.
9. Check that engine oil pressure light on display unit goes out and audible alarm shuts off. If not, stop engine immediately and find cause.
10. Stop engine, remove dipstick (4) and check oil level. Engine is full when oil level is in the crosshatched area. Install dipstick.
11. Check for any leakage at filter. Tighten filter only enough to stop leakage.



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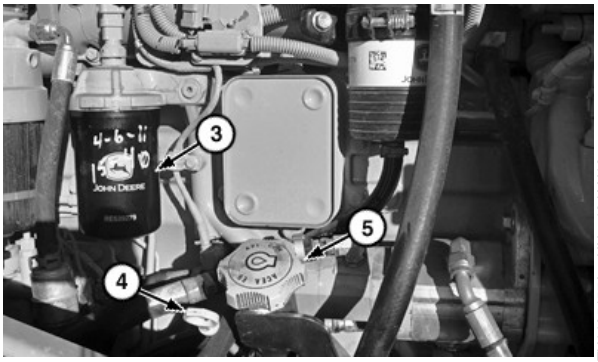
Engine Oil Drain Hose and Valve



TX1105457A—UN—12JAN12

Engine Oil Filter, Fill Tube, and Dipstick

1—Drain Hose
2—Drain Valve
3—Engine Oil Filter
4—Dipstick
5—Fill Tube Cap

12. Close engine service door and side shield.

LB82152,0000A2C-19-11APR21-1/1

Maintenance—Every 2000 Hours

Replace Outer Pin Seals

See Inspect Outer Pin Seals. (Section 3-4.)

ER93822,00001E1-19-10APR13-1/1

Rerun Transmission Clutch Calibration

See an authorized John Deere dealer.

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

Replace Open Crankcase Ventilation (OCV) Filter

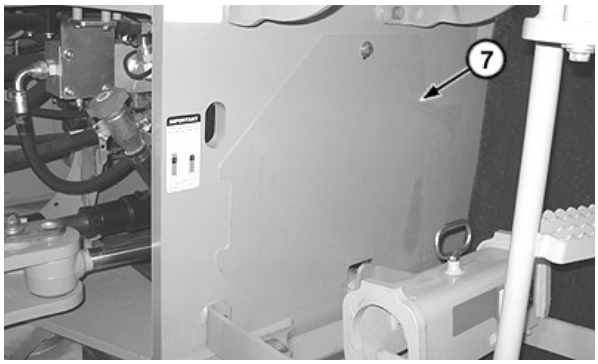
See your authorized John Deere dealer.

LB82152,0000691-19-22DEC10-1/1

Adjust Engine Valve Lash (Clearance)

See your authorized John Deere dealer.

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



Cover Under Platform

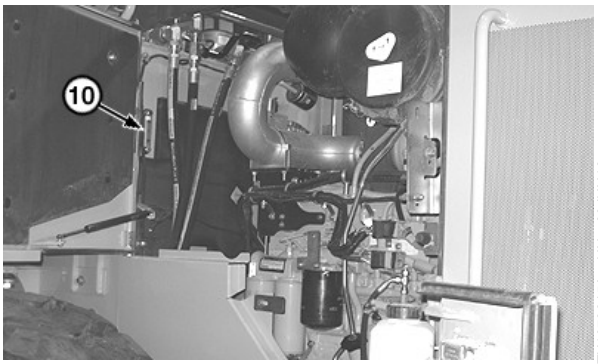
11. On left side of machine, remove cover (7) under platform to access hydraulic reservoir drain hose (8) and drain valve (9).
12. Remove tie band and route drain hose into suitable container.
13. Open drain valve and allow oil to drain into container. Dispose of waste oil properly.
14. Flush reservoir with diesel fuel.
15. Tighten drain valve and route drain hose back to original position. Secure with tie band.
16. Install cover under platform.
17. Fill reservoir. See Hydraulic Oil. (Section 3-1.)

Specification

Hydraulic Reservoir and Filters—Capacity	102.1 L 27.0 gal.

18. Install fill cap.

Hydraulic Oil Drain Valve and Hose



Hydraulic Sight Gauge

7—Cover
8—Drain Hose
9—Drain Valve
10—Sight Gauge

19. Check oil level in sight gauge (10). Level is correct when oil is in FULL range. Add oil as necessary.

LB82152,0000A41-19-02JUL15-2/2

Using Booster Batteries—24-Volt System

Before boost starting, machine must be properly shut down and secured to prevent unexpected machine movement when engine starts.

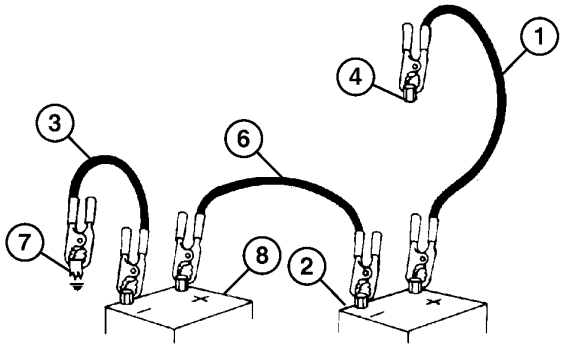
CAUTION: An explosive gas is produced while batteries are in use or being charged. Keep flames or sparks away from the battery area. Make sure that the batteries are charged in a well ventilated area.

IMPORTANT: The machine electrical system is a 24 V negative (-) ground. Connect two 12 V booster batteries together in series as shown for 24-volts.

1. Connect cable (6) to positive terminal on booster battery (8) and negative terminal on booster battery (2).
2. On right side of machine, open engine service door and side shield. Remove plastic cap on starter lug (4).
3. Connect one end of positive cable (1) to starter lug and other end to positive terminal of booster battery (2).
4. Connect one end of negative cable (3) to negative terminal of booster battery (8). Then connect other end of negative cable to machine frame (7) as far away from machine batteries as possible.
5. Start engine.
6. Immediately after starting engine, disconnect end of negative cable from machine frame first. Then disconnect other end of negative cable from negative terminal of booster batteries.
7. Disconnect positive cable from booster battery (2) and starter lug.
8. Install plastic cap. Close side shield and engine service door.

1—Cable (positive)
2—Booster Battery
3—Cable (negative)
4—Starter Lug
6—Cable (positive and negative)
7—Machine Frame
8—Booster Battery

TS204—UN—15APR13



TX1057368—UN—24MAR09

Booster Batteries To Starter Lug

TX1085163A—UN—29NOV10

Starter Lug

OUT4001,0000711-19-03NOV11-1/1

Service Recommendations For Snap-To-Connect (STC®) Fittings

Snap-To-Connect (STC®) fittings are used on this machine. The fittings are designed to allow the hydraulic hose to rotate as needed when the system is not pressurized. This prevents the hydraulic hoses from binding when components are put back to their operating position.

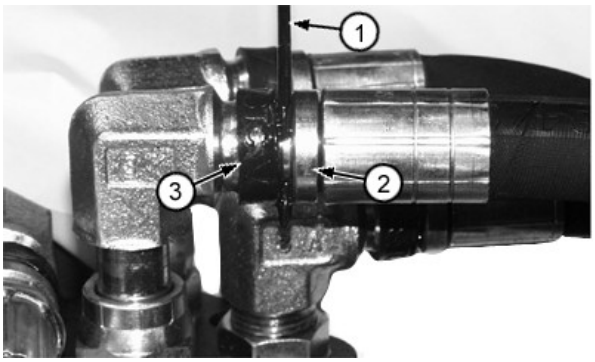
Fittings are easily disconnected using special tool, JDG1385 STC Fitting Release Tool (1) (supplied in machine with Operator's Manual). The special tool has a different size slot cut into each end. The narrow slot is for -06 size fittings. The wide slot is for -08 size fittings. Use appropriate end of special tool on fitting being disconnected. To connect fittings, simply push each half of fitting together.

IMPORTANT: DO NOT pry against release sleeve (3) or damage to fitting may result.

DO NOT force release sleeve beyond normal range of travel; otherwise, release sleeve may fall off when hose is disconnected. If this happens and fitting is connected without the release sleeve installed, fitting will not be able to be disconnected again.

1. Disconnect STC type fittings:
   a. Clean area around fitting, especially around the release sleeve (3).

Snap-To-Connect (STC) is a trademark of Eaton Corp.



T134792C—UN—24OCT00

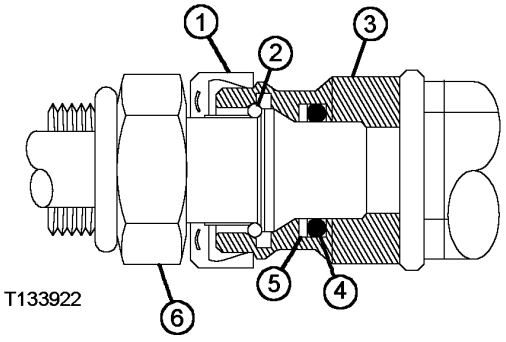
STC Fitting and JDG1385 STC Fitting Release Tool

1—JDG1385 STC Fitting Release Tool
2—Shoulder
3—Release Sleeve

   b. While keeping JDG1385 STC Fitting Release Tool (1) perpendicular to the fitting, insert tool between release sleeve (3) and shoulder (2).
   c. Gently push, **DO NOT PRY**, release sleeve away from shoulder to disconnect the fitting.
   d. Pull hose to disconnect.

OUO1010,0000457-19-19DEC13-1/2

2. Inspect STC fittings:
   a. Check seal mating surfaces for nicks, scratches, or flat spots.
   b. Check O-ring (4), backup ring (5), and retaining ring (2) for wear or damage.
   c. Make sure O-ring, backup ring, and retaining ring are in position before connecting fitting halves together.
3. Connect STC fittings:
   a. Make sure fitting halves (3 and 6) are clean and free of contaminants.
   b. Make sure release sleeve (1) is on male half (6) of fitting before connecting fitting halves together.
   c. Push fitting halves together until a definite snap and solid stop is felt.
   d. Pull back on hose to make sure fitting halves are locked together.



T133922—UN—21SEP00

STC Fitting Cross Section

1—Release Sleeve
2—Retaining Ring
3—Female Half of STC Fitting
4—O-Ring
5—Backup Ring
6—Male Half of STC Fitting

   e. To prevent hoses from binding, move component into position before pressurizing hydraulic system.

OUO1010,0000457-19-19DEC13-2/2

Cab System Checks

TX1074224A—UN—24MAR10

Sealed Switch Module (SSM)

1—Engine Start Switch
2—Engine Stop Switch
3—Beacon Light Switch (if equipped)
4—Hazards Light Switch
5—Pilot Enable/Boom Down Switch
6—Park Brake Switch
7—Return-to-Dig Enable Switch
8—Automatic Transmission Switch
9—Ride Control Switch (if equipped)
10—Clutch Cut-Off Enable Switch
11—Boom Height Kickout Enable Switch
12—Return-to-Carry Enable Switch
13—Auto-Differential Lock Enable Switch (if equipped)
14—Spin Control Enable Switch (if equipped)
15—Pin Disconnect Switch (if equipped)
16—Air Conditioner (On/Off) Switch
17—Heated Side Mirrors Switch (if equipped)
18—Front Washer Switch
19—Front Wiper Switch
20—Drive Lights Switch
21—Torque Converter Lock Up Enable Switch (if equipped)
22—Auto-Axle Disconnect Switch (if equipped)
23—Rear Washer Switch
24—Rear Wiper Switch
25—Work Light Switch

Activate following lights:

- Dome light
- Front and rear work lights
- Front and rear drive, marker, and tail lights
- Turn lights
- Four-way flashers
- Rotary beacon (if equipped)

LOOK: Do all lights operate properly?

YES: Go to next step in this check.

NO: If all lights are off, see your authorized John Deere dealer.

If dome light does not operate, check Service ADVISOR™ and dome light battery power 5-amp fuse (F49). If turn lights do not operate, check ADU, monitor

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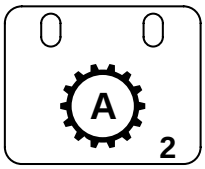
Automatic Shift Check



TX1028750—UN—30AUG07

Automatic Transmission Switch

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.

NOTE: In AUTO 1-D mode, transmission will start in second when initially shifted from neutral. After initial shift from neutral, transmission will shift to first if a high load is encountered. Transmission will upshift or downshift as ground speed dictates, but will only upshift to highest gear selected.

In AUTO 2-D mode, transmission will shift to highest gear selected as ground speed increases, or will downshift to second as ground speed decreases. Transmission will never shift to first gear.

Fasten seat belt.

Put transmission in AUTO 1-D mode by pushing automatic transmission switch on sealed switch module (SSM) (one LED on).

Push park brake switch on SSM to release park brake. Make sure park brake indicator on advanced display unit (ADU) is off.

Shift transmission to D using steering column FNR/gear select switch.

Put steering column FNR/gear select switch to forward (F) position.

Drive machine on level ground and slowly accelerate to fast idle speed while observing each upshift.

Reduce engine speed to slow idle and observe each downshift.

LOOK: Does transmission shift through all gears depending on auto mode selected?

NOTE: When in D automatic, transmission starts out in 2nd gear and upshifts to 3rd, 4th, then 5th (if equipped with five speed transmission) as machine accelerates. As machine decelerates, transmission downshifts until 2nd gear is obtained. Transmission will shift at different speeds, depending on machine loads.

YES: Go to next check.

NO: See your authorized John Deere dealer.

Continued on next page

ER93822,00001EA-19-25APR13-26/47

Cycle Time Check

CAUTION: Prevent possible injury from unexpected machine movement. Clear all persons from the area before operating machine.

NOTE: All systems must be warmed up to operating range to get accurate test results.

Use advanced display unit (ADU) or Service ADVISOR™ application to observe engine rpm and hydraulic oil temperature.

Specification

Hydraulic Oil—Temperature. . . . . 44—56°C
110—130°F

Engine—Speed. . . . . Fast Idle

Perform each function three times and take an average of the times for a cycle time.

Record cycle time for each function.

Standard Lift Z-Bar — Specification

Boom Raise—Cycle Time. . . . . 5.9 seconds

Boom Lower (float)—Cycle Time. . . . . 2.7 seconds

Bucket Dump (boom at full height)—Cycle Time. . . . . 1.3 seconds

High Lift Z-Bar — Specification

Boom Raise—Cycle Time. . . . . 5.9 seconds

Boom Lower (float)—Cycle Time. . . . . 2.7 seconds

Bucket Dump (boom at full height)—Cycle Time. . . . . 1.3 seconds

Powerllel™ Lift — Specification

Boom Raise—Cycle Time. . . . . 5.9 seconds

Boom Lower (float)—Cycle Time. . . . . 2.8 seconds

Bucket Dump (boom at full height)—Cycle Time. . . . . 1.4 seconds

Tool Carrier Linkage — Specification

Boom Raise—Cycle Time. . . . . 5.6 seconds

Boom Lower (float)—Cycle Time. . . . . 2.7 seconds

Bucket Dump (boom at full height)—Cycle Time. . . . . 3.0 seconds

LOOK: Are cycle times at specification?

YES: Go to next check.

NO: See your authorized John Deere dealer.

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ER93822,00001EA-19-25APR13-44/47

Symptom	Problem	Solution
	Low transmission oil level	Check transmission oil level. See Check Transmission Oil Level. (Section 3-4.)
Machine Vibrates	Aerated transmission oil	Check transmission oil level. See Check Transmission Oil Level. (Section 3-4.) Add transmission oil if needed.
	Universal joints on transmission drive shaft or axle drive shafts worn or damaged	Check universal joints. Replace if worn or damaged. See an authorized John Deere dealer.
	Damaged output damper	Inspect output damper. If output damper is damaged, see an authorized John Deere dealer.
Machine Lacks Power and Acceleration	Incorrect transmission oil	Drain transmission oil and refill. See Drain and Refill Transmission Oil and Replace Filters. (Section 3-10.)
	Aerated transmission oil	Check transmission oil level. See Check Transmission Oil Level. (Section 3-4.) Add transmission oil if needed.

OUT4001,00005BC-19-07NOV16-3/3

Prepare Machine for Storage

IMPORTANT: Avoid machine damage, do not use biodiesel during machine storage. When using biodiesel blends, switch to petroleum diesel for long term storage.

1. Before storage, operate engine on at least one complete tank of petroleum diesel fuel to purge the fuel system. Ensure that the fuel tank is full during storage to prevent water buildup due to condensation.

NOTE: For blends up to and including B20, it is recommended that biodiesel be used within three months of its manufacture. For blends greater than B20, it is recommended that the biodiesel be used within 45 days. The poor oxidation stability characteristic of biodiesel can result in long-term storage problems. John Deere does not recommend using biodiesel in engines powering standby applications or vehicles operating on a seasonal basis. Consult your John Deere dealer or fuel supplier for additives to improve fuel storage and performance of biodiesel fuels. These additives must be added to the biodiesel close to its time of production for them to be effective.

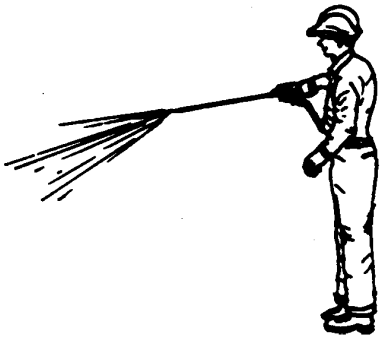
2. Repair worn or damaged parts. Install new parts, if necessary, to avoid needless delays later.

IMPORTANT: High-pressure washing [greater than 1379 kPa (13.8 bar) (200 psi)] can damage freshly painted finishes. Paint should be allowed to air dry for 30 days minimum after receipt of machine before cleaning parts or machine with high pressure. Use low pressure wash operations until 30 days have elapsed.

NOTE: Before washing the machine, see Precautions for Alternator and Regulator. (Operator's Manual.)

3. Wash the machine using low-pressure wash operations (less than 1379 kPa [13.8 bar] [200 psi]) until 30 days after receipt of machine. Paint areas to prevent rust and replace decals where needed.

LPS 3 Rust Inhibitor is manufactured by Holt Lloyd Corporation.



T5813AM—UN—09FEB89

4. Fill fuel tank, to prevent condensation.
5. Ensure that tires are properly inflated.
6. Park machine on a hard surface to prevent tires from freezing to ground.

IMPORTANT: LPS 3® Rust Inhibitor can destroy painted finish. DO NOT spray LPS 3 Rust Inhibitor on painted surfaces.

7. Retract all hydraulic cylinders if possible. If not, coat exposed cylinder rods with LPS 3 Rust Inhibitor.
8. Apply grease at all lubrication fittings.
9. Remove batteries or disconnect terminals from batteries.
10. Store machine in a dry, protected place.

IMPORTANT: Prevent possible machine damage from unauthorized persons operating machine. Attach a DO NOT OPERATE tag to steering wheel.

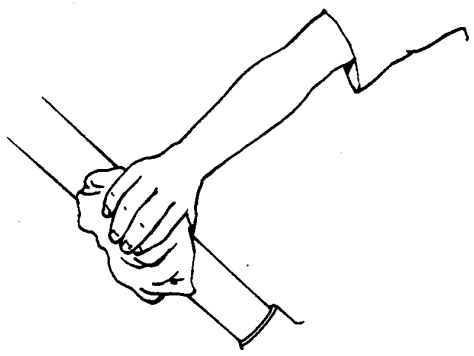
11. Put a DO NOT OPERATE tag on the steering wheel.
12. Close all vent louvers in the cab.
13. Lock all covers and doors.

OUT4001,0000631-19-04MAR20-1/1

Monthly Storage Procedure

CAUTION: Prevent possible injury or death from asphyxiation. Engine exhaust fumes can cause sickness or death. Start engine ONLY in a well-ventilated area.

1. Drain water and sediment from fuel tank when air temperature is above freezing.
2. Remove LPS 3® Rust Inhibitor from cylinder rods with a cleaning solvent.



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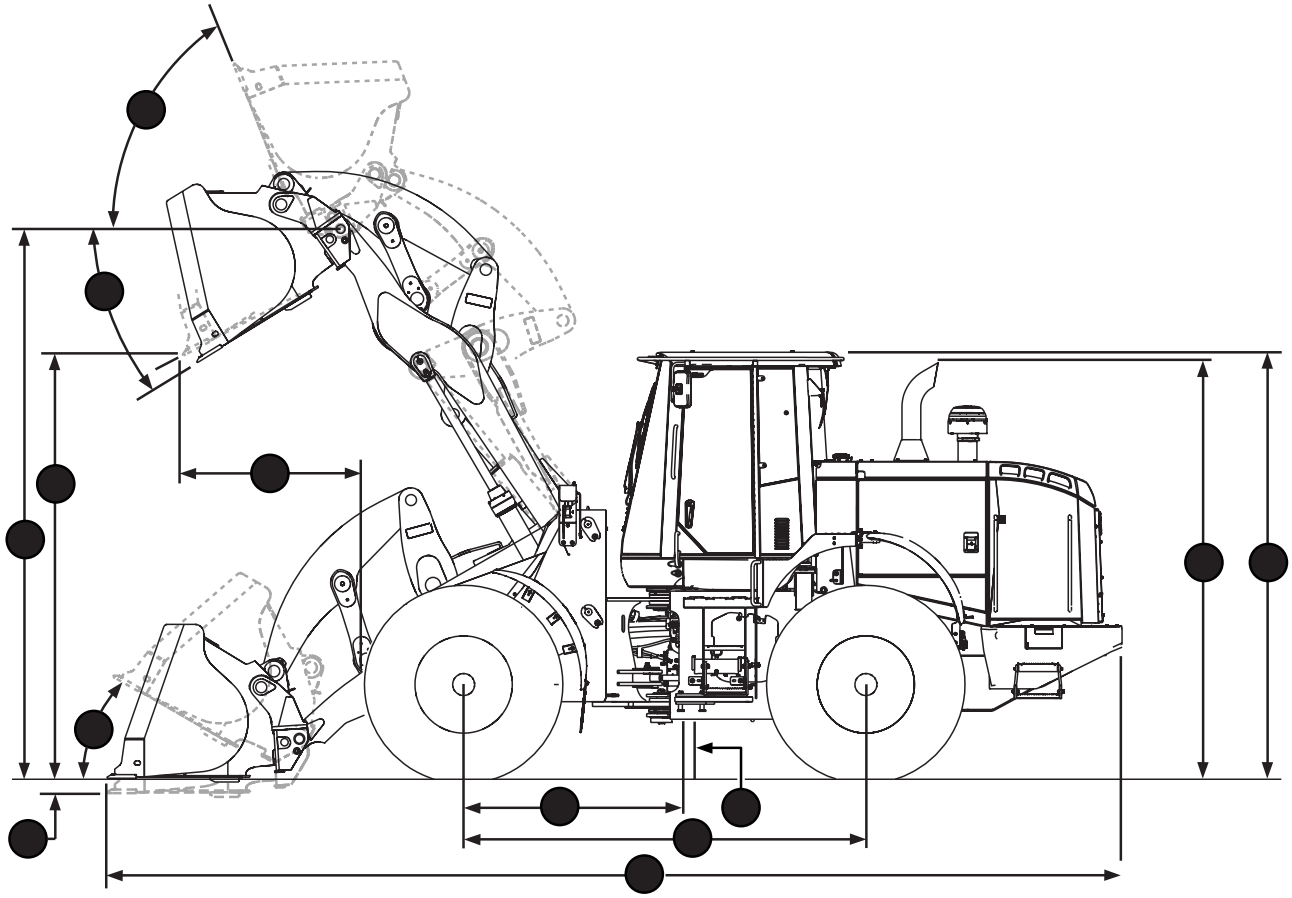
TX,STORAGE,SSM-19-20JAN11-1/2

Powerllel™ Specifications



TX1084357

TX1084357—UN—11NOV10

A—Overall Machine Height
B—Ground to Top of Exhaust Height
C—Machine to Ground Clearance
D—Centerline to Front Axle Length
E—Wheelbase Length
F—Dump Clearance Height
G—Bucket Hinge Height
H—Dump Reach
I—Maximum Digging Depth
J—Overall Machine Length
K—Maximum Rollback at Ground Level
L—Maximum Rollback at Full Height
M—Bucket Dump at Full Height

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ISO standards. Loader operating information is based on machine with identified linkage and standard equipment, ROPS cab, rear cast bumper/counterweight, transmission side-frame guards, bottom guards, standard tires, full fuel tank, hi vis attachment coupler, 4.0 cu. yd. (3.05 m³) hook-on bucket with bolt-on edge, and 175-lb. (79 kg) operator. This information is affected by changes in tires, ballast, and different attachments.

Item	Measurement	Specification
A—Overall Machine	Height	3.32 m 10 ft. 11 in.

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LB82152,0000A4F-19-16JAN12-1/2