210G and 210GLC Excavator

(PIN: 1FF210GX_ _F521988—)

OPERATOR'S MANUAL

210G and 210GLC Excavator (PIN: 1FF210GX_ _F521988—)

OMT364030X19 ISSUE F7 (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.

CARB Non-road Emissions Control Warranty Statement—Compression Ignition

Emissions Control Warranty Statement 2016 through 2018

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 2016 through 2018 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

7. LIMITATION OF LIABILITY. EXCEPT AS SET FORTH IN THE LIMITED WARRANTY, UNDER NO CIRCUMSTANCES SHALL LICENSOR, ITS AFFILIATES OR ITS THIRD PARTY SUPPLIERS BE LIABLE TO YOU OR TO ANY THIRD PARTIES FOR DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ANY LOSS OR DAMAGE CAUSED BY THE SOFTWARE; ANY PARTIAL OR TOTAL FAILURE OF THE SOFTWARE; PERFORMANCE, NONPERFORMANCE OR DELAYS IN CONNECTION WITH ANY INSTALLATION, MAINTENANCE, WARRANTY OR REPAIRS OF THE SOFTWARE, DAMAGES FOR CROP LOSS, DAMAGE TO LAND, LOST PROFITS, LOSS OF BUSINESS OR LOSS OF GOODWILL, LOSS OF USE OF EQUIPMENT OR SERVICES OR DAMAGES TO BUSINESS OR REPUTATION ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY ASPECT OF THIS AGREEMENT, WHETHER IN CONTRACT, TORT OR OTHERWISE, AND WHETHER OR NOT LICENSOR, ITS AFFILIATES OR ITS THIRD PARTY SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL LICENSOR'S CUMULATIVE LIABILITY TO YOU OR TO ANY OTHER PARTY FOR ANY LOSSES OR DAMAGES RESULTING FROM ANY CLAIMS, LAWSUITS, DEMANDS, OR ACTIONS ARISING FROM OR RELATING TO USE OF THE SOFTWARE EXCEED YOUR TOTAL PAYMENT FOR THE MACHINE AND FOR THE LICENSE OF THE SOFTWARE.

8. Termination of License. Licensor may terminate the license granted under this Agreement upon written notice of termination provided to you if you violate any material term of this Agreement pertaining to your use of the Software or Licensor's rights, including, without limitation, the provisions of Sections 2 and 3 above.

9. Compliance with Law. You agree that you will use the Software in accordance with United States law and the laws of the country in which you are located, as applicable, including foreign trade control laws and regulations. The Software may be subject to export and other foreign trade controls restricting re-sales and/or transfers to other countries and parties. By accepting the terms of this Agreement, you acknowledge that you understand that the Software may be so controlled, including, but not limited to, by the Export Administration Regulations and/or the foreign trade control regulations of the Treasury Department of the United States. Any other provision of this Agreement to the contrary notwithstanding, you agree that the Software will not be resold, re-exported or otherwise transferred. The Software remains subject to applicable U.S. laws.

10. Indemnification. You agree to defend, indemnify and hold Licensor, its affiliates and third party supplier, and their, officers, directors, employees, agents and representatives (each an "**Indemnified Party**"), harmless from and against all claims, demands proceedings, injuries, liabilities, losses, or costs and expenses (including reasonable legal fees) brought by any third party against any such persons arising from or in connection with your use of the Software, regardless of whether such losses are caused, wholly or partially, by any negligence, breach of contract or other fault of an Indemnified Party.

11. Costs of Litigation. If any claim or action is brought by either party to this License Agreement against the other party regarding the subject matter hereof, the prevailing party shall be entitled to recover, in addition to any other relief granted, reasonable attorney fees and expenses of litigation.

12. Severability and Waiver. Should any term of this Agreement be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms hereof. The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights of subsequent actions in the event of future breaches.

13. Language Clause. If you are a resident of Canada at the time you accept this Agreement, then the parties hereby acknowledge that they have required this Agreement, and all other documents relating hereto, be drawn up in the English language only. Les parties reconnaissent avoir demandé que le présent contrat ainsi que toute autre entente ou avis requis ou permis à être conclu ou donné en vertu des stipulations du présent contrat, soient rédigés en langue anglaise seulement. If you are a resident of any country other than the United States, Canada, Great Britain, Australia or New Zealand then you agree as follows: there may be a translated version of this Agreement. If there is an inconsistency or contradiction between the translated version and the English version of this Agreement, the English version of this Agreement shall control.

14. Assignment by Licensor. Licensor may assign this Agreement without your prior consent to any company or entity affiliated with Licensor, or by an assignment associated with a corporate restructuring, merger or acquisition.

15. Governing Law and Forum. This Agreement will be governed by and construed in accordance with the substantive laws identified in the table in Section 18, below The respective courts of the venue identified in the table in Section 18, below, for the location of the Machine shall have non-exclusive jurisdiction over all disputes relating to this Agreement. This Agreement will not be governed by the conflict of law rules of any jurisdiction or the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded.

16. Specific Exceptions.

Continued on next page

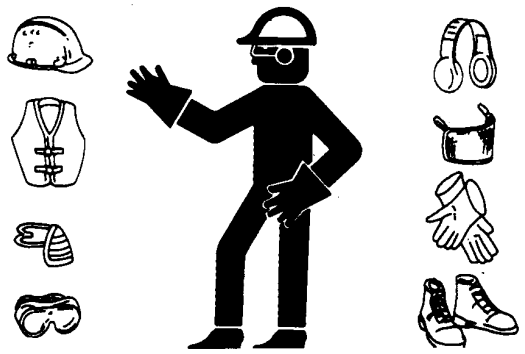
Wear Protective Equipment

Guard against injury from flying pieces or metal or debris; wear goggles or safety glasses.

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

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

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protection such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises. Radio or music headphones are not suitable to use for hearing protection.



TS206 —UN—15APR13

TX,WEAR,PE -19-22SEP10-1/1

Avoid Unauthorized Machine Modifications

John Deere recommends using only genuine John Deere replacement parts to ensure machine performance. Never substitute genuine John Deere parts with alternate parts not intended for the application as these can create hazardous situations or hazardous performance. Non-John Deere parts, or any damage or failures resulting from their use are not covered by any John Deere warranty.

Modifications of this machine, or addition of unapproved products or attachments, may affect machine stability or reliability, and may create a hazard for the operator or others near the machine. The installer of any modification which may affect the electronic controls of this machine is responsible for establishing that the modification does not adversely affect the machine or its performance.

Always contact an authorized dealer before making machine modifications that change the intended use, weight or balance of the machine, or that alter machine controls, performance or reliability.

AM40430,00000A9 -19-20AUG09-1/1

Control Pattern Selector—If Equipped

This machine may be equipped with a control pattern selector valve. Ensure all bystanders are clear of machine and area is large enough to operate machine functions. Verify the machine response to each control movement.

DB84312,00000A5 -19-07JUL15-1/1

Add Cab Guarding for Special Uses

Special work situations or machine attachments could create an environment with falling or flying objects. Working near an overhead bank, demolition work, using a hydraulic hammer or winch, working in a forestry application or wooded area, or working in a waste management application, for example, could require added guarding to protect the operator.

Additional level II FOPS (falling object protective structure), forestry protection packages, and special screens or guarding should be installed when falling or flying objects could enter or damage the machine. A rear screen should always be used with a winch to protect against a snapping cable. Before operating in any special work environments, follow the operator protection recommendations of the manufacturer of any specialized attachment or equipment. Contact your authorized John Deere dealer for information on protective guarding.

TX,CABGUARD -19-12FEB13-1/1

Avoid Machine Tip Over

Use seat belt at all times.

Do not jump if the machine tips. Operator will be unlikely to jump clear and the machine may crush the operator.

Load and unload from trucks or trailers carefully. Be sure truck is wide enough and on a firm level surface. Use loading ramps and attach them properly to truck bed. Avoid trucks with steel beds because tracks slip more easily on steel.

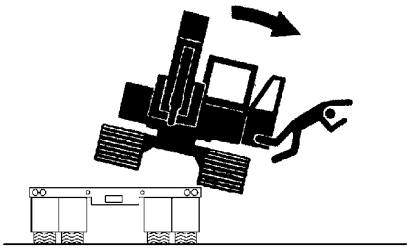
Be careful on slopes. Use extra care on soft, rocky or frozen ground. Machine may slip sideways in these conditions. When traveling up or down slopes, keep the bucket on uphill side and just above ground level.

Be careful with heavy loads. Using oversize buckets or lifting heavy objects reduces machine stability. Extending a heavy load or swinging it over side of undercarriage may cause machine to tip.

Ensure solid footing. Use extra care when operating near banks or excavations that may cave-in and cause machine to tip or fall.

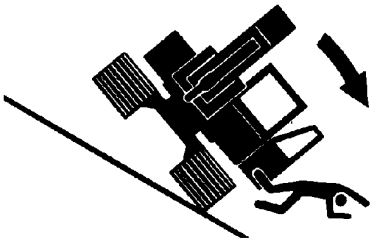
T1133716 —19—17APR13

Use Seat Belt



T1133545 —UN—15SEP00

Unloading Machine



T1133803 —UN—27SEP00

Do Not Jump

TX03679,00016DF -19-30JUN16-1/1

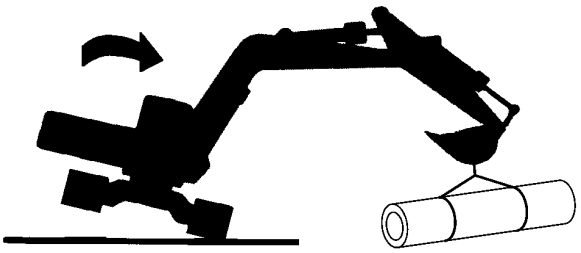
Use Special Care When Lifting Objects

Never use this machine to lift people.

Never lift a load above another person. Keep bystanders clear of all areas where a load might fall if it breaks free. Do not leave the seat when there is a raised load.

Do not exceed lift capacity limits posted on machine and in this manual. Extending heavy loads too far or swinging over undercarriage side may cause machine to tip over.

Use proper rigging to attach and stabilize loads. Be sure slings or chains have adequate capacity and are in good condition. Use tether lines to guide loads and prearranged hand signals to communicate with co-workers.



T1133839 —UN—27SEP00

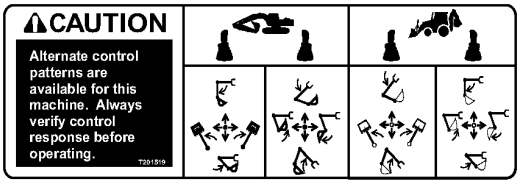
Use Special Care When Lifting Objects

TX03679,00016E1 -19-08JUL15-1/1

12. **CAUTION, Alternate Control Patterns—If Equipped**

Alternate control patterns are available for this backhoe. Always verify control response before operating.

This safety label is located inside the cab on the right-side window.



TX1104371 —19—12APR12

CAUTION, Alternate Control Patterns—If Equipped

KR46761,0000E43 -19-23FEB15-13/18

13. **CAUTION, Prevent Injury**

To prevent injury from the front window falling, lock window in place with the lock pin.

This safety label is located inside the cab on the right-side window.

TX1104376 —19—12APR12

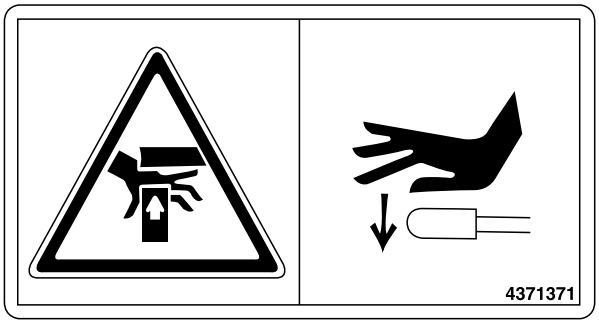
CAUTION, Prevent Injury

KR46761,0000E43 -19-23FEB15-14/18

14. **CAUTION, Pinch Point**

Avoid personal injury when operating seat fore-and-aft lever.

This safety label is located on the front of seat pedestal.



TX1157159 —UN—04APR14

CAUTION, Pinch Point

Continued on next page

KR46761,0000E43 -19-23FEB15-15/18

Cab Heater and Air Conditioner

CAB HEATER OPERATION

AUTO Operation

1. Press blower speed switch (1) while air conditioner is OFF to set blower speed to AUTO mode (blower speed setting and air flow setting are then selected automatically).
2. Rotate temperature control/mode switch (2) to reach operator's preferred cab degree heat setting. Temperature setting will change on the air conditioner display on the monitor as the switch is rotated either way. Blower speed and air flow settings adjust automatically to reach and maintain desired cab temperature.

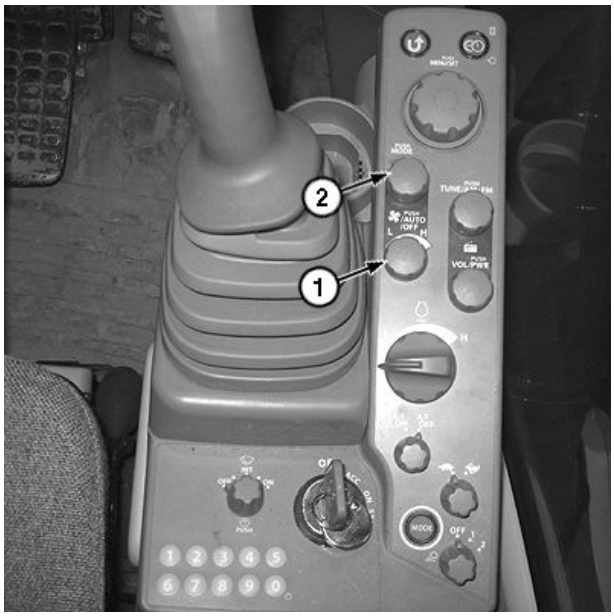
Manual Operation

1. Press blower speed switch (1) while air conditioner is OFF to set blower speed to AUTO mode. Rotate blower speed switch either way to cancel AUTO mode and set the blower speed manually to desired speed setting.
2. Rotate temperature control/mode switch (2) to reach operator's preferred cab degree heat setting. Temperature setting will change on the air conditioner display on the monitor as the switch is rotated either way.
3. Press temperature control/mode switch to toggle between different air vent options. The air conditioner display on the monitor will show the different settings each time the switch is pressed. There are four different settings:
   - Air flows out of front vent and the defroster vents.
   - Air flows out of front, rear, and the defroster vents.
   - Air flows out of front, rear, foot, and the defroster vents.
   - Air flows out of foot vents.

NOTE: Usually the cab heater turns the dehumidifier function off. Dehumidifier function can be turned on from monitor menu. See Main Menu—Air Conditioner. (Section 2-2.)

Defroster Operation

1. Press blower speed switch (1) while air conditioner is OFF to set blower speed to AUTO mode. During cold weather season when starting the engine, the engine coolant temperature and air temperature in the cab are low. The heater/air conditioner unit controls the blow rate to the minimum in order to restrict cool air from flowing into the cab.
2. Rotate temperature control/mode switch (2) to reach operator's preferred cab degree heat setting. Temperature setting will change on the air conditioner display on the monitor as the switch is rotated either way.
3. Set the circulation mode to fresh air using the monitor menu. See Main Menu—Air Conditioner. (Section 2-2.)
4. Once AUTO mode is operating and cab starts to heat up, press temperature control/mode switch to cancel AUTO mode and toggle between different air vent options. The air conditioner display on the monitor will show the different settings each time the switch is pressed. For best defrosting results, select either:
   - Air flows out of front vent and the defroster vents.
   - Air flows out of front, rear, and the defroster vents.
5. Control air flow direction by adjusting the vents in the cab to blow towards the windows.
6. Rotate temperature control/mode switch as needed to control preferred air temperature.
7. Rotate blower speed switch as needed to set preferred fan speed.



TX1086733A —UN—11JAN11

Cab Heater and Air Conditioner Operation

1— Blower Speed Switch

2— Temperature Control/Mode Switch

Air Conditioner Operation

NOTE: During off season, operate the air conditioner at least once a month for several minutes with the engine running at slow idle to protect each part of the air conditioner compressor from lack of lubricant.

AUTO Operation

1. Press blower speed switch (1) while air conditioner is OFF to set blower speed to AUTO mode (blower speed setting and air flow setting are selected automatically).
2. Rotate temperature control/mode switch (2) to reach operator's preferred cab degree cold air setting. Temperature setting will change on the air conditioner display on the monitor as the switch is rotated either way. Blower speed and air flow settings adjust automatically to reach and maintain desired cab temperature.

Manual Operation

Continued on next page

Monitor Functions

1. Auto-Idle Indicator: Displays if auto-idle mode is turned ON from the switch panel. For more information, see Switch Panel Functions. (Section 2-1.)

2. Auto-Shutdown Indicator: Displays if auto-shutdown was selected by operator from the menu screen. For more information, see Main Menu—Setting Menu—Auto-Shutdown in this section.

3. Work Mode Indicator: Displays icon for the current attachment being used (bucket mode, breaker, pulverizer, crusher, vibrating hammer, grapple, clamshell, or others). For more information, see Main Menu—Work Mode in this section.

4. Travel Speed Indicator: Displays travel speed selected from the switch panel (rabbit—fast speed travel or turtle—slow speed travel).

5. Exhaust Filter Indicator: Displays condition of the exhaust filter. Two different indicators could appear here:

- **Exhaust Filter Cleaning Indicator** appears when exhaust temperature is high during an auto or parked cleaning.
- **Exhaust Filter Auto Cleaning Disabled Indicator** appears when exhaust filter auto cleaning has been disabled by the operator. For more information, see Main Menu—Setting Menu—Auto Exhaust Filter Cleaning in this section.

6. Auxiliary Indicator: Displays optional auxiliary data indicator.

7. Power Mode Indicator: Displays a power mode selected from the switch panel (ECO, PWR, or H/P). For more information, see Switch Panel Functions. (Section 2-1.)

8. Auxiliary Indicator: Displays optional auxiliary data indicator.

9. Auxiliary Indicator: Displays optional auxiliary data indicator.

10. Not Used.

11. Hour Meter and Clock: Displays total machine operation hours counted since the machine started working in the unit of hours (h). One digit after the decimal point indicates tenths of an hour (6 minutes).

Clock indicates present time.

12. Engine Preheat Indicator:

IMPORTANT: Prevent engine damage. Do not use ether in this machine.

If preheating is required, the engine preheat indicator is automatically lit. If preheating is not required, this indicator will not display.

TX1086447 —UN—05JAN11

Exhaust Filter Cleaning Indicator

TX1086347 —UN—06JAN11

Exhaust Filter Auto Cleaning Disabled Indicator

13. Seat Belt Indicator: Displays when key switch is in ON position, and disappears 5 seconds after the engine starts.

14. Diesel Exhaust Fluid (DEF) Gauge: Displays approximate level of diesel exhaust fluid (DEF) remaining in the DEF tank. If Diesel Exhaust Fluid (DEF) is low, last segment of DEF gauge and outer ring illuminates yellow. When DEF level is severely low, engine power derates and last segment of DEF gauge illuminates yellow and blinks. When DEF level is empty, engine power and speed derates. All segments of DEF gauge are off, outer ring illuminates red, and warning indicators appear. Engine can start, but machine cannot be operated until DEF tank is filled. Fill DEF tank before last segment turns yellow.

15. Fuel Gauge: Displays remaining fuel amount as indicated by the needle. Fuel machine before needle reaches E.

16. Fuel Mark: If fuel sensor is malfunctioning, color of the fuel mark changes and the needle disappears. If the harness between the fuel sensor and the monitor unit is broken, the needle disappears but the fuel mark color does not change.

17. Sub Meter: Displays fuel consumption or breaker hours depending on what is set in the monitor. For more information, see Main Menu—Setting Menu—Sub Meter Selection in this section.

18. Coolant Temperature Gauge:

IMPORTANT: Possible engine damage may occur. If needle points to RED zone, idle engine to bring back to BLUE zone before stopping engine. If needle continues to rise, stop engine.

Displays engine coolant temperature. Needle should be around the center of the scale during operation.

19. Coolant Temperature Mark: If coolant temperature sensor is malfunctioning, color of the coolant temperature mark changes and the needle disappears. If the harness between the coolant temperature sensor and the monitor unit is broken, the needle disappears but the coolant temperature mark color does not change.

20. Air Conditioner Display: Shows blower fan speed, selected air vent, and temperature setting.

21. Radio Display: Shows current radio station, frequency, and volume setting.

Continued on next page

• **Diesel Exhaust Fluid (DEF) Alarm—**Diesel exhaust fluid (DEF) tank is empty or DEF quality is poor. Engine power is derated. Refill DEF tank as soon as possible.

TX1156518 —UN—20MAR14

Diesel Exhaust Fluid (DEF) Alarm

Monitor Display Messages

The monitor automatically displays a message for specific machine situations and certain diagnostic trouble codes (DTCs). Depending on machine situation or if a DTC is initially active, a message displays on the monitor until the situation changes or the DTC is resolved.

Display Message	Message Trigger
Exhaust Filter Cleaning Failed Aborted by Operator Cleaning Incomplete	The cleaning process was discontinued due to one of the following conditions: • Pilot shutoff lever is moved. • Engine speed dial is moved. • Parked cleaning is aborted due to a system fault. • Engine runs out of fuel. • Engine is shut off by operator (not recommended).
Exhaust Filter Cleaning Complete	Exhaust filter cleaning complete and machine is ready to return to operation.
REFILL DEF DEF Tank Level Low	DEF tank level is low.
REFILL DEF DEF Tank Empty Engine Power Limited	DEF tank level is empty.
REFILL DEF DEF Tank Empty Engine Power and Speed Limited	DEF tank level is empty.
DEF System Fault Engine Power and Speed Limited Check Active Codes	Initiated by active code.
DEF Quality Poor Engine Power and Speed Limited Check Active Codes	Poor DEF quality detected.
DEF System Fault Engine Power and Speed Limited Check Active Codes	Initiated by active code.

CN93077,000023B -19-26MAY16-27/27

Main Menu—Setting Menu—Rear View Camera Monitor

CAUTION: The rear camera image is designed to supplement other safety practices and is not intended to be the sole method of collision avoidance. Always be alert and aware of the surroundings when operating this machine to avoid possible injury or death to operator or others.

IMPORTANT: Prevent possible damage to the camera lens surface. The camera lens surface is a resin product. Lightly wipe the surface with a wet, clean cloth. Never use an organic solvent.

NOTE: When the Rear View Camera Monitor mode is enabled, the color of the preceding square is green and rear view image (1) is continuously displayed on the default screen.

The **Rear View Camera Monitor** menu provides the capability to turn the camera ON or OFF so the view behind the machine is shown on the monitor.

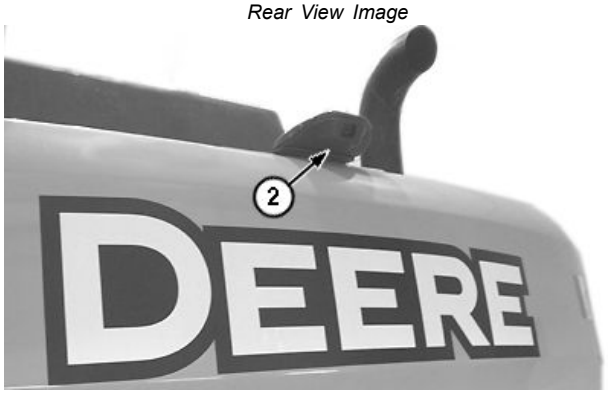
At Setting Menu, rotate monitor dial to highlight Rear View Camera Monitor. Press monitor dial to display Rear View Camera Monitor menu.

□ **ON (Enable)**
Press monitor dial to turn ON (enable) the rear camera on the monitor. Press monitor dial again to disable rear camera.

Never attempt to change the mounting position of the rear camera (2). If rear camera is not operating properly, see an authorized dealer.

Rear View Image

TX1160741A —UN—15MAY14



Rear Camera

TX1086331A —UN—28DEC10

1— Rear View Image **2— Rear Camera**

Press back button to return to previous screen.

Press home button to return to default screen.

CN93077,000023E -19-08MAR16-1/1

Cold Weather Start Aid

CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs.

IMPORTANT: Prevent possible damage to the engine. The diesel fired coolant heater is required for temperatures -20°C (-4°F) and below. See an authorized John Deere dealer.

IMPORTANT: Prevent possible damage to engine. Temperatures below -20°C (-4°F) require an additional warm-up period. See Cold Weather Warm-Up in this section.

This machine is equipped with glow plugs. Glow plugs are automatically controlled by the engine controller when the key is turned ON. Do not start engine until the engine preheat indicator disappears on the monitor.

ER79617,0000DC8 -19-04MAY15-1/1

Service ADVISOR™ Remote (SAR) Software Delivery Process

Theory of Operation

Service ADVISOR™ is a diagnostic tool used by John Deere dealers to perform diagnostics as well as updates to machine settings and software. Dealers can access diagnostic trouble codes and diagnostic addresses, create readings and recordings, and program controllers. This technology consists of both software and hardware. Technicians attend a minimum of 8 hours of training to become certified in utilizing this tool.

Service ADVISOR Remote (SAR) is a function of Service ADVISOR. SAR allows the dealer technician to connect to a SAR-enabled machine via the JDLink™ network to remotely access diagnostic trouble code information and record diagnostic data as well as program controllers.

Similar to software (payload) updates in the computer industry, SAR enables John Deere to remotely deliver updated software via the JDLink hardware on board. Remote programming gives John Deere the ability to update software to enhance the performance of the machine. This capability can be used to reprogram most machine controllers. The user actively participates with the dealer in this process by installing the software update.

NOTE: Some vehicle controllers may not be compatible for SAR reprogramming.

Service ADVISOR is a trademark of Deere & Company
JDLink is a trademark of Deere & Company

For more information about Service ADVISOR Remote, see an authorized John Deere dealer.

Vehicle Reprogramming

NOTE: Factory setting is set to always accept software downloads.

Normal machine operation can continue during the software download process.

Customer will be notified by John Deere or a John Deere dealer of pending software updates with appropriate installation instructions via letter or phone.

Customer can determine the appropriate time and place to install the new software on the machine. For more information, see Service ADVISOR™ Remote (SAR) Operation in this section.

Once the customer initiates installation of the software, SAR will start and manage the installation of the new payload to the appropriate machine controllers.

NOTE: Software download speed capability depends on JDLink cellular coverage.

OUT4001,000075A -19-19AUG15-1/1

Lower Boom With Engine Stopped

When an engine stops during operation, the boom cannot be lowered using the pilot controller because there is no pilot pressure oil to move the boom valve spool.

CAUTION: Prevent possible injury from unexpected machine movement. Clear all bystanders from the area before lowering the boom with the engine stopped.

1. Remove control valve access cover.

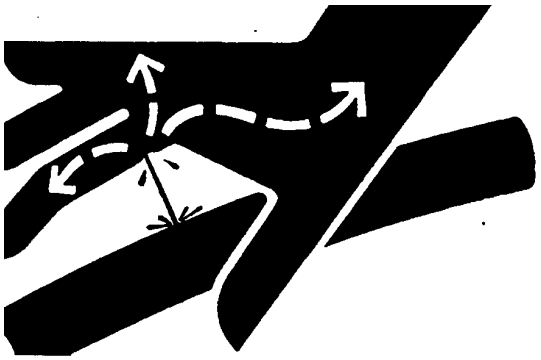
CAUTION: To avoid injury from escaping oil under pressure, stop engine and relieve the pressure in the system before disconnecting or connecting hydraulic or other lines. Tighten all connections before applying pressure.

NOTE: Never loosen screw more than 2 turns as screw may come off.

2. Loosen nut (1). Loosen boom manual lower screw (2) 1/2 turn. The boom will start to lower. The boom lowering speed can be adjusted by loosening screw more.
3. After the bucket is lowered to the ground, tighten screw, then nut to specification.

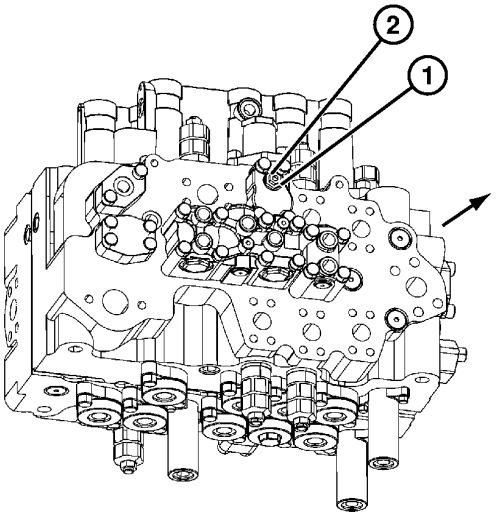
Specification	
Screw—Torque	7 N·m
	62 lb·in
Nut—Torque	13 N·m
	115 lb·in

1— Nut **2— Boom Manual Lower Screw**



X9811 —UN—23AUG88

Avoid Injury From Escaping Oil Under Pressure



TX1000642 —UN—29NOV05

TX1000642

Control Valve—Right Side Shown

CN93077,0000004 -19-19AUG15-1/1

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold-weather operation, a little extra care is necessary. The following information outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold-weather aids.

Use Winter Grade Fuel

When temperatures fall below 0 °C (32 °F), winter grade fuel (No. 1-D in North America) is best suited for cold-weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax begins to form in the fuel. This wax causes fuel filters to plug. **Pour point** is the lowest temperature at which movement of the fuel is observed.

NOTE: On average, winter grade diesel fuel has a lower Btu (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low-power complaints in cold-weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold-weather season. This generally extends operability to about 10 °C (18 °F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0 °C (32 °F). For best results, use with untreated fuel. Follow all recommended instructions on label.

BioDiesel

When operating with BioDiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) at 5 °C (41 °F) to treat BioDiesel fuels during the cold-weather season. Use B5 or lower blends at temperatures below 0 °C (32 °F). Use only winter grade petroleum diesel fuel at temperatures below -10 °C (14 °F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93 °C (200 °F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

DX,FUEL10 -19-15MAY13-1/1

Diesel Engine Coolant (engine with wet sleeve cylinder liners)

Preferred Coolants

The following pre-mix engine coolants are preferred:

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

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

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

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

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

Additional Recommended Coolants

The following engine coolant is also recommended:

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

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

Other Coolants

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

- Pre-mix coolant meeting ASTM D6210 requirements
- Coolant concentrate meeting ASTM D6210 requirements in a 40—60% mixture of concentrate with quality water

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

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

Water Quality

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

Coolant Drain Intervals

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

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

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

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

COOL-GARD is a trademark of Deere & Company

DX,COOL3 -19-15MAY13-1/1

Required Parts

REQUIRED PARTS							
Insure machine performance and availability; use only genuine John Deere parts. Verify part numbers are current and that any associated parts are also on hand, i.e., filter O-rings.							
Description	**Every 250 Hours**	**Every 500 Hours**	**Every 1000 Hours**	**Every 2000 Hours**	**Every 4000 Hours**	**Every 5000 Hours**	**Every 6000 Hours**
Engine Oil Filter		1	1	1	1	1	1
Primary Fuel Filter Element		1	1	1	1	1	1
Final Fuel Filter Element		1	1	1	1	1	1
Auxiliary Fuel Filter Element—If Equipped		1	1	1	1	1	1
Hydraulic Tank Oil Filter Element			1	1	1	1	1
Pilot Oil Filter Element			1	1	1	1	1
Primary Air Filter Element			1	1	1	1	1
Secondary Air Filter Element			1	1	1	1	1
Dust Unloader Valve			1	1	1	1	1
Open Crankcase Ventilation (OCV) Filter Element				1	1		1
Engine Rocker Arm Cover Gasket				1	1		1
Diesel Exhaust Fluid (DEF) Header Suction Screen (S.N. —524722)				1	1		1
Diesel Exhaust Fluid (DEF) Header Suction Filter (S.N. 524723—)					1		
Diesel Exhaust Fluid (DEF) Dosing Unit Filter				1	1		1
Diesel Exhaust Fluid (DEF) Tank Breather Filter					1		
Hydraulic Tank Vent Cap Filter Element						1	
Diesel Exhaust Fluid (DEF) Baffle (S.N. 524723—)	As Required						
Cab Fresh Air Filter	As Required						
Cab Recirculating Air Filter	As Required						
Diesel Particulate Filter (component of exhaust filter)	As Required						
John Deere Plus-50™ II Engine Oil[1]		20.8 L (5.5 gal.)	21.8 L (5.8 gal.)	21.8 L (5.8 gal.)	21.8 L (5.8 gal.)	21.8 L (5.8 gal.)	21.8 L (5.8 gal.)
API GL-5 Gear Oil[1]			6.2 L (1.6 gal.)	21.8 L (5.8 gal.)	21.8 L (5.8 gal.)	6.2 L (1.6 gal.)	21.8 L (5.8 gal.)
Hitachi SUPER EX 46HN Hydraulic Oil[1]						135.0 L (35.7 gal.)	
John Deere Cool-Gard™ II Pre-Mix							35.4 L (9.4 gal.)
Fluid Analysis Kits [2]							
Diesel Engine Oil	1	1	1	1	1	1	1
Hydraulic Oil		1	1	1	1	1	1
Travel Gear Case Oil		2	2	2	2	2	2
Swing Gear Case Oil		1	1	1	1	1	1
Pump Drive Gear Case Oil		1	1	1	1	1	1
Diesel Fuel		1	1	1	1	1	1
Engine Coolant		1	1	1	1	1	1
[1]For recommended oil viscosities based on operating temperatures, see Maintenance—Machine. (Section 3-1.) [2]Based on fluid analysis results, intervals may need to be adjusted for your operating conditions. Consult local John Deere dealer.							

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

KR46761,0000E32 -19-17NOV16-1/1

Inspect and Re-Torque Track Hardware

Each inspection and re-torquing should be documented by completing a service report for each unit, placing a copy of this report in the machine file, and forwarding a copy to the manufacturer's attention.

For shoes with missing or loose cap screws and nuts, remove shoes and clean the mating surface of shoes and links before replacing cap screws and nuts. The cap screws must be replaced because they have been stretched to yield previously.

IMPORTANT: Prevent possible machine damage. Operating a machine with loose shoes can cause the cap screws and holes in the shoes and links to wear, making it difficult to keep the shoes tight. Loose shoes can also cause hardware malfunction and loss of shoes.

Improper track shoe cap screw torque will result in serious damage to the undercarriage components, shorter life expectancy, and will void the manufacturer's warranty on the undercarriage components.

Checking Track Shoe Hardware Torque

1. Tighten cap screws in sequence to specification.

Specification

Cap Screw—Torque.....1556 N·m
1147.6 lb.-ft.

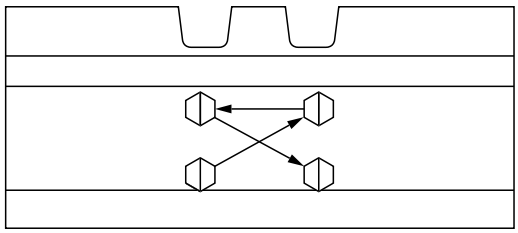
2. Cap screws that have turned have reduced tightness and need to be re-torqued.
3. Check track shoe holes for wear or damage. Replace as necessary.

Re-Torquing Track Shoe Hardware

1. Loosen cap screw.
2. Tighten cap screws in sequence to specification.

Specification

Cap Screw—Initial
Torque.....136.0 N·m
100.3 lb.-ft.



TX1176204 —UN—10NOV14

Cap Screw Torque Sequence

3. Re-torque cap screws in sequence to specification.

Specification

Cap Screw—Final
Torque..... 353.0 N·m + 1/3 Turn (120°)
260.4 lb.-ft. + 1/3 Turn (120°)

Torquing Replacement Track Shoe Hardware

IMPORTANT: Prevent possible machine damage. Clean shoe and link surfaces of dirt, paint, and debris before installation.

1. Clean shoe and link surfaces of dirt or paint.
2. Tighten cap screws in sequence to specification.

Specification

Cap Screw—Initial
Torque.....136.0 N·m
100.3 lb.-ft.

3. Torque cap screws in sequence to specification.

Specification

Cap Screw—Final
Torque..... 353.0 N·m + 1/3 Turn (120°)
260.4 lb.-ft. + 1/3 Turn (120°)

KR46761,0000BB6 -19-13APR16-1/1

Replace Final Fuel Filter

NOTE: Do not clean fuel tank inlet screen and change fuel filter at the same time. Clean fuel tank inlet screen and run engine before changing fuel filter.

1. Ensure key switch is in the OFF position.
2. Open right service door to access final fuel filter (1).
3. Thoroughly clean exterior of final fuel filter assembly and surrounding area.

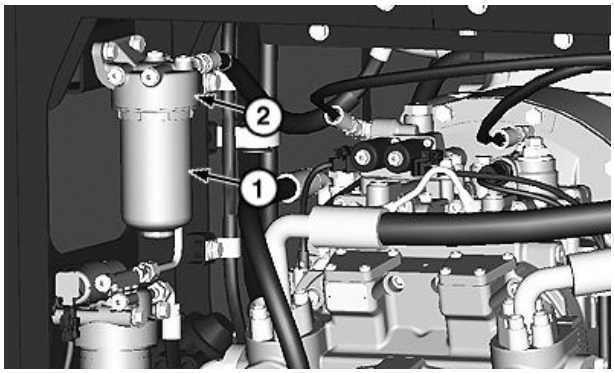
NOTE: Some fuel will be present in final fuel filter housing.

4. Remove final fuel filter using a filter wrench. Dispose of used filter properly.
5. Clean filter mounting base (2).

IMPORTANT: DO NOT prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

Only lubricate filter seal with diesel fuel before installing.

6. Install new final fuel filter onto mounting base. Rotate filter housing clockwise by hand. Tighten 1/2—3/4 turn after seal contacts mounting base.



TX1183481 —UN—27JAN15

Final Fuel Filter

1— Final Fuel Filter **2— Mounting Base**

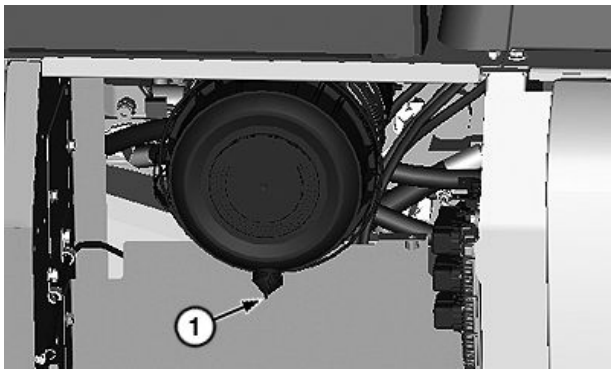
7. Prime fuel system and bleed air. See Bleed Fuel System. (Section 4-1.)
8. Operate engine and check for leaks.
9. Close service door.

KR46761,0000E5D -19-05MAR15-1/1

Replace Air Cleaner Dust Unloader Valve

IMPORTANT: Avoid machine damage. A missing, damaged, or hardened air cleaner dust unloader valve (1) will make the dust cup precleaner ineffective, causing very short element life. Valve should suck closed when engine is running.

1. On left side of machine, open front service door to access dust unloader valve (1).
2. Twist and pull on dust unloader valve to remove dust unloader valve from the air cleaner cover.
3. Install new dust unloader valve on air cleaner cover.
4. Close service door.



TX1156004 —UN—27MAR14

Dust Unloader Valve

1— Dust Unloader Valve

KR46761,0000BEE -19-29JAN15-1/1

Check Coolant Condition

CAUTION: Prevent possible injury from hot, spraying fluids. Shut off engine. Remove filler cap only when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.

NOTE: Coolant should be checked every 1000 hours or 1 year, or when replacing 1/3 or more of coolant using SERVICEGARD™ tool program.

1. Open engine cover to access surge tank.
2. Test engine coolant. See Testing Coolant Freeze Point. (Section 3-1.)
3. Install surge tank cap.

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TS281 —UN—15APR13

Pressurized Fluids

4. Close engine cover.

KR46761,0000BB7 -19-17APR17-1/1

Cooling System Fill and Deaeration Procedure

CAUTION: Prevent possible injury from hot spraying fluids. Shut off engine. Remove filler cap only when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.

IMPORTANT: Avoid mixing different brands or types of coolant. Coolant manufacturers engineer their coolants to meet certain specifications and performance requirements. Mixing different coolant types can degrade coolant and machine performance.

Use only permanent-type low silicate ethylene glycol base antifreeze in coolant solution. Other types of antifreeze may damage cylinder seals.

John Deere COOL-GARD™ II Pre-Mix coolant is recommended when adding new coolant to cooling system.

Follow directions on container for correct mixture ratio.

FREEZING TEMPERATURES: Fill with permanent-type, low silicate, ethylene glycol antifreeze (without stop-leak additive) and clean, soft water.

Fill

Remove surge tank cap (1) to relieve pressure. Fill surge tank to above the full hot mark. Replace surge tank cap.

Deaeration

The cooling system requires several warm-up and cool down cycles to deaerate. It will NOT deaerate during normal operation. Only during warm-up and cool down cycles will the system deaerate.

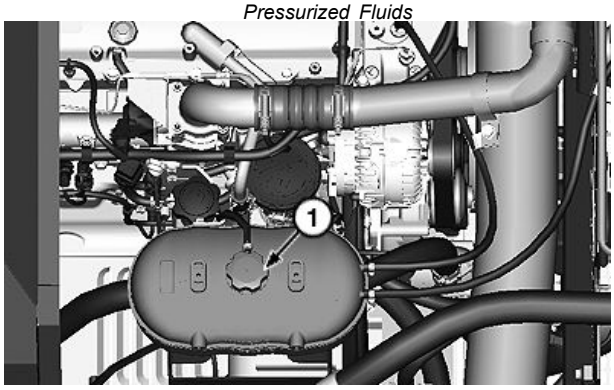
1. Start engine. Run engine until coolant reaches a warm temperature.
2. Stop engine. Allow coolant to cool.
3. Check coolant level at surge tank.
4. Repeat steps 1—3 until surge tank coolant level is repeatedly at the same level (stabilized).

NOTE: The level of the coolant in the cooling system MUST BE repeatedly checked after all drain and refill procedures to insure that all air is out of the system which allows the coolant level to stabilize. Check coolant level only when the engine is cold.

5. If necessary, fill surge tank to above the MIN COLD mark.

Pressurized Fluids

TS281 —UN—15APR13



Surge Tank

TX1183347 —UN—16FEB15

1— Surge Tank Cap

Specification	
Cooling System—Capacity	35.4 L 9.4 gal.

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KR46761,0000E58 -19-16FEB15-1/1

Replacing Fuses

The fuse box is located inside the cab underneath the left rear panel labeled FUSE.

Remove cover.

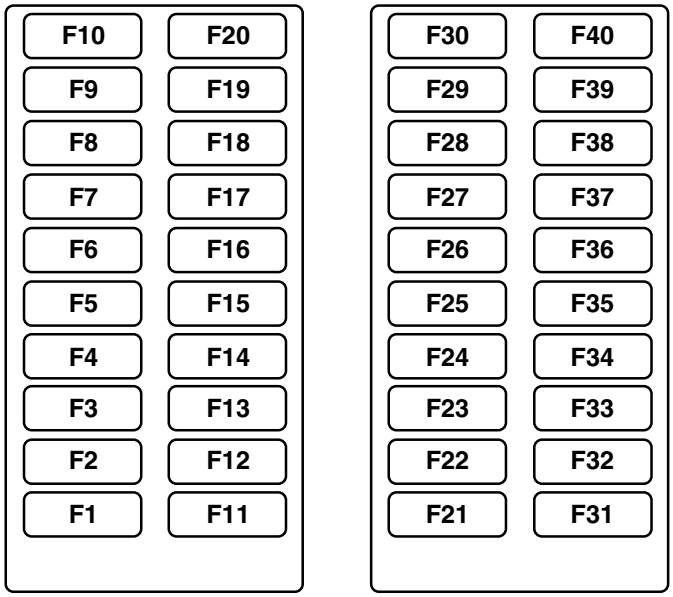
IMPORTANT: Install fuse with correct amperage rating to prevent electrical system damage from overload.

Additional fuses located in battery compartment:

- F60—ALT 65-Amp Fuse
- F61—BAT 45-Amp Fuse

Amperage Rating	Color
1	Black
3	Violet
4	Pink
5	Tan
7-1/2	Brown
10	Red
15	Light Blue
20	Yellow
25	Natural (white)
30	Light Green

Fuse Color Codes



TX1161372

TX1161372 —UN—22MAY14

Fuse Blocks

F1 — LAMP 20-Amp Fuse
F2 — WIPER 10-Amp Fuse
F3 — HEATER 20-Amp Fuse
F4 — SOLENOID 20-Amp Fuse
F5 — OPT. 1 (ALT) 5-Amp Fuse
F6 — OPT. 2 (ALT) 20-Amp Fuse
F7 — START 5-Amp Fuse
F8 — ECU P1 20-Amp Fuse
F9 — BACK UP 10-Amp Fuse
F10 — CONTROLLER 5-Amp Fuse
F11 — TRAVEL ALARM 5-Amp Fuse
F12 — RADIO 5-Amp Fuse
F13 — LIGHTER 10-Amp Fuse
F14 — MONITOR 5-Amp Fuse
F15 — AUX 10-Amp Fuse
F16 — 12V UNIT 10-Amp Fuse
F17 — POWER ON 5-Amp Fuse
F18 — IDLE STOP 5-Amp Fuse
F19 — HORN 10-Amp Fuse
F20 — OPT. 3 (BAT) 5-Amp Fuse
F21 — SEAT HEATER 10-Amp Fuse
F22 — CAB LAMP FRONT 10-Amp Fuse
F23 — CAB LAMP REAR 10-Amp Fuse
F24 — IMOBI 5-Amp Fuse
F25 — QUICK HITCH 5-Amp Fuse
F26 — AUX 3 5-Amp Fuse
F27 — NOT USED
F28 — NOT USED
F29 — NOT USED
F30 — NOT USED
F31 — SEAT COMPR 10-Amp Fuse
F32 — CAB LAMP FRONT +2 10-Amp Fuse
F33 — WARNING LAMP 10-Amp Fuse
F34 — AUX 2 10-Amp Fuse
F35 — DIAG 5-Amp Fuse
F36 — ECU P2 20-Amp Fuse
F37 — ECU P3 20-Amp Fuse
F38 — ECU P4 20-Amp Fuse
F39 — NOT USED
F40 — NOT USED

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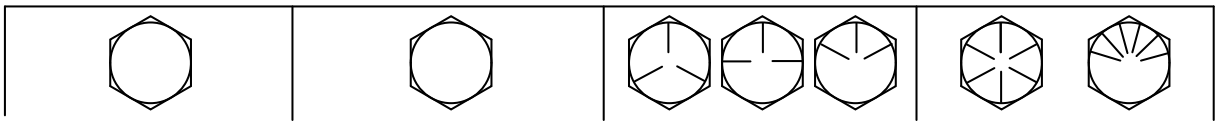
KR46761,0000E37 -19-01SEP15-1/3

Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



Bolt or Screw Size	SAE Grade 1				SAE Grade 2[a]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]	
	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.	N·m	lb.-in.
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N·m	lb.-ft.	N·m	lb.-ft.
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N·m	lb.-ft.	N·m	lb.-ft.				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N·m	lb.-ft.	N·m	lb.-ft.	N·m	lb.-ft.								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N·m	lb.-ft.														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

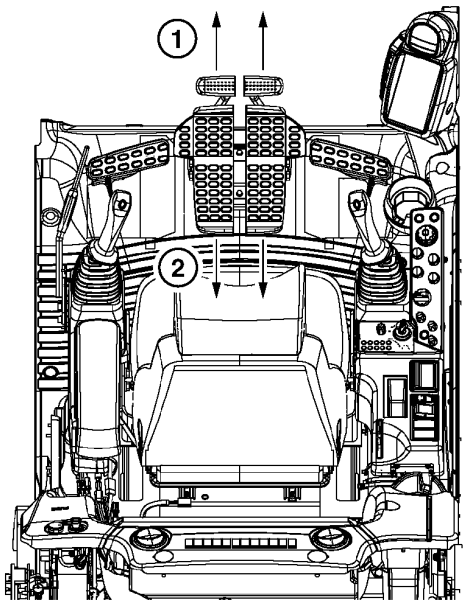
[a] Grade 2 applies for hex cap screws (not hex bolts) up to 6 in. (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

[b] "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C, F13F or F13J zinc flake coating.

[c] "Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B, F13E or F13H zinc flake coating.

DX,TORQ1 -19-12JAN11-1/1

Travel Lever and Pedal Neutral Checks



TX1157583 —UN—09APR14

Travel Lever and Pedal

1— Forward
2— Rearward

Push both travel levers and pedals forward (1), then release.

Pull both travel levers and pedals rearward (2), then release.

FEEL: Do levers and pedals require equal effort to operate in forward and reverse?

LOOK: Do levers and pedals return to neutral at the same time when released?

YES: Go to next check.

NO: See your authorized dealer.

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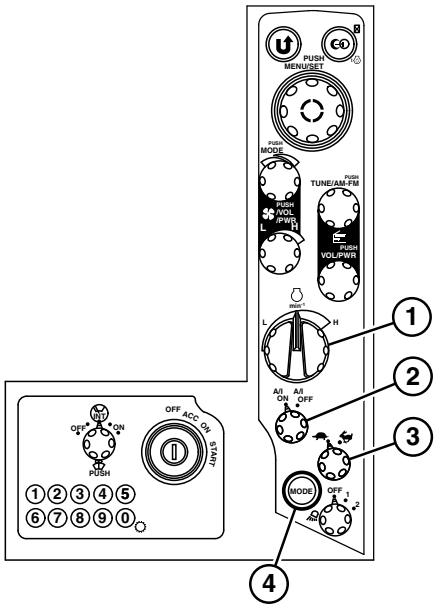
KR46761,0000E83 -19-04AUG15-13/56

ECO (economy) Mode and PWR (power) Mode Checks



TX1086753 —UN—11JAN11

Switch Panel

1— Engine Speed Dial
2— Auto-Idle Switch
3— Travel Speed Switch
4— Power Mode Button

Turn auto-idle switch (2) to A/I OFF position.

Turn engine speed dial (1) to H (fast idle) position.

Press and release power mode button until ECO (economy) mode is displayed on monitor.

LOOK/LISTEN: Does engine speed decrease?

Press and release power mode button (4) until PWR (power) mode is displayed on monitor.

LOOK/LISTEN: Does engine speed increase?

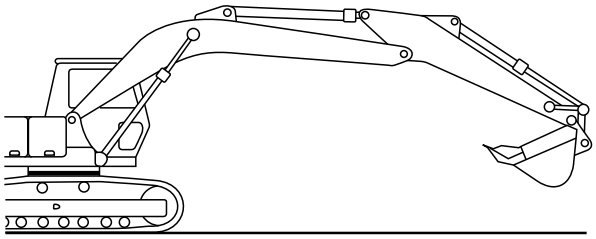
YES: Go to next check.

NO: See your authorized dealer.

Continued on next page

KR46761,0000E83 -19-04AUG15-25/56

Dig Function Drift Check (loaded bucket)



TX1095487 —UN—28JUN13

Machine Position—Loaded Bucket

Fill bucket with material to specification.

Specification

Loaded Bucket—Weight (approximate)..... 1050 kg
2315 lb.

Position bucket at maximum reach with bucket pivot pin at same height as boom pivot pin.

Retract arm cylinder, then extend about 50 mm (2 in.).

Extend bucket cylinder, then retract about 50 mm (2 in.).

Stop engine.

Measure amount cylinders extend or retract in 5 minutes.

Measure distance from bottom of bucket to ground.

Compare measurements to specifications.

Dig Function Drift Specifications (loaded bucket)—Specification

Boom Cylinder—Drift..... 20 mm
0.79 in.

Arm Cylinder—Drift..... 20 mm
0.79 in.

Bucket Cylinder—Drift..... 20 mm
0.79 in.

Bottom Of Bucket-To-Ground—Drift..... 150 mm
5.91 in.

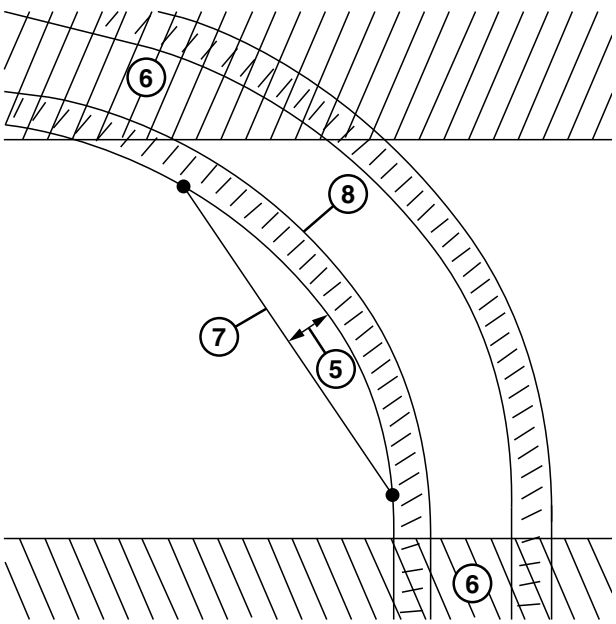
LOOK: Is cylinder drift within specification?

YES: Go to next check.

NO: See your authorized dealer.

Continued on next page

KR46761,0000E83 -19-04AUG15-36/56



TX1120481 —UN—17AUG12

Tracking Check

5— Distance of Mistrack
6— Acceleration and Deceleration Zone (approximate): 3—5 m (10—16 ft.)
7— Test Line (distance): 20 m (66 ft.)
8— Track Print

Operate machine at full travel forward speed on a flat and level surface approximately 30 m (99 ft.).

NOTE: When machine mistracks right, hydraulic pump 1 circuit oil flow may be less than specification. When machine mistracks left, hydraulic pump 2 circuit oil flow may be less than specification.

Observe direction of mistrack.

Create a straight test line 20 m (66 ft.) (7) long between two points on track print (8).

Measure and record greatest distance of mistrack (5) between inside edge of track print and test line.

Repeat procedure in reverse travel.

LOOK: Does machine mistrack less than 200 mm (7.87 in.)?

YES: Go to next check.

NO: Check track sag. See Check and Adjust Track Sag. (Section 3-3.)

IF OK: See your authorized dealer.

Continued on next page

KR46761,0000E83 -19-04AUG15-47/56

Miscellaneous—Troubleshooting

Troubleshooting Procedure

NOTE: Troubleshooting charts are arranged from the simplest to verify, to least likely, more difficult to verify. When diagnosing a problem, use all possible means to isolate the problem to a single component or system. Use the following steps to diagnose problems:

Step 1. Operational Checkout Procedure

Step 2. Troubleshooting Charts

Step 3. Adjustments

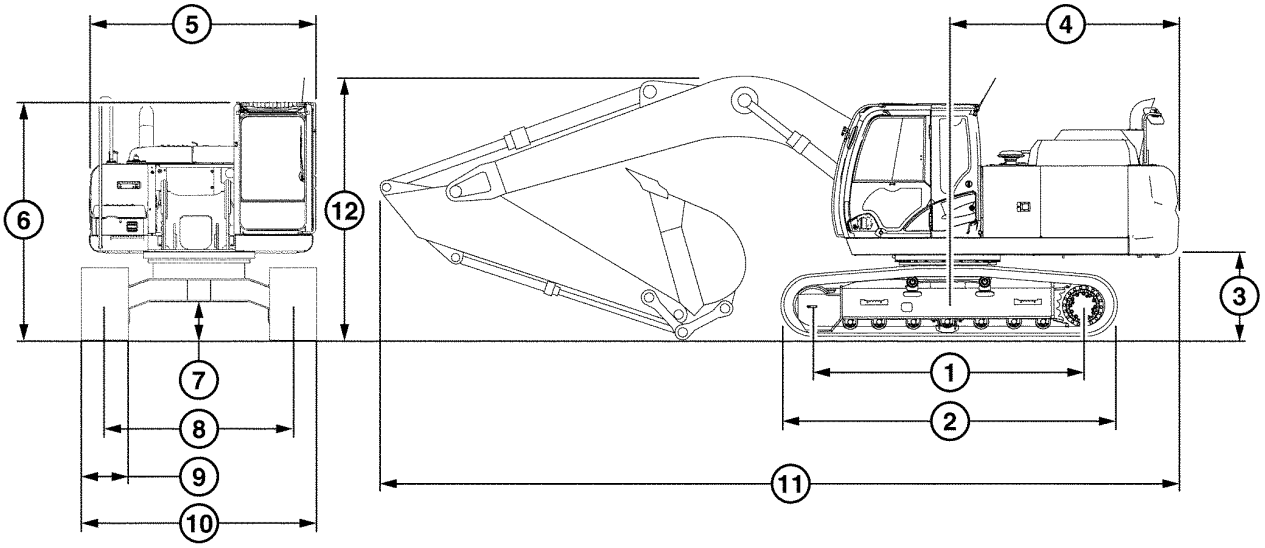
Step 4. See your authorized John Deere dealer.

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

Symptom	Problem	Solution
	Alternator bearing	Loosen alternator belts. Turn pulley by hand. If any roughness is felt, repair alternator.
No Monitor Panel Indicators or Gauges Work	Fuse	Check CONTROLLER 5-amp fuse (F10). Replace if necessary.
No Switch Panel Switches or Engine Speed Dial Work	Fuse	Check POWER ON 5-amp fuse (F17). Check MONITOR 5-amp fuse (F14). Check SOLENOID 20-amp fuse (F4). Check BACK UP 10-amp fuse (F9). Replace if necessary.

KR46761,0000C36 -19-04FEB16-3/3

210G and 210GLC Machine Specifications



TX1184220 —UN—05FEB15

TX1184220

Machine Specifications

1— Sprocket Center to Idler Center Distance
2— Undercarriage Length
3— Counterweight Clearance
4— Rear End Swing Radius
5— Upperstructure Width
6— Cab Height
7— Minimum Ground Clearance
8— Center of Sprocket to Center of Sprocket Distance
9— Track Shoe Width
10— Machine Overall Width
11— Machine Overall Length
12— Machine Transport Height

NOTE: Specifications and design are subject to change without notice. Wherever applicable, specifications are in accordance with PCSA and SAE standards. Except where otherwise noted these specifications are based on a machine equipped with 800 mm (32 in.) shoes, 4250 kg (9370 lb.) counterweight, 2.91 m (9 ft. 7 in.) arm, 886 kg (1951 lb.) 0.91 m^3 (1.19 yd^3) bucket, full fuel tank, 79 kg (175 lb.) operator and standard equipment.

Item	Measurement	Specification
1—Sprocket Center to Idler Center		
210G	Distance	3350 mm 11 ft. 0 in.
210GLC	Distance	3660 mm 12 ft. 0 in.
2—Undercarriage		
210G	Length	4170 mm 13 ft. 8 in.
210GLC	Length	4470 mm 14 ft. 8 in.
3—Counterweight	Clearance	1030 mm 3 ft. 5 in.
4—Rear End Swing	Radius	2890 mm 9 ft. 6 in.

Continued on next page

210G Lift Capacity—Arm: 2.91 m (9 ft. 7 in.); Bucket: 666 kg (1468 lb.); Shoe: 800 mm (32 in.)

Ratings are at bucket lift hook, using standard counterweight, situated on firm, level, uniform supporting surface.

Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine. Figures marked with an asterisk (*) are hydraulically-limited capacities. Remaining figures are stability-limited capacities.

Arm: 2.91 m (9 ft. 7 in.)	**Bucket: 666 kg (1468 lb.)**		**Shoe: 800 mm (32 in.)**	
Power Dig: On				
LIFTING OVER FRONT				
Load Point Height	**Horizontal Distance From Centerline of Rotation**			
m (ft.)	**1.5 (5)**	**3.0 (10)**	**4.5 (15)**	**6.0 (20)**	**7.5 (25)**
6.0 (20)				4650* (10 210*)	
4.5 (15)			6030* (13 010*)	5200* (11 310*)	4750 (10 190)
3.0 (10)			7950* (17 100*)	6070* (13 150*)	4640 (9970)
1.5 (5)			9680* (20 880*)	6450 (13 880)	4520 (9710)
Ground Line		4270* (9930*)	10 000 (21 460)	6270 (13 480)	4420 (9520)
-1.5 (-5)	4900* (11 010*)	8520* (19 440*)	9910 (21 270)	6190 (13 320)	4400 (9470)
-3.0 (-10)	9390* (21 140*)	13 810* (29 920*)	9650* (20 840*)	6230 (13 410)	
-4.5 (-15)		10 680* (22 820*)	7540* (16 000*)		
LIFTING OVER SIDE					
Load Point Height	**Horizontal Distance From Centerline of Rotation**			
m (ft.)	**1.5 (5)**	**3.0 (10)**	**4.5 (15)**	**6.0 (20)**	**7.5 (25)**
6.0 (20)				4640 (9960)	
4.5 (15)			6030* (13 010*)	4480 (9640)	3020 (6480)
3.0 (10)			6670 (14 380)	4250 (9140)	2920 (6280)
1.5 (5)			6180 (13 330)	4010 (8640)	2810 (6040)
Ground Line		4270* (9930*)	5920 (12 760)	3850 (8290)	2730 (5860)
-1.5 (-5)	4900* (11 010*)	8520* (19 440*)	5850 (12 590)	3780 (8140)	2700 (5820)
-3.0 (-10)	9390* (21 140*)	11 650 (24 970)	5910 (12 730)	3820 (8220)	
-4.5 (-15)		10 680* (22 820*)	6120 (13 200)		

* Hydraulically Limited Capacities

KR46761,0000E93 -19-05MAR15-1/1

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