Air, Fuel, Coolant, and Exhaust Maintenance

Required Emission-Related Information

Service Provider

A qualified repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

HK75640,000107D-19-14SEP20

Recommended Dealer Performed Service

NOTE: See the Maintenance Intervals section for recommended service intervals.

Check Engine Coolant Properties

MAINTENANCE INTERVAL
Annually

Ask your John Deere dealer to check engine coolant properties. Use Cool-Gard™ II only if additional coolant is required.

Flush Cooling System and Replace Thermostat

MAINTENANCE INTERVAL

Every 4500 Hours If Cool-Gard™ II is used. Machine must be initially filled and only serviced with properly diluted Cool-Gard™ II coolant.

Every 2000 Hours If Cool-Gard™ II is not used.

Have your John Deere dealer flush the cooling system, replace thermostat and fill the system with Cool-Gard™ II.

Drain and Flush Fuel Tank

MAINTENANCE INTERVAL
Every 300 Hours

If excessive amounts of water or dirt are found in the fuel filter and water separator, ask your John Deere dealer to drain and flush fuel tank.

LGCKF7U,0000C18-19-11MAY21

Check Engine and Exhaust Compartments for Debris

IMPORTANT: Directing pressurized water at electronic/electrical components, connectors, bearings and hydraulic seals, fuel injection pump, or other sensitive components can cause product malfunctions. Reduce pressure and spray at a 45 to 90 degree angle.

Directing pressurized air at electronic/electrical components or connectors can cause buildup of static electricity and product malfunctions.

Never steam clean or pour cold water on an injection pump that is operating or hot. Pump could seize.

1. Shut off engine and allow to cool.
2. Open and raise engine hood.
3. Remove any crop or debris within engine and exhaust compartments, especially around turbocharger, exhaust manifold, and exhaust aftertreatment system.
4. Reinstall all shields. Close and securely latch hood.

LGCKF7U,0000C19-19-11MAY21

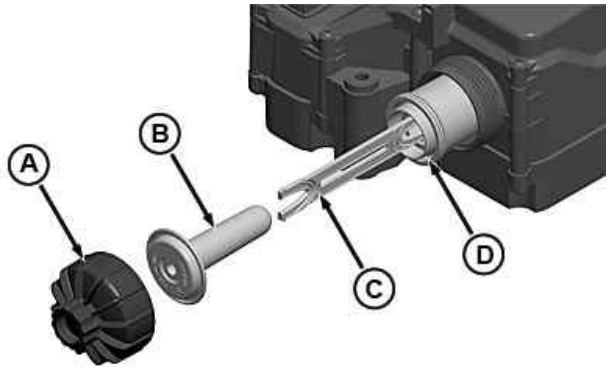
Clean Diesel Particulate Filter (DPF)

1. When exhaust filter and warning light indicators are illuminated, ensure that exhaust filter cleaning is set to “Auto”.
2. Operate machine above 1200 rpm to allow an automatic exhaust filter cleaning to occur.
3. If indicators remain illuminated after an automatic cleaning has occurred, additional cleaning is required. Perform parked exhaust filter cleaning (if system allows). (See Air, Fuel, Coolant, and Exhaust Operation section for procedure.)
4. If a parked exhaust filter cleaning has been performed and exhaust filter and warning light indicators are still illuminated, contact your John Deere dealer.

LGCKF7U,0000C1A-19-11MAY21

Change Diesel Exhaust Fluid (DEF) Dosing Unit Filter

MAINTENANCE INTERVAL
Every 1500 Hours



RG22534—UN—21MAR13

DEF Dosing Unit Filter

A—DEF Dosing Unit Filter Cover
B—DEF Dosing Unit Filter Equalizing Element
C—DEF Dosing Unit Filter Tool (supplied with new filter)
D—DEF Dosing Unit Filter

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

NOTE: Servicing DEF dosing unit filter may require removing additional covers or components.

1. Remove DEF dosing unit filter cover (A).
2. Remove and discard DEF dosing unit filter equalizing element (B).

NOTE: DEF dosing unit filter tool (C) is supplied with replacement filter.

3. Insert “Black” end of DEF dosing unit filter tool (C) into DEF dosing unit filter (D) until CLICK is felt or heard indicating DEF dosing unit filter tool is fully engaged.

NOTE: A tool such as a screwdriver can be inserted into DEF dosing unit filter tool slot to assist removal.

4. Pull DEF dosing unit filter tool and DEF dosing unit filter from DEF dosing unit. Discard DEF dosing unit filter and DEF dosing unit filter tool.
5. Clean DEF dosing unit threads and mating surfaces with distilled water.
6. Lubricate DEF filter O-rings with clean DEF. Carefully insert DEF dosing unit filter into DEF dosing unit.
7. Install new DEF dosing unit filter equalizing element into DEF dosing unit filter.
8. Install DEF dosing unit filter cover and tighten to specification.

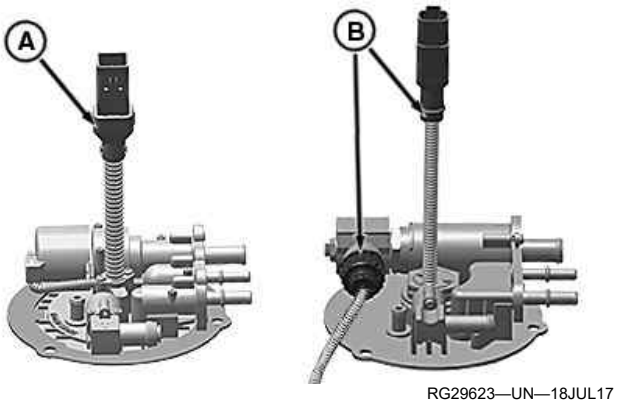
Specification	
DEF Dosing Unit Filter Cover—Torque	23 N·m (204 lb·in)

HK75640,0001081-19-14SEP20

Replace Diesel Exhaust Fluid (DEF) Tank Header Suction Screen

MAINTENANCE INTERVAL
Every 1500 Hours

DEF Tank Header Identification



RG29623—UN—18JUL17

DEF Tank Header Identification

A—Type A DEF Tank Header (one electrical connection)
B—Type B DEF Tank Header (two electrical connections)

NOTE: Accessing DEF tank header may require removing additional covers or components.

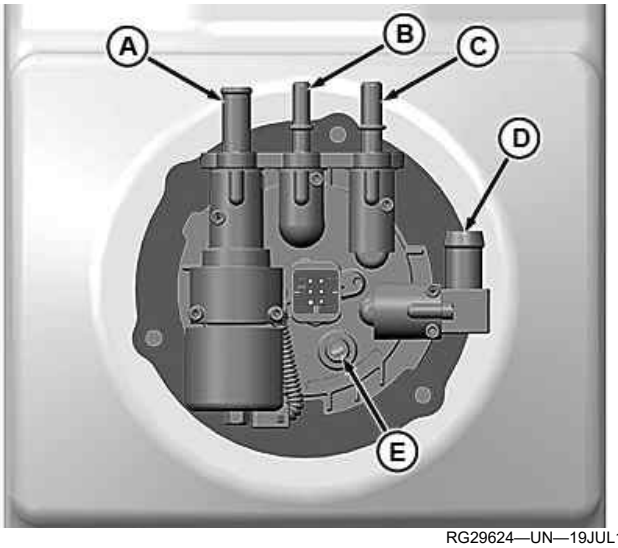
Type A DEF tank header has one wiring harness connection (A). Type B DEF tank header has two wiring harness connections (B). Refer to the procedure that is applicable to your DEF tank header.

Replace Type A DEF Tank Header Suction Screen

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.



RG29624—UN—19JUL17

DEF Tank Header Fittings

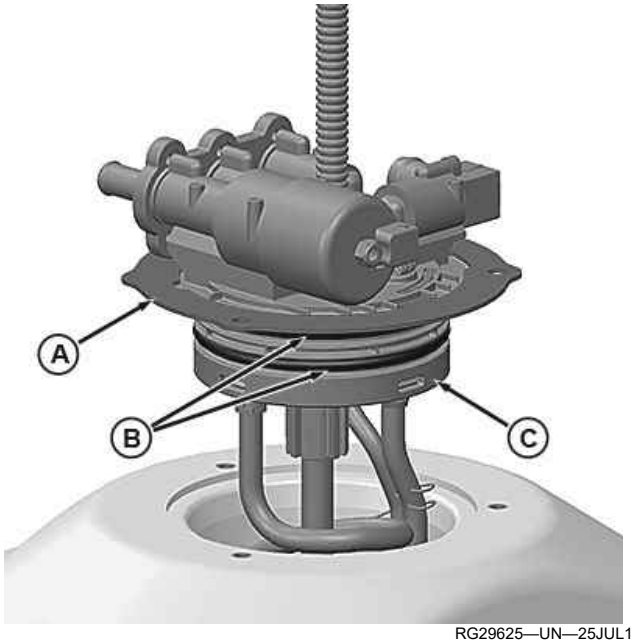
A—Coolant Outlet Fitting
B—DEF Return Line Fitting
C—DEF Supply Line Fitting
D—Coolant Inlet Fitting
E—Vent Line Fitting

1. Clear all debris from area around DEF tank header.

CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns. Before disconnecting coolant hoses, wait until engine coolant is cool enough to touch the surge tank cap with bare hands. Slowly loosen the surge tank cap to first stop to relieve pressure.

IMPORTANT: Cap and plug all lines and fittings to prevent contamination. Coolant in DEF causes Selective Catalytic Reduction (SCR) system performance issues.

2. Disconnect coolant hoses from fittings (A and D).
3. Disconnect DEF return and supply lines from fittings (B and C).
4. Disconnect DEF tank header electrical connector.
5. Remove vent hose from fitting (E).

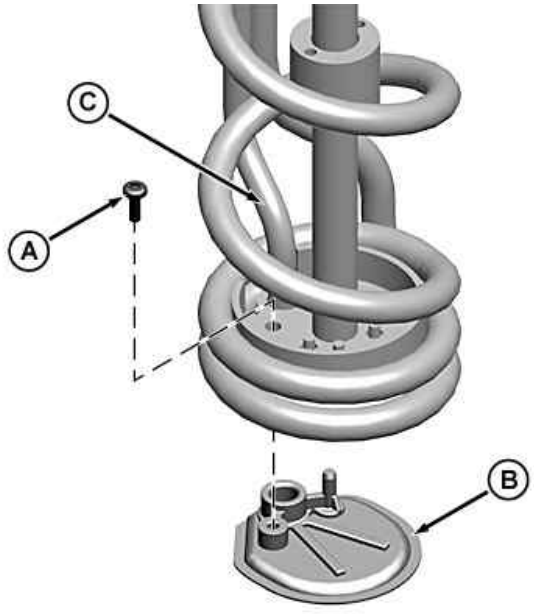


RG29625—UN—25JUL17

DEF Tank Header

A—DEF Tank Header Locking Ring
B—O-Ring (2 used)
C—DEF Tank Header

6. Remove cap screws from DEF tank header locking ring (A).
7. Remove DEF tank header (C) from tank.
8. Remove O-rings (B) and inspect for damage.
9. Replace O-rings (B) if necessary.



RG23672—UN—01JUL13

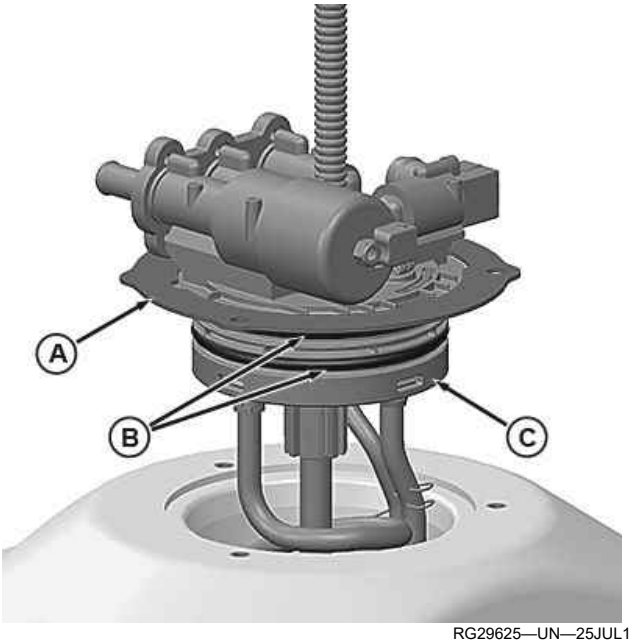
DEF Suction Screen

A—Screw
B—Suction Screen
C—Suction Tube

10. Remove screw (A) that secures suction screen (B) to suction tube (C).
11. Remove suction screen (B).
12. Install suction screen (B) to suction tube (C).
13. Install screw (A) and tighten to specification.

Specification

DEF Suction Screen
Screw—Torque. . . . . 1 N·m (11 lb·in)

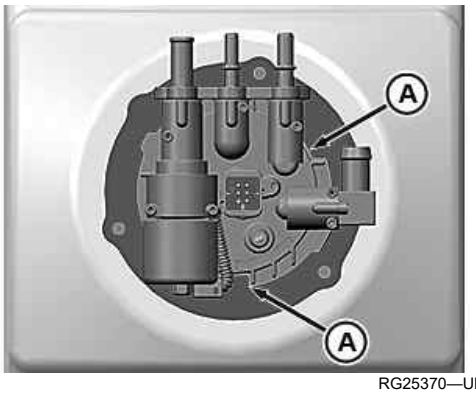


RG29625—UN—25JUL17

DEF Tank Header

A—DEF Tank Header Locking Ring
B—O-Ring (2 used)
C—DEF Tank Header

14. Lubricate O-rings (B) with clean DEF.
15. Insert DEF header into tank and align holes on locking ring (A) with holes in tank.



RG25370—UN—03APR14

Alignment Notches

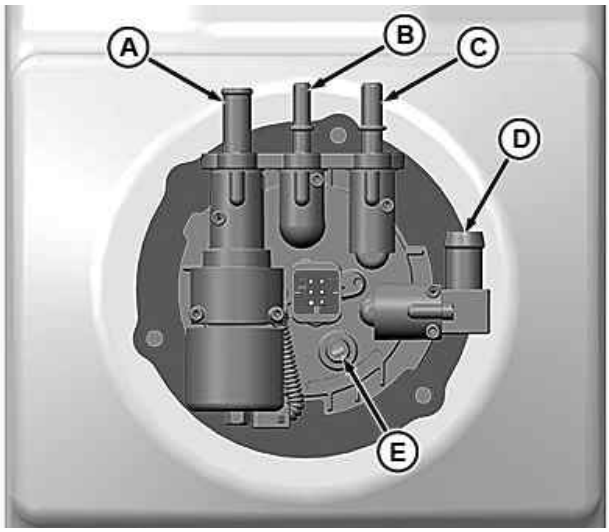
A—Alignment Notch (2 used)

IMPORTANT: Prevent DEF leak, header, and lock ring damage. Ensure that alignment notches on the locking ring are properly aligned with plastic tabs on the header.

16. Install stainless steel cap screws into mounting holes and tighten to specification.

Specification

DEF Tank Header M6 Cap
Screw—Torque. . . . . 9 N·m (80 lb·in)



RG29624—UN—19JUL17

DEF Tank Header Fittings

A—Coolant Outlet Fitting
B—DEF Return Line Fitting
C—DEF Supply Line Fitting
D—Coolant Inlet Fitting
E—Vent Line Fitting

17. Connect 9.5-mm (3/8-in) vent hose to fitting (E).
18. Connect 16-mm (5/8 in) coolant hose to coolant inlet fitting (D).
19. Connect 13-mm (1/2 in) coolant hose to coolant outlet fitting (A).

IMPORTANT: Push DEF line onto fitting until you hear a “click”, then lightly pull back to ensure that it is connected and locked in place.

NOTE: DEF supply and return lines have unique sized fittings.

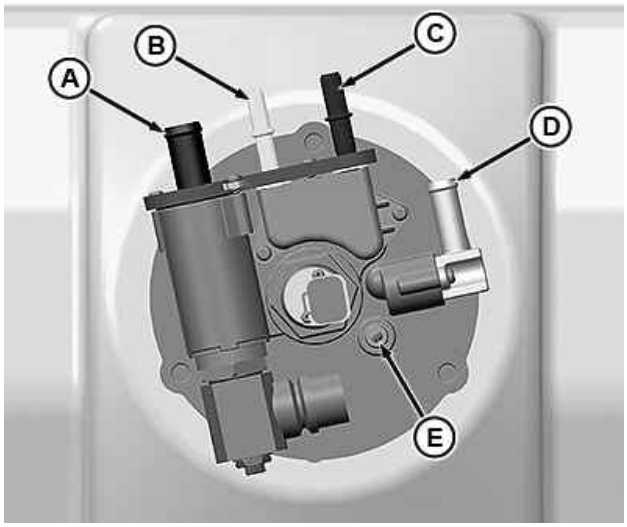
20. Connect DEF return and supply lines to fittings (B and C).
21. Connect DEF tank header electrical connector.

Replace Type B DEF Tank Header Suction Screen

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.



RG29626—UN—19JUL17

DEF Tank Header Fittings

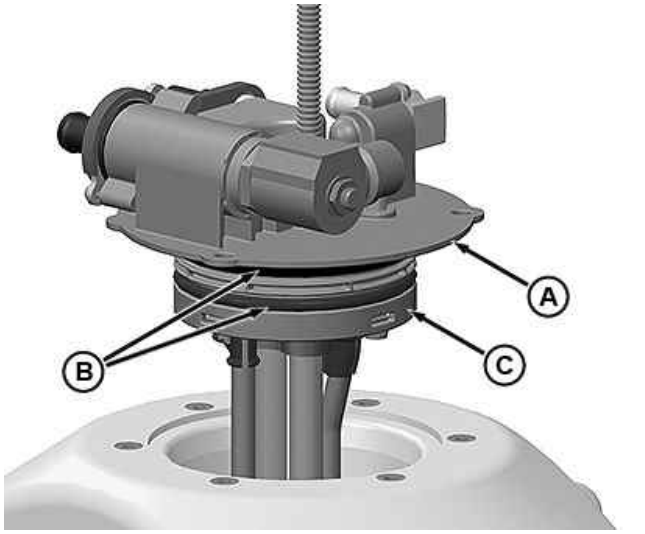
A—Coolant Inlet Fitting
B—DEF Return Line Fitting
C—DEF Supply Line Fitting
D—Coolant Outlet Fitting
E—Vent Line Fitting

1. Clear all debris from area around DEF tank header.

CAUTION: Explosive release of fluids from pressurized cooling system can cause serious burns. Before disconnecting coolant hoses, wait until engine coolant is cool enough to touch the surge tank cap with bare hands. Slowly loosen surge tank cap to first stop to relieve pressure.

IMPORTANT: Cap and plug all lines and fittings to prevent contamination. Coolant in DEF causes Selective Catalytic Reduction (SCR) system performance issues.

2. Disconnect coolant hoses from fittings (A and D).
3. Disconnect DEF return and supply lines from fittings (B and C).
4. Disconnect DEF tank header electrical connectors.
5. Remove vent hose from fitting (E).

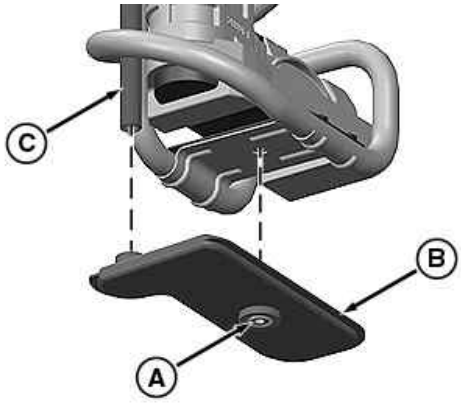


RG29627—UN—19JUL17

DEF Tank Header

A—DEF Tank Header Mounting Flange
B—O-Ring (2 used)
C—DEF Tank Header

6. Remove cap screws from DEF tank header mounting flange (A).
7. Remove DEF tank header (C) from tank.
8. Remove O-rings (B) and inspect for damage.
9. Replace O-rings (B) if necessary.



RG28054—UN—29MAR16

DEF Suction Screen

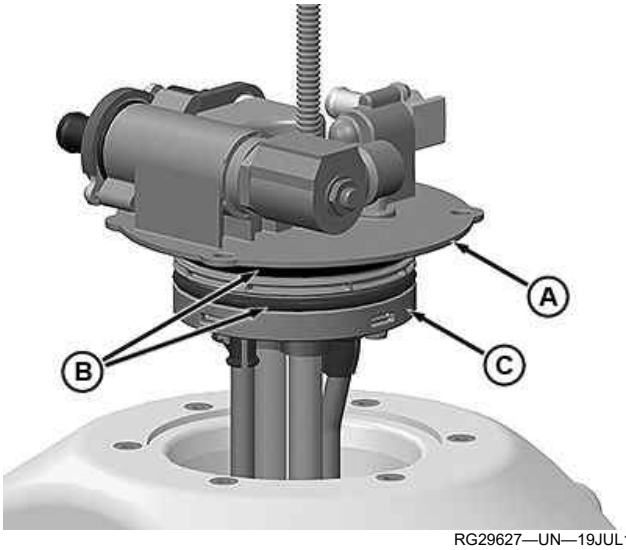
A—Screw
B—Suction Screen
C—Suction Tube

10. Remove screw (A) that secures suction screen (B) to suction tube (C).

11. Remove suction screen (B).
12. Install suction screen (B) to suction tube (C).
13. Install screw (A) and tighten to specification.

Specification

DEF Suction Screen
Screw—Torque. . . . . 1 N·m (11 lb·in)



RG29627—UN—19JUL17

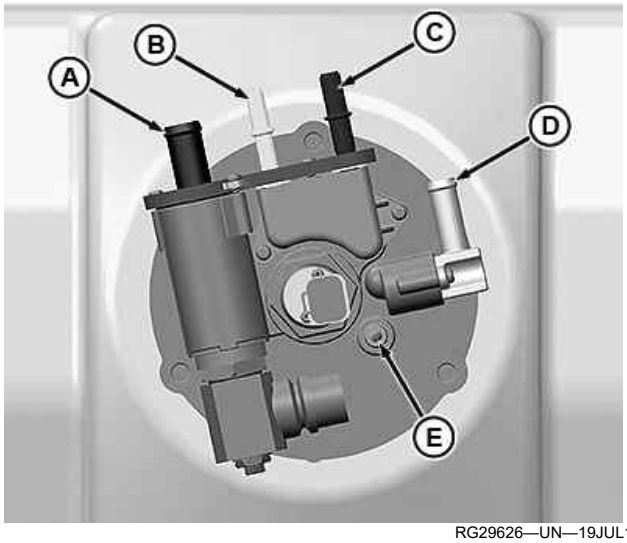
DEF Tank Header

A—DEF Tank Header Mounting Flange
B—O-Ring (2 used)
C—DEF Tank Header

14. Lubricate O-rings (B) with clean DEF.
15. Insert DEF header (C) into tank and align mounting holes on mounting flange (A) with holes in tank.
16. Install stainless steel M6 cap screws into mounting holes and tighten to specification.

Specification

DEF Tank Header Cap
Screw—Torque. . . . . 9 N·m (80 lb·in)



RG29626—UN—19JUL17

DEF Tank Header Fittings

A—Coolant Inlet Fitting
B—DEF Return Line Fitting
C—DEF Supply Line Fitting
D—Coolant Outlet Fitting
E—Vent Line Fitting

17. Connect 9.5-mm (3/8 in) vent hose to fitting (E).
18. Connect 16-mm (5/8 in) coolant hose to coolant inlet fitting (A).
19. Connect 13-mm (1/2 in) coolant hose to coolant outlet fitting (D).

IMPORTANT: Push DEF line onto fitting until you hear a “click”, then lightly pull back to ensure that it is connected and locked in place.

NOTE: DEF supply and return lines have unique sized fittings.

20. Connect DEF return and supply lines to fittings (B and C).
21. Connect DEF tank header electrical connectors.

LGCKF7U,0000C1B-19-11MAY21

Clean Diesel Exhaust Fluid (DEF) Tank

CAUTION: Avoid contact with eyes. In case of contact, immediately flush eyes with large amounts of water for a minimum of 15 minutes. Reference the Materials Safety Data Sheet (MSDS) for additional information.

IMPORTANT: If DEF is spilled or contacts any surface other than the storage tank, immediately clean the surface with clear water. DEF is corrosive to painted and unpainted metallic surfaces and can distort some plastic and rubber components.

Spilled DEF, if left to dry or if only wiped away with a cloth, leaves a white residue. Improperly cleaned DEF spill can interfere with diagnosis of Selective Catalytic Reduction (SCR) system leakage problems.

If foreign material or fluid has been added to the DEF tank, drain the DEF tank, flush, and fill with new DEF.

If DEF quality is in question, pull a sample out of the DEF tank and place into a clear container. DEF should be crystal clear with a light ammonia smell. If DEF appears cloudy, has a colored tint, or has a profound ammonia smell, it is likely not within specification. DEF in this condition should not be used.

1. Remove drain plug (if equipped), and drain or siphon bad DEF from DEF tank.

NOTE: Cleaning can take place with DEF tank installed or removed.

2. Clean DEF tank with new DEF.

   DEF must pass visual, smell, and concentration checks before the engine can be ran. See Diesel Exhaust Fluid (DEF) – For Use In Selective Catalytic Reduction (SCR) Equipped Engines in the Fuels, Lubricants, and Coolants Section for more information.

3. Drain or siphon DEF tank.

NOTE: Repeat steps 2—3 until DEF tank has been cleaned.

4. Change DEF dosing unit filter and DEF tank header suction screen.
5. If removed, install DEF tank drain plug.
6. If removed, install DEF tank.
7. Fill DEF tank with new DEF.
8. Check DEF concentration with DEF refractometer, such as JDG11594 or JDG11684. The correct DEF concentration is 31.8% — 33.2%. See your authorized dealer for more information.
9. If DEF is not within specification, does not appear clear, or does not have a slight ammonia smell, contact your authorized dealer.

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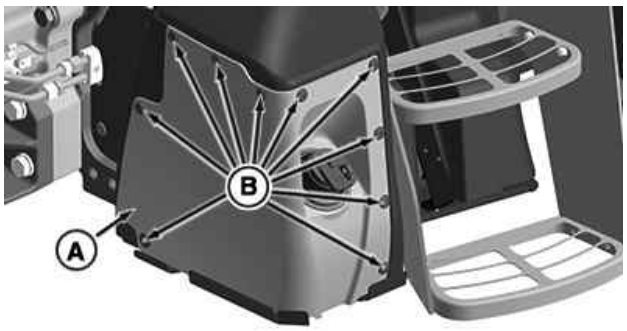
Drain Diesel Exhaust Fluid (DEF) Tank



RXA0154380—UN—22FEB17

RXA0154381—UN—22FEB17

A—DEF Tank Cover
B—Screws (10 used)
C—DEF Tank Drain Plug

IMPORTANT: Do not overtorque the drain plug.

NOTE: Not used on 5075M.

1. Remove screws (B) and DEF tank cover (A). Remove DEF tank cap if necessary to remove cover.
2. Place a container below the drain and capture waste. Dispose of waste properly.
3. Remove DEF tank drain plug (C) and drain DEF from tank.
4. Check O-ring for defects. Replace if needed.
5. Clean DEF tank. (See Cleaning Diesel Exhaust Fluid (DEF) Tank in this section.)
6. Clean out any DEF crystallization in threads.
7. Install drain plug and tighten to specification.

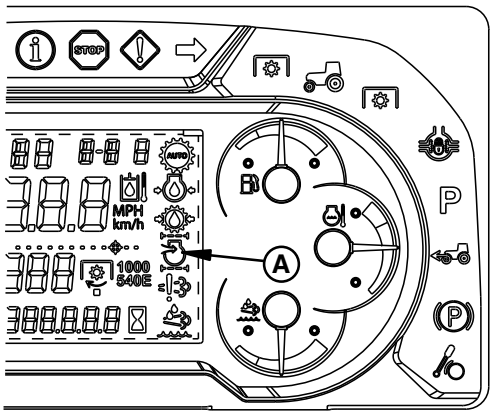
Specification	
DEF Tank Drain Plug—Torque	25 N·m (18 lb·ft)

8. Clean all DEF from machine surfaces with clean water.

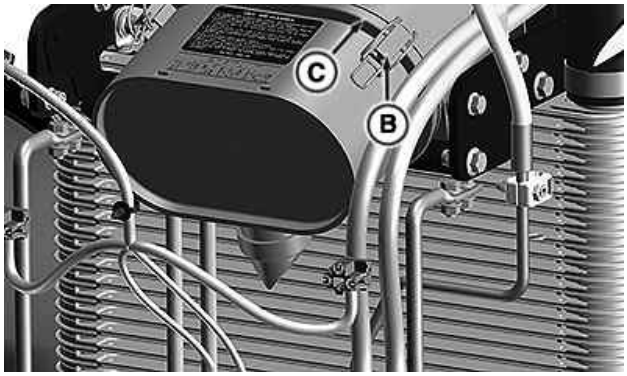
LGCKF7U,0000C1C-19-11MAY21

Service Air Cleaner Elements

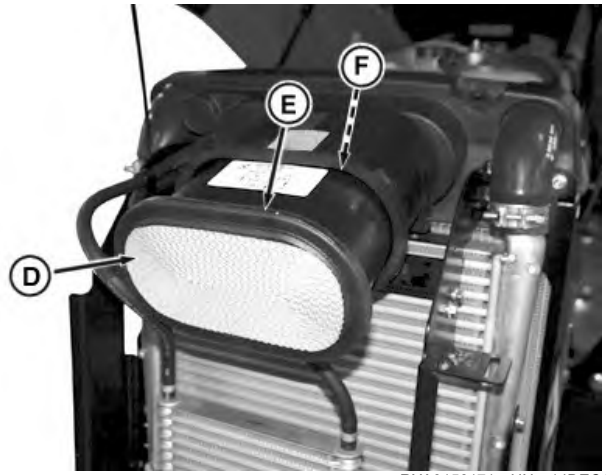
MAINTENANCE INTERVAL
Every 1200 Hours



PY42071—UN—17MAY17



RXA0153091—UN—28JUL16



RXA0156171—UN—14DEC16

A—Air Filter Restriction Indicator
B—Latch
C—Cover
D—Primary Air Cleaner Element
E—Guide Ring
F—Secondary Air Cleaner Element

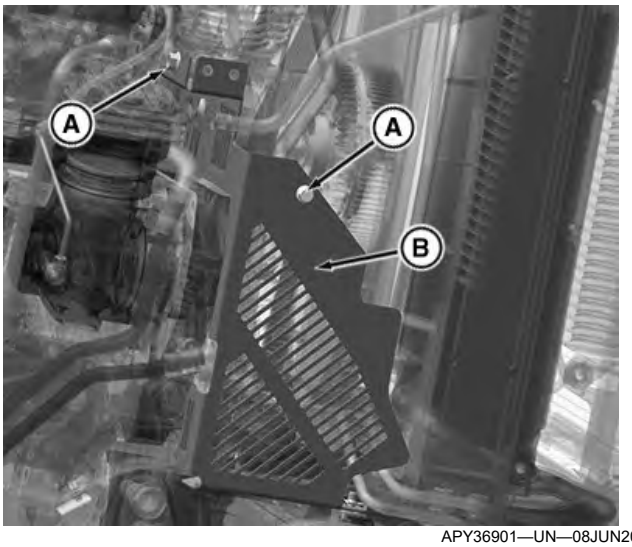
IMPORTANT: Dirty air cleaner element is indicated when air filter restriction indicator (A) appears on the information display.

1. Open hood.
2. Remove latch (B) and cover (C).
3. Remove air cleaner element (D). If primary element does not pull out with ease, move side-to-side.
4. When air cleaner element must be serviced in field, tap it on the palm of your hand. Do not use compressed air or filter damage occurs.
5. Inspect guide ring (E) for damage.
6. Replace elements if core material or seals (both ends) are damaged, or if indicator remains illuminated.
7. Install elements and reinstall latch cover.
8. Lower hood.

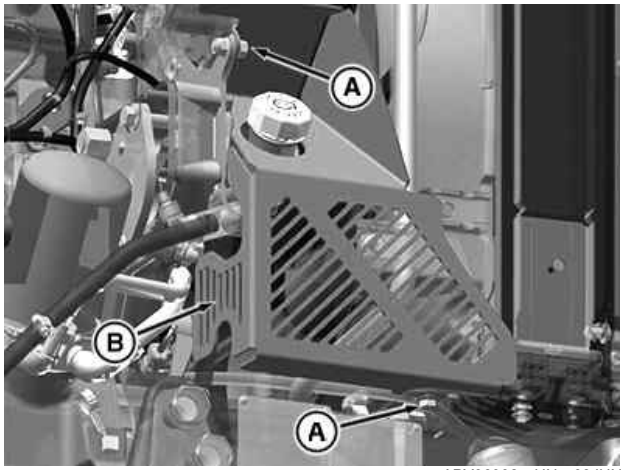
LGCKF7U,0000C1D-19-11MAY21

Tighten Air Intake and Engine Cooling Hose Clamps

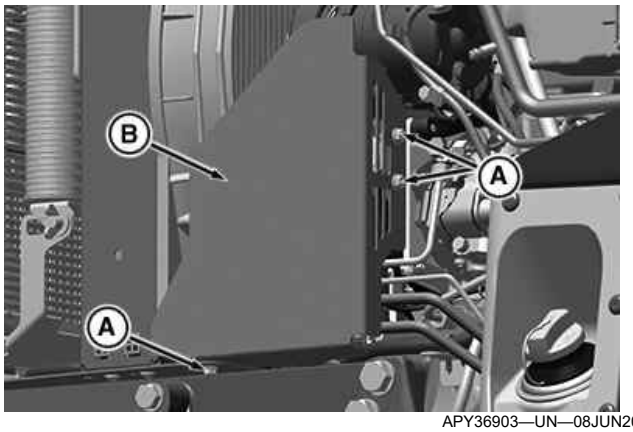
MAINTENANCE INTERVAL
INITIAL — 100 Hours
REGULAR — Every 600 Hours



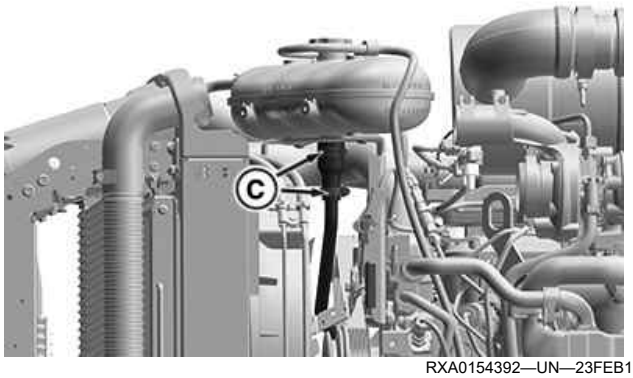
APY36901—UN—08JUN20



APY36902—UN—08JUN20

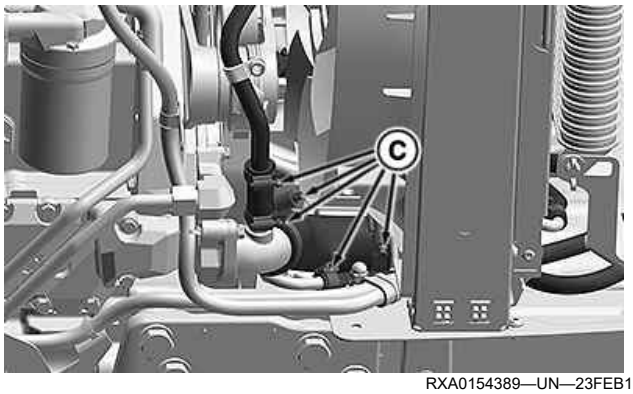


APY36903—UN—08JUN20



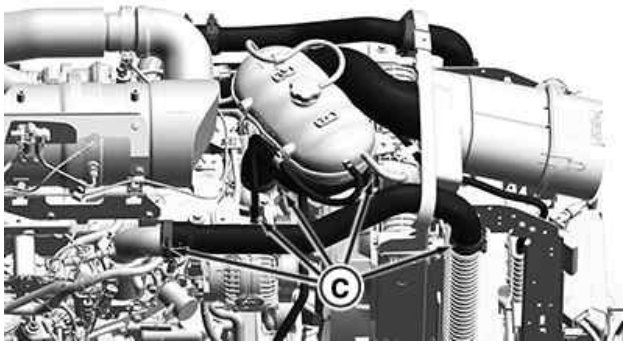
RXA0154392—UN—23FEB17

4.5 L - Under Coolant Tank



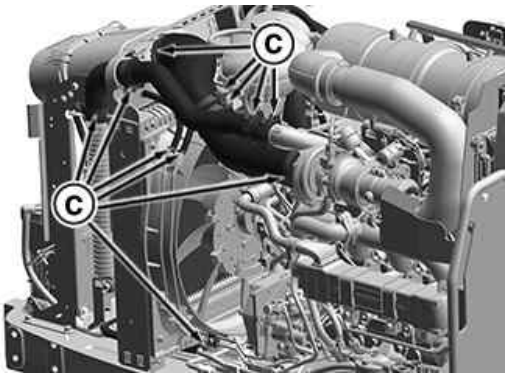
RXA0154389—UN—23FEB17

4.5 L - Right Side of Engine



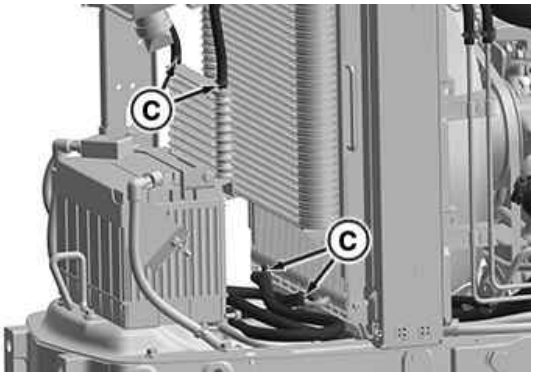
RXA0154390—UN—23FEB17

4.5 L - Right Side of Engine



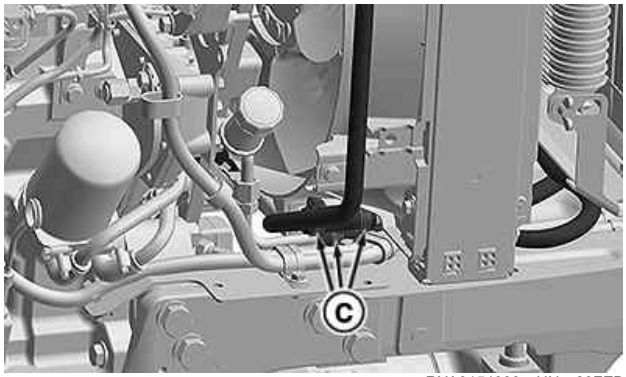
RXA0154391—UN—23FEB17

4.5 L - Left Side of Engine



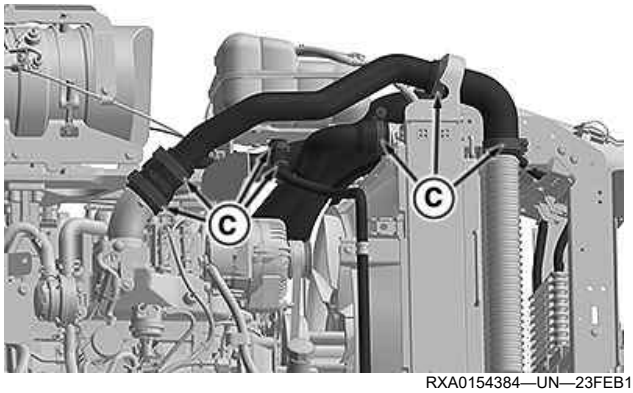
RXA0154387—UN—23FEB17

All - Behind Battery



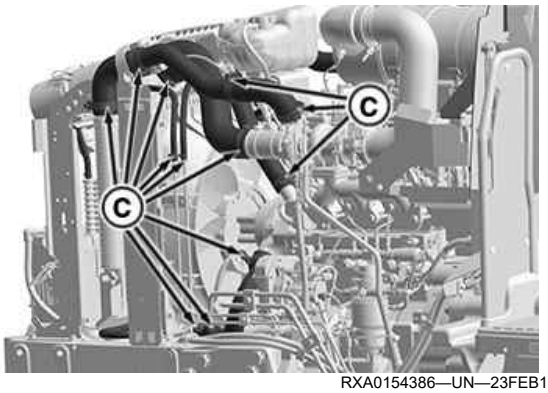
RXA0154383—UN—23FEB17

2.9 L - Right Side of Engine



RXA0154384—UN—23FEB17

2.9 L - Right Side of Engine



RXA0154386—UN—23FEB17

2.9 L - Left Side of Engine

A—Cap Screws and Bolts
B—Fan Shields
C—Clamp

⚠ CAUTION: Do not operate engine without the fan shields installed.

1. Park machine, shut off engine, and remove key.
2. Raise hood.

NOTE: Fan shields and mounting hardware vary from the picture depending on machine configuration.

3. Remove cap screws and bolts (A) from fan shields (B) as required to remove.
4. Inspect hose clamps (C) of the fuel, air intake, hydraulic cooling, and engine cooling systems. Tighten any loose hose clamps. See the following illustrations for hose locations.
5. Reinstall shields and lower hood before operating machine.

LGCKF7U,0000C1E-19-11MAY21

Clean Air Filter Dust Unloading Valve

MAINTENANCE INTERVAL
Daily or 10 Hours

RXA0154394—UN—24FEB17

A—Dust Unloading Valve

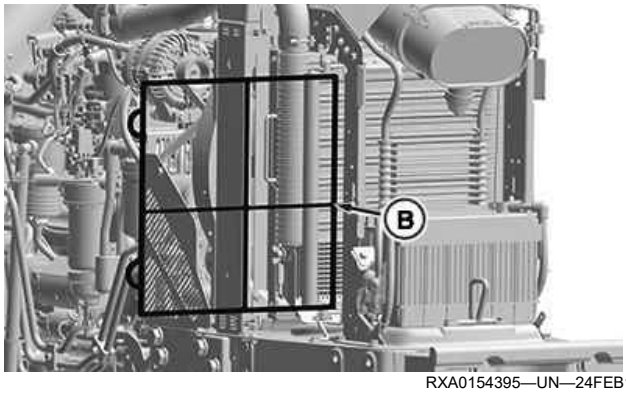
IMPORTANT: Do not operate the engine without air cleaner elements or dust unloading valve installed.

1. Park machine on level ground and shut off engine.
2. Raise hood.
3. Squeeze the end of the dust unloading valve (A). Open and remove any excessive buildup of dust and dirt. Replace if damaged.
4. Lower hood.

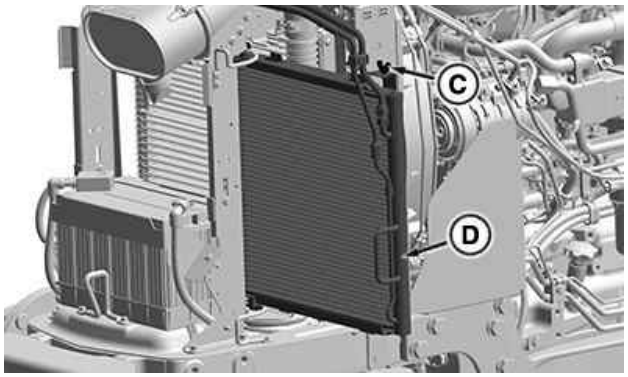
LGCKF7U,0000C1F-19-11MAY21

Clean Grille Screens and Cooling Package

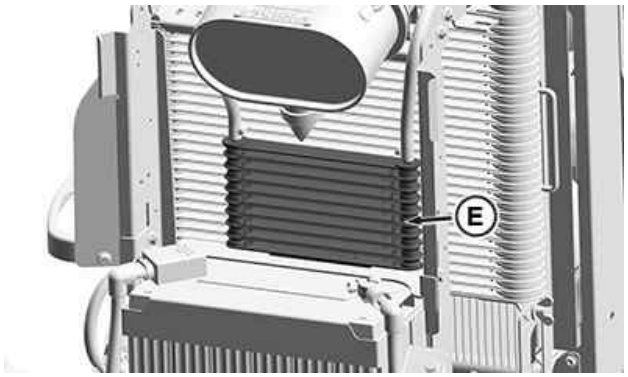
APY36904—UN—08JUN20



RXA0154395—UN—24FEB17



RXA0154396—UN—24FEB17

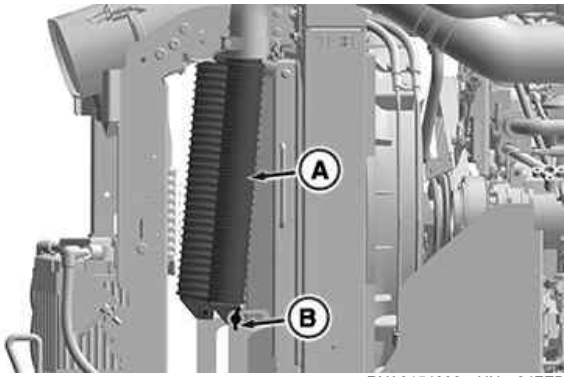


RXA0154397—UN—24FEB17

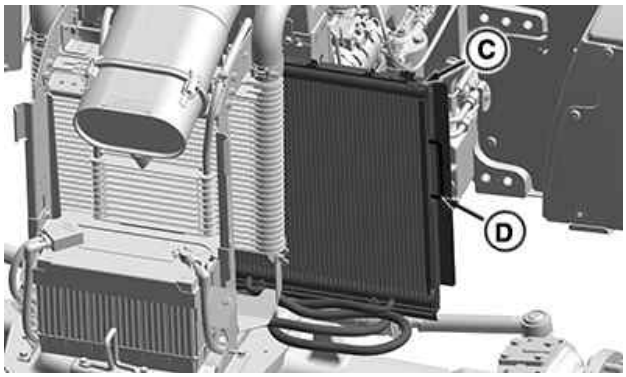
A—Grille
B—Air Conditioner Condenser Screen
C—Wing Nut
D—Air Conditioner Condenser
E—Fuel Cooler

CAUTION: Reduce compressed air to less than 210 kPa (2 bar) (30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

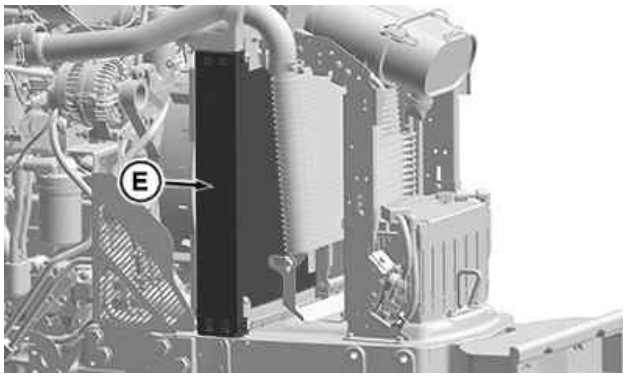
1. Park machine and shut off engine. Remove key.
2. Remove trash buildup on the front grille (A) as required.
3. Raise hood.
4. Slide the air conditioner condenser screen (B) out toward the right side of the machine to remove.
5. Loosen wing nut (C) and slide the air conditioner condenser toward the left side of the machine until it hits the stop.
6. Clean air conditioner condenser, screen, and fuel cooler (E) with compressed air.
7. If a more thorough cleaning is required perform the following.



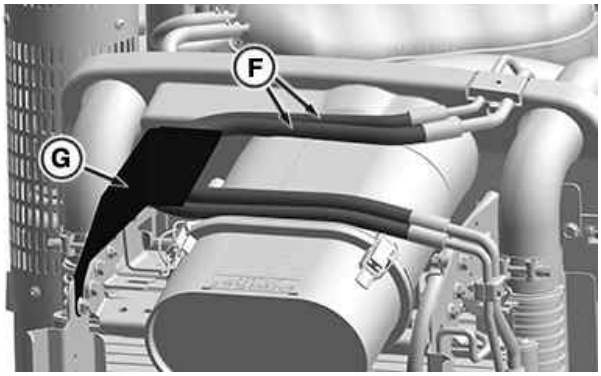
RXA0154398—UN—24FEB17



RXA0154399—UN—24FEB17



RXA0154400—UN—24FEB17



RXA0154401—UN—24FEB17

A—Charge Air Cooler
B—Wing Nut
C—Hydraulic Oil Cooler
D—Handle
E—Radiator
F—Hydraulic Oil Hoses
G—Shield

1. Loosen wing nuts (B) on each side of the charge air cooler (A) and pivot forward to the position shown. Tighten wing nuts to retain position.
2. Pull handle (D) of the hydraulic oil cooler (C) toward left side of the machine until it hits the stop.
3. Clean charge air cooler, hydraulic oil cooler, and radiator (E) with compressed air.
4. Straighten any bent fins.
5. Return coolers, condenser, and screen back to original position and tighten wing nuts to secure in place.
6. Verify that hydraulic oil cooler hoses (F) are under the protective shield (G).
7. Verify that all lines are not pinched or kinked when coolers are repositioned.
8. Lower hood.

LGCKF7U,0000C20-19-11MAY21

Do Not Modify Fuel System

IMPORTANT: Increasing horsepower or altering fuel and air delivery beyond the factory rating causes emissions to exceed United States Environmental Protection Agency (EPA) approved levels. Violations of EPA regulations can result in substantial fines to persons or companies committing such violations.

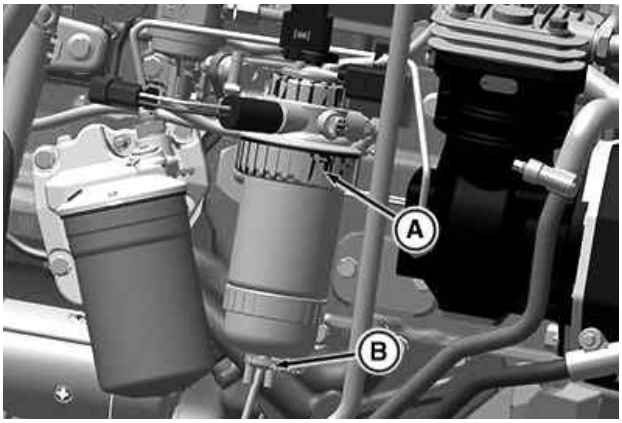
Machine warranty is void if power level is changed from factory specifications.

Do not attempt to service injection pump or fuel injectors yourself. Special training and special tools are required. See your John Deere dealer.

HK75640,0001089-19-14SEP20

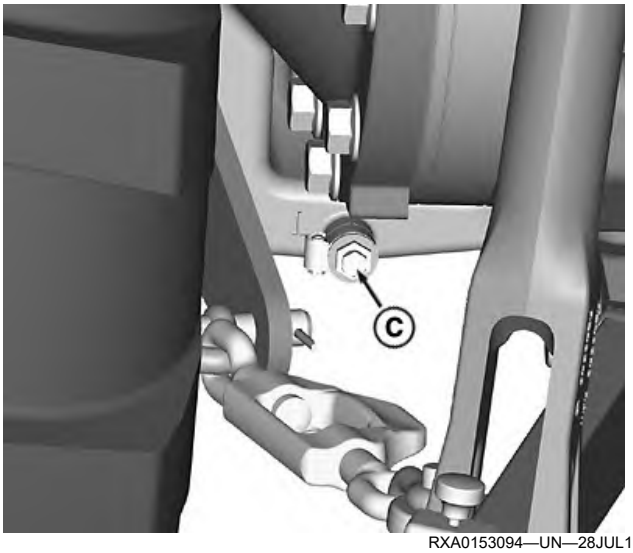
Drain Water and Sediment from Fuel Filter

MAINTENANCE INTERVAL
Daily or 10 Hours



APY36905—UN—08JUN20

Primary Fuel Filter



RXA0153094—UN—28JUL16

Drain Plug

A—Primary Fuel Filter
B—Water Separator Drain Valve
C—Fuel Tank Drain Plug

IMPORTANT: Place a suitable sized container under the fuel drain locations (filters, water separator, and tanks). Dispose of waste properly.

1. Park machine on level ground and shut off engine. Remove key.
2. Raise hood and locate primary fuel filter (A) on the right-hand side of machine.
3. Open water separator drain valve (B) to bleed accumulated water and sediment from filter. Close when clear fuel runs from the drain valve.
4. Run engine for minimum of 20 seconds and check water separator drain valve again for water and sediment.
5. If moisture or sediment is present, drain fuel tank.
6. Open fuel tank drain plug (C) to bleed accumulated moisture and sediment from the fuel tank.

7. Apply Teflon® tape or equivalent to threads of the drain plug.
8. Tighten plug when clear fuel runs from the fuel tank drain. Replace and tighten.
9. Lower hood.

HK75640,000108A-19-14SEP20

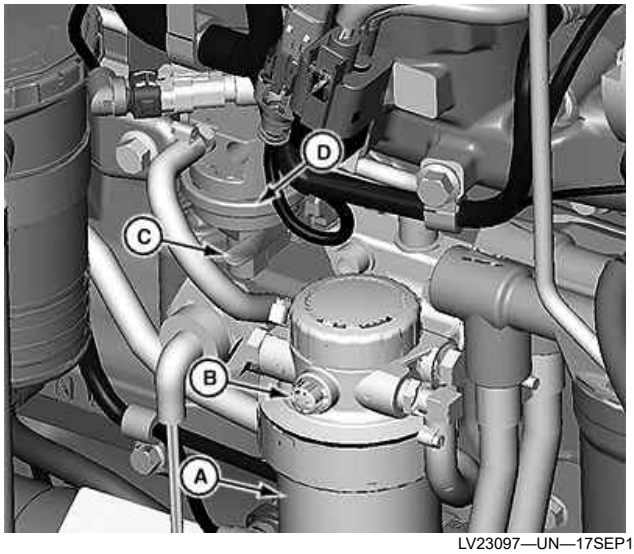
Bleed Fuel System

CAUTION: Escaping fluid under pressure has the potential to penetrate the skin, causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene can result. Doctors unfamiliar with this type of injury must reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

IMPORTANT: To avoid injection pump damage, do not attempt to start the engine while bleeding the fuel system.

4.5 Liter 4 Cylinder Engine



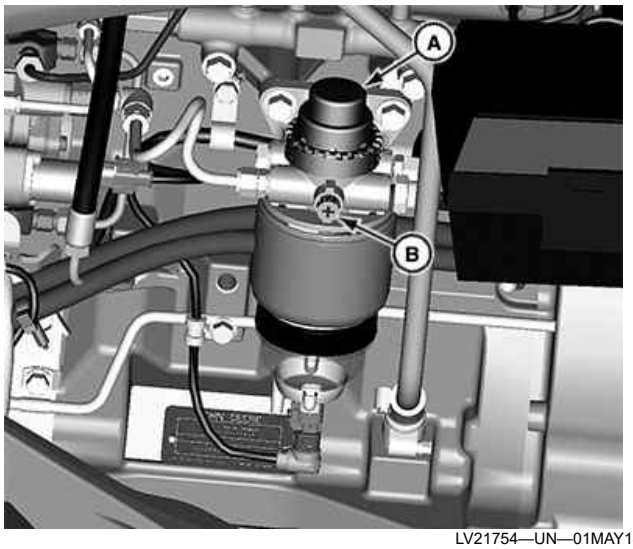
LV23097—UN—17SEP14

Right Side of Engine

A—Fuel Filter
B—Bleed Screw
C—Priming Mechanism
D—Transfer Pump

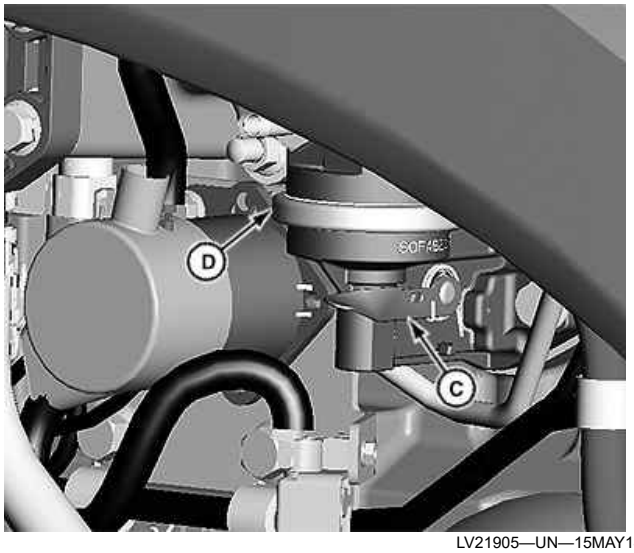
1. Park machine on level ground. Remove key.
2. Check fuel level. Add if necessary.
3. Raise hood and locate primary fuel filter (A) on the right-hand side of machine.
4. Loosen filter housing bleed screw (B). Capture the discharge waste and dispose of properly.
5. Push priming mechanism (C) at the transfer pump (D) until all air is purged and fuel runs out smoothly from bleed screw. Tighten bleed screw.
6. Lower hood.

2.9 Liter 3 Cylinder Engine



LV21754—UN—01MAY14

Left Side of Engine



LV21905—UN—15MAY14

Right Side of Engine

A—Priming Pump
B—Bleed Screw
C—Priming Mechanism
D—Transfer Pump

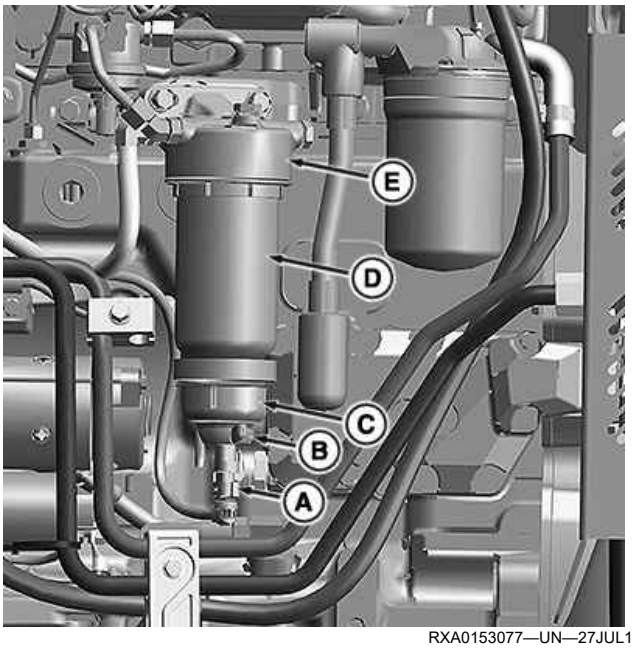
1. Park machine on level ground. Remove key.
2. Check fuel level. Add if necessary.

3. Raise hood and loosen the bleed screw (B) on filter housing two full turns.
4. Push priming mechanism (C) on the transfer pump (D) several times to get fuel to fuel filter.
5. Push priming pump (A) until all air is purged and fuel runs out smoothly from bleed screw. Tighten bleed screw.
6. Lower hood.

LGCKF7U,0000C21-19-11MAY21

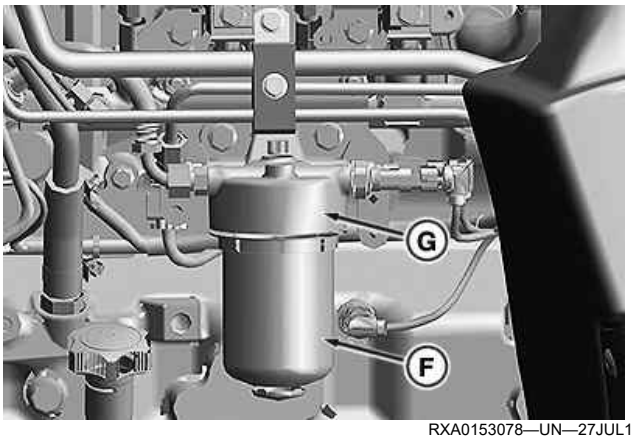
Replace Fuel Filters

MAINTENANCE INTERVAL
Every 500 Hours



RXA0153077—UN—27JUL16

Right Side of Engine



RXA0153078—UN—27JUL16

Left Side of Engine

A—Water-in-Fuel Sensor
B—Drain Valve
C—Water Separator Bowl Assembly
D—Primary Fuel Filter
E—Primary Fuel Filter Housing
F—Secondary Fuel Filter
G—Secondary Fuel Filter Housing

IMPORTANT: Be sure characteristics of the new filter match the original filter.

The fuel filters (D and F) are different, do not interchange. See your John Deere dealer for correct replacement parts. Replace one after another to avoid interchange.

IMPORTANT: Do not use a filter wrench when tightening filters. Hand tighten filter only.

NOTE: The 2.9 liter 3 cylinder engine has a single fuel filter on the left-hand side.

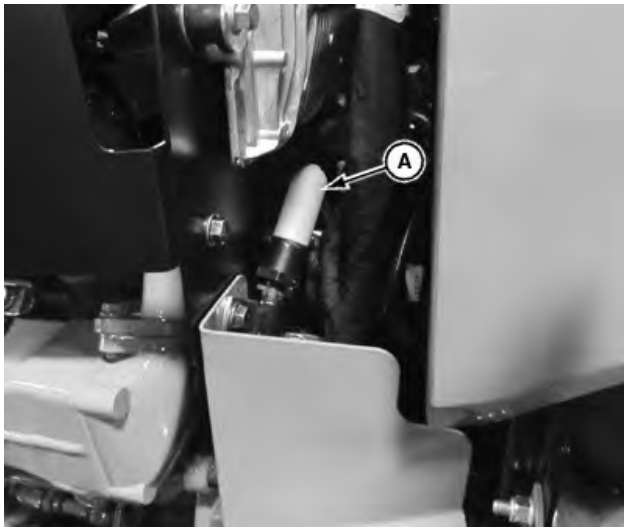
1. Place machine in park, turn off engine, and remove key. Allow engine to cool.
2. Raise hood.
3. Disconnect water-in-fuel sensor (A) on the bottom of the primary fuel filter on the right-hand side of the engine.
4. Open drain valve (B) on water separator bowl assembly (C) of the primary fuel filter (D). Drain fuel. Capture the discharge waste and dispose of properly.
5. Remove primary filter from the fuel filter housing (E) by turning counterclockwise.
6. Remove water separator bowl assembly from the primary fuel filter.
7. Clean water separator bowl. Dry with compressed air.
8. Install new seals (supplied with the new filter) on the water separator bowl and drain valve. Install water separator assembly on the new primary fuel filter.
9. Fill filters with clean diesel fuel before installing on engine.
10. Apply a small amount of clean oil on the primary fuel filter gasket.
11. Install new primary fuel filter assembly.
12. Connect water-in-fuel sensor.
13. Remove secondary fuel filter (F) on the left-hand side of the engine from the filter housing (G) by turning counterclockwise.
14. Apply a small amount of clean oil on the new secondary fuel filter gasket.
15. Install new secondary fuel filter.
16. Bleed the fuel system. (See Bleed Fuel System in this section.)

17. Start engine and run until warm.
18. Turn off engine and remove key.
19. Inspect drain valve and filters for leaks.
20. Lower hood.

LGCKF7U,0000C22-19-11MAY21

Clean Fuel Tank Vent Filter (If Equipped)

MAINTENANCE INTERVAL
Every 1200 Hours



LV22351—UN—11JUL14

Left-Hand Side

A—Fuel Tank Vent Filter

CAUTION: Reduce compressed air to less than 210 kPa (2 bar) (30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.

NOTE: Fuel tank vent filter is not used on machines equipped with vented fuel caps.

Raise hood and locate fuel tank vent filter (A) on the left-hand side of machine.

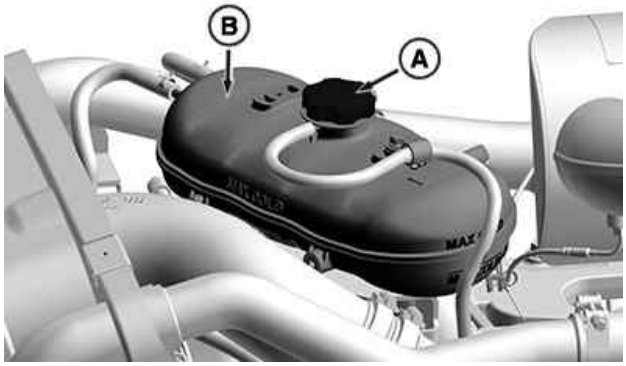
1. Remove and clean fuel tank vent filter with a soapy solution.
2. Blow dry with compressed air and install.
3. If fuel tank vent filter is damaged, replace.

LGCKF7U,0000B63-19-21APR21

Check Coolant Level

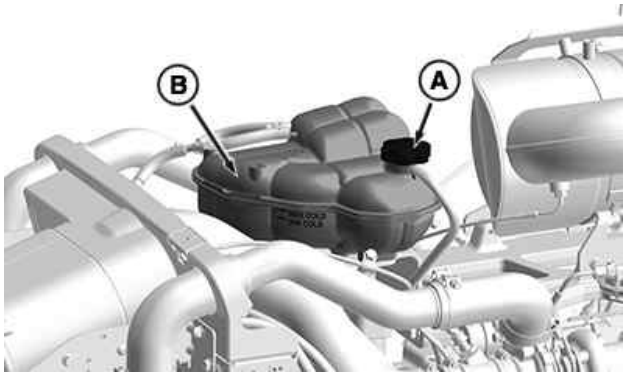
MAINTENANCE INTERVAL
Weekly or 50 Hours

TS281—UN—15APR13



RXA0154402—UN—24FEB17

4.5 Liter 4 Cylinder



RXA0154403—UN—24FEB17

2.9 Liter 3 Cylinder

A—Cap
B—Coolant Recovery Tank

CAUTION: Avoid injury from hot, spraying fluid. Add make-up coolant through the coolant recovery tank. If cap must be removed, do not remove when engine is hot. Shut off engine and wait until cap is cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.

1. Park machine on level ground and shut off engine. Remove key.
2. Allow engine to cool completely.
3. Raise hood and check level in the coolant recovery tank (B).
4. If coolant level is below **the MIN COLD** mark, remove cap (A) and add coolant to the recovery tank. Fill tank level between **MIN COLD** and **MAX COLD** marks with Cool-Gard™ II pre-diluted coolant. (See Fuel, Lubricants, and Coolants section.)
5. Replace cap.
6. Lower hood.

HK75640,000108E-19-14SEP20