

# **335 / 435 LOG LOADER**

S/N – 001001 – 001007

S/N – 001002 – 001043

## **TECHNICAL MANUAL 335 / 435 LOG LOADER TM1875**

**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.**

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# 1. Introduction

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

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

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

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Machine Numbers section. Accurately record all the numbers to help in tracing the machine should it be stolen. Your dealer also needs these numbers when you

order parts. File the identification numbers in a secure place off the machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate which you should have received from your dealer.

This warranty provides you the assurance that John Deere will back its products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines will result in such action.

THE TIRE MANUFACTURER'S warranty supplied with your machine may not apply outside the U.S.

<b>CALIFORNIA PROPOSITION 65 WARNING</b>
Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

### EMISSIONS CONTROL WARRANTY STATEMENT FOR NEW JOHN DEERE CONSTRUCTION EQUIPMENT (U.S. AND CANADA)

To determine if the engine in your machine qualifies for the additional warranties set forth below, look for the "Engine Information" label located on your engine. If you reside in the United States and the engine label states: "Engine conforms to US EPA regulations on heavy duty non road diesel cycle engines," you are entitled to the "U.S. Emission Control Warranty Statement." If you reside in California, and the engine label states: "Engine conforms to California regulations on heavy duty non road diesel cycle engines," you are entitled to the "California Emission Control Warranty Statement."

#### U.S. EPA EMISSIONS CONTROL WARRANTY STATEMENT

Emissions control-related parts and components are warranted by John Deere for five years or 3000 hours of operation, whichever occurs first. John Deere further warrants that the engine covered by this warranty was designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards at the time of manufacture, and that it is free of defects in materials and workmanship which would cause it not to meet these standards within the period of five years or 3000 hours of operations, whichever occurs first.

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete machine warranty, less emissions-related parts and components, is provided separately as "John Deere "Secure Warranty" For New Construction Products."

#### CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board (CARB) and John Deere are pleased to explain the emission control system on your new engine. In California, new heavy-duty 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 machine.

Your emissions control system includes:

- Fuel Metering System
  - Fuel Injection System
- Air Induction System
  - Intake Manifold
  - Turbocharger System
  - Charge Air Cooling System
- Miscellaneous Items used in Above Systems

Where a warrantable condition exists, i.e. failure due to defect in John Deere-supplied material and/or workmanship, John Deere will repair your heavy-duty engine at no cost to you including diagnosis, parts and labor

#### JOHN DEERE'S WARRANTY COVERAGE:

The emission control system of your heavy-duty engine is warranted for five years or 3000 hours of operation, whichever occurs first. If any emission-related part on your engine is defective, the part will be repaired or replaced by John Deere. Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete machine warranty, less emissions-related parts and components, is provided separately as the "John Deere "Secure Warranty" For New Construction Products."

#### OWNER'S WARRANTY RESPONSIBILITIES:

As the heavy-duty engine owner, you are responsible for the performance of the required maintenance as outlined in the

Operator's Manual. John Deere recommends that you retain all receipts covering maintenance on your heavy-duty engine, but John Deere cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

However, as the heavy-duty engine owner, you should be aware that John Deere may deny you warranty coverage if your heavy-duty engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

Your engine is designed to operate on diesel fuel only. Use of any other fuel may result in your engine no longer operating in compliance with California's emissions requirements.

You are responsible for initiating the warranty process. The CARB suggests that you present your machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the service dealer as expeditiously as possible.

If you have any questions regarding your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400, or the State of California Air Resources Board, Mobile Source Operation Division, PO Box 8001, El Monte, CA 91731-2900

The warranty period begins on the date the machine is delivered to an ultimate purchaser, or when otherwise put into service. John Deere warrants to the ultimate purchaser and each subsequent purchaser that the engine is designed, built and equipped so as to conform with all applicable regulations adopted by the Air Resources Board, and that it is free from defects in materials and workmanship which would cause the failure of a warranted part.

Any warranted part which is scheduled for replacement as required maintenance by the operator's manual is warranted by John Deere for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement point, the part shall be repaired or replaced under warranty. Any such part repaired or replaced under warranty is warranted for the remainder of the period prior to the first scheduled replacement point for that part.

Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of repairing or replacing as necessary, is warranted for the warranty period.

Repair or replacement of a warranted part will be performed at no charge to you by an authorized John Deere dealer. You will not be charged for diagnostic labor which leads to the determination that a warranted part is defective, if the diagnostic work is performed by a John Deere dealer.

John Deere is liable for damages to other engine components caused by failure under warranty of any warranted part.

John Deere is NOT liable for travel or mileage on extended emissions warranty service calls.

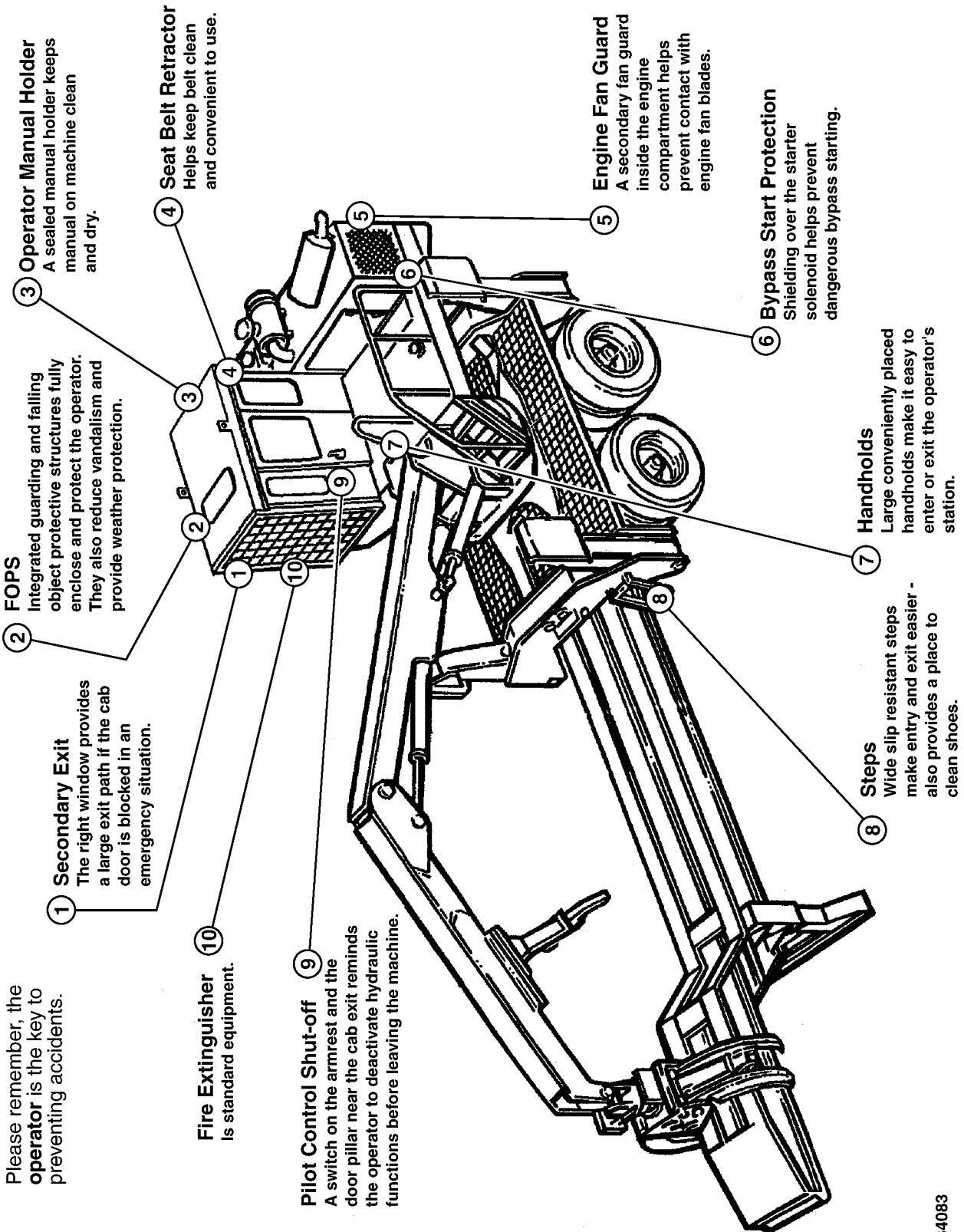
Any replacement part may be used in the performance of any maintenance or repairs, and such use will not reduce the warranty obligations of John Deere. However, the use of add-on or modified parts are grounds for disallowing a warranty claim.

## 2. Safety Rules



JOHN DEERE LOG LOADER SAFETY FEATURES

Please remember, the operator is the key to preventing accidents.



**1 Secondary Exit**  
The right window provides a large exit path if the cab door is blocked in an emergency situation.

**2 FOPS**  
Integrated guarding and falling object protective structures fully enclose and protect the operator. They also reduce vandalism and provide weather protection.

**3 Operator Manual Holder**  
A sealed manual holder keeps manual on machine clean and dry.

**4 Seat Belt Retractor**  
Helps keep belt clean and convenient to use.

**5 Engine Fan Guard**  
A secondary fan guard inside the engine compartment helps prevent contact with engine fan blades.

**6 Bypass Start Protection**  
Shielding over the starter solenoid helps prevent dangerous bypass starting.

**7 Handholds**  
Large conveniently placed handholds make it easy to enter or exit the operator's station.

**8 Steps**  
Wide slip resistant steps make entry and exit easier - also provides a place to clean shoes.

**9 Pilot Control Shut-off**  
A switch on the armrest and the door pillar near the cab exit reminds the operator to deactivate hydraulic functions before leaving the machine.

**10 Fire Extinguisher**  
Is standard equipment.

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## Use Allied Equipment Information

**IMPORTANT!** Refer to appropriate allied equipment manual for safety information specific to your attachments.

## Recognize Safety Information

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.



## Understand Signal Words

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



**DANGER**



**WARNING**



**CAUTION**

## Follow Safety Instructions

Carefully read all safety messages in this manual and on our machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

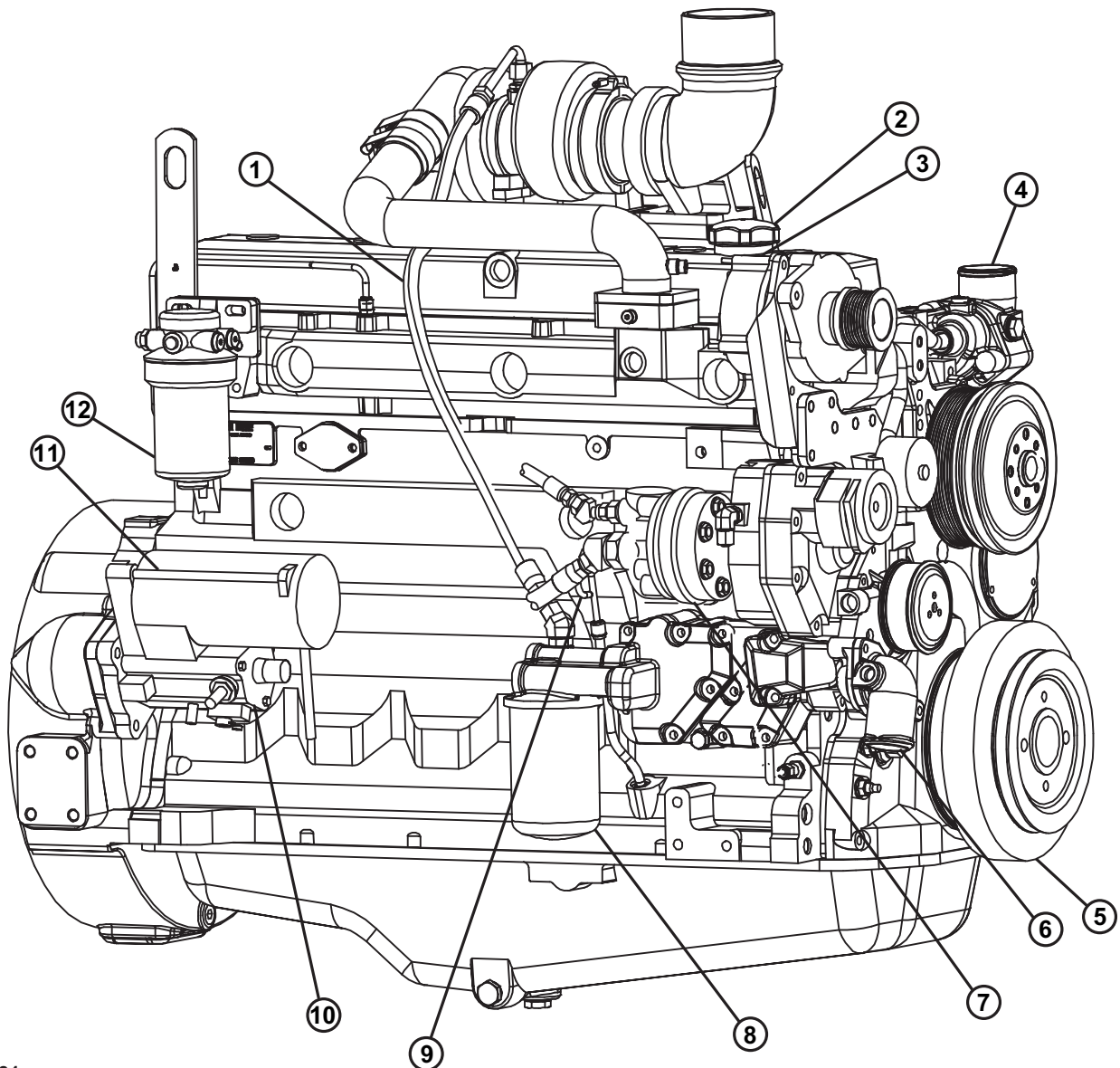
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

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



## 10.1 Engine Component Locator



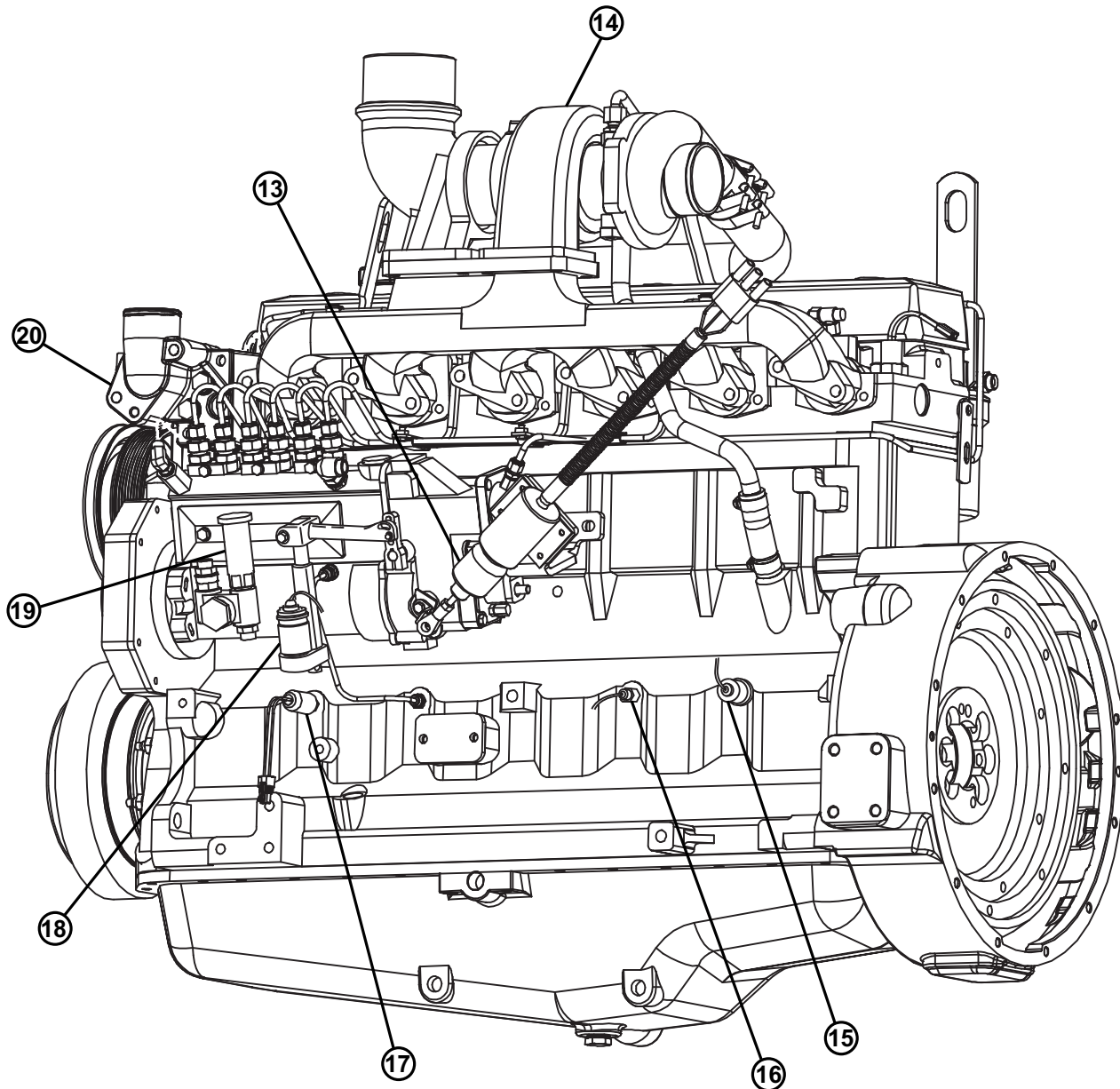
TJ081

- 1. Turbocharger Lubrication Line
- 2. Oil Fill Cap
- 3. Alternator
- 4. Coolant Outlet
- 5. Crankshaft Hub

- 6. Coolant Inlet
- 7. Pilot Pump
- 8. Oil Filter
- 9. Oil Dipstick
- 10. Starter Solenoid

- 11. Starter Motor
- 12. Fuel Filter

## **10.1 Engine Component Locator**

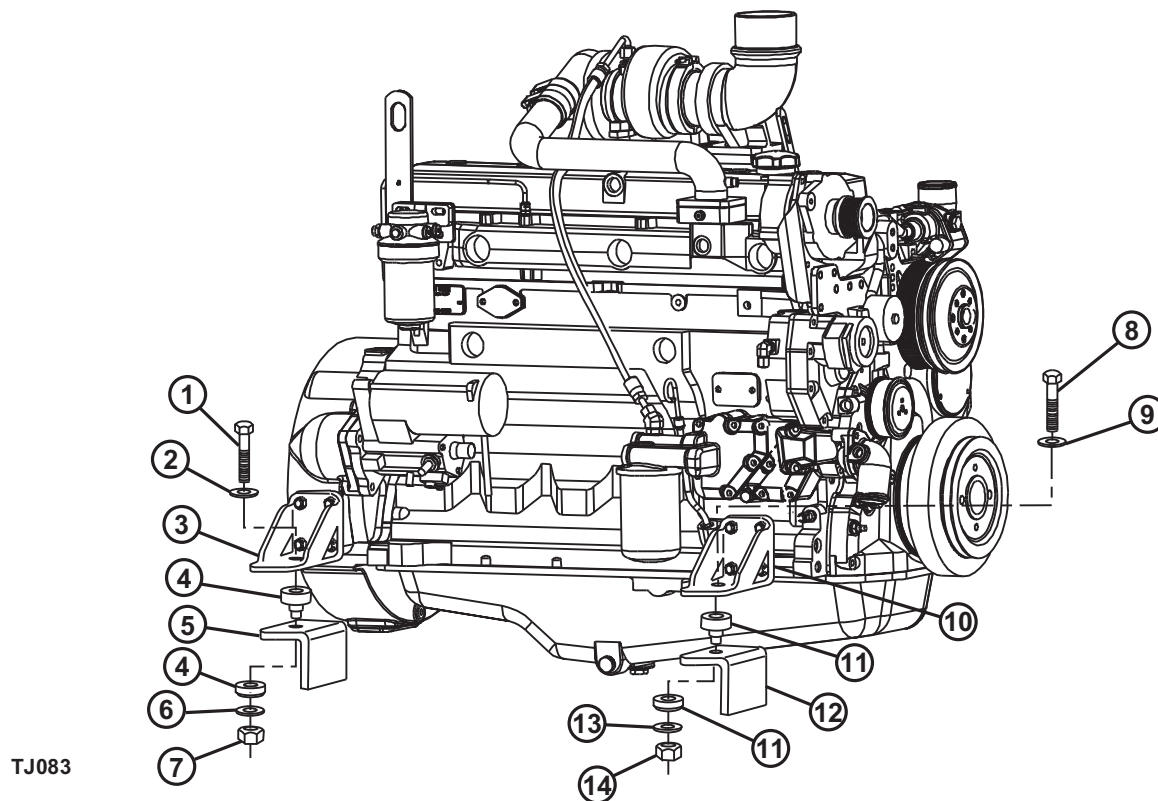


TJ082

- 13. Fuel Shutoff Solenoid
- 14. Turbocharger
- 15. Oil Pressure Sender
- 16. Oil Pressure Switch

- 17. High Temperature Switch
- 18. Throttle Actuator Motor
- 19. Fuel Transfer Pump
- 20. Thermostat Housing

## 10.2 Engine Rubber Mounts



TJ083

- |                         |                         |
|-------------------------|-------------------------|
| 1. Hex Head Bolt        | 8. Hex Head Bolt        |
| 2. Flat Washer          | 9. Flat Washer          |
| 3. Front Engine Bracket | 10. Rear Engine Bracket |
| 4. Engine Rubber Mount  | 11. Engine Rubber Mount |
| 5. Front Frame Bracket  | 12. Rear Frame Bracket  |
| 6. Flat Washer          | 13. Large Flat Washer   |
| 7. Hex Lock Nut         | 14. Hex Lock Nut        |

## **10.2 Engine Rubber Mounts**

### **10.2.1 General Information**

The engine rubber mounts consist of rubber isolators placed between the engine mounting brackets and the frame mounting brackets to isolate the loader superstructure from engine vibrations.

### **10.2.2 Removal**

*NOTE: All four engine mounts can be replaced from underneath the loader.*

Use a high-boy jack to support the front or rear of the engine as applicable.

Remove the lock nuts, washers, and bolts attaching the rubber mounts.

Remove and discard the rubber mounts.

### **10.2.3 Installation**

**IMPORTANT: It is recommended that the rubber mounts are replaced in pairs, front or rear.**

Clean and inspect the engine and frame mounting brackets for damage. Repair or replace the brackets as necessary.

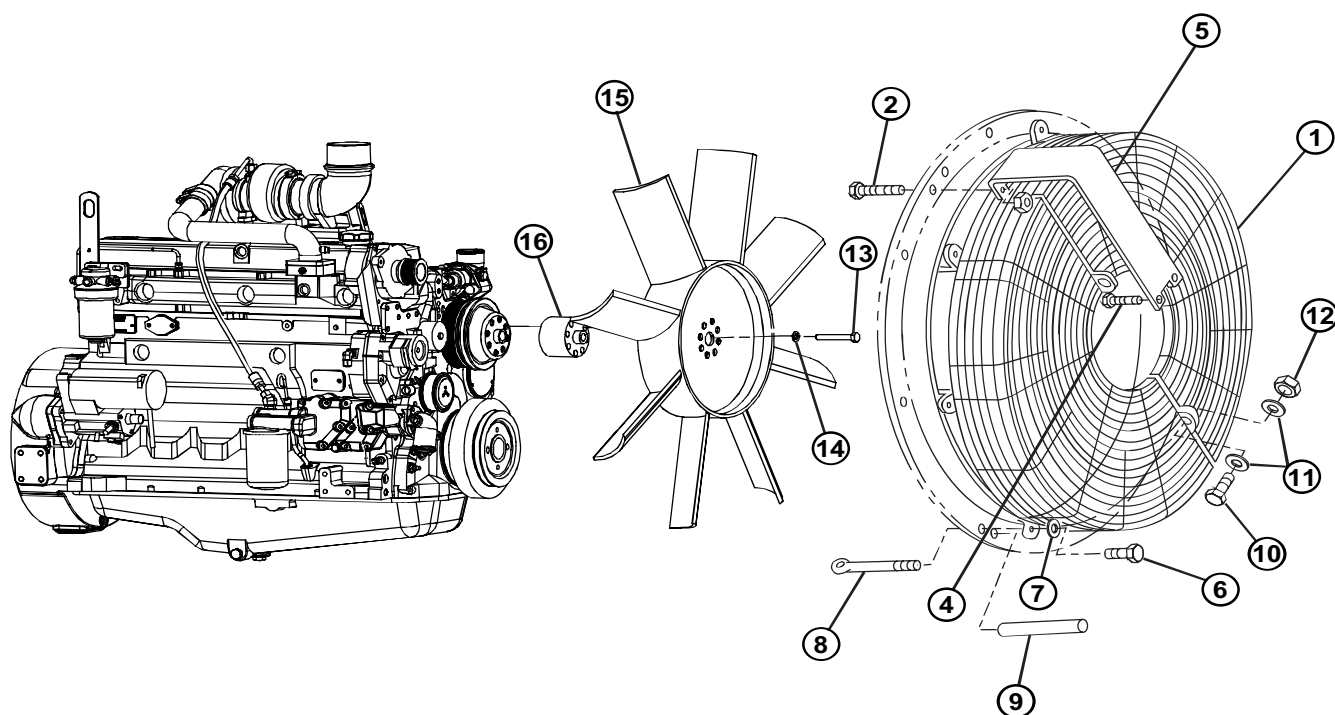
Inspect the rubber mount attaching hardware. Bolts, washers, and lock nuts that are corroded or damaged must be replaced to ensure that the mounts can be secured with the correct torque.

Install new rubber mounts and attaching hardware.

Tighten the rubber mount attaching bolts and lock nuts to 644 - 691 Nm (475 - 510 lb-ft).

If any of the engine mounting brackets are replaced, the bracket mounting bolts must be torqued to 140 Nm (105 lb-ft).

## 10.3 Engine Fan



TJ084

- |                |                   |
|----------------|-------------------|
| 1. Fan Guard   | 9. Pipe           |
| 2. Cap Screw   | 10. Cap Screw     |
| 3. Nut         | 11. Flat Washer   |
| 4. Hex Bolt    | 12. Nut           |
| 5. Bracket     | 13. Hex Head Bolt |
| 6. Cap Screw   | 14. Flat Washer   |
| 7. Flat Washer | 15. Engine Fan    |
| 8. Eyebolt     | 16. Fan Hub       |

## **10.3 Engine Fan**

### **10.3.1 General Information**

The engine fan, although not included in the engine assembly, is part of the complete power unit.

The fan is a suction fan attached to and driven by the engine. It is located inside the radiator fan shroud with a protective guard installed behind it to prevent accidental contact by personnel.

### **10.3.2 Removal**

Remove the fan guard parts (1 through 12).

Remove the A/C condenser hydraulic oil cooler/engine radiator and radiator fan shroud (paragraphs 10.9 and 10.10).

Remove the engine fan parts (13 through 16).

### **10.3.3 Installation**

**IMPORTANT: Do not attempt to repair a damaged fan. The fan should always be replaced if it is damaged.**

Clean and inspect the fan, fan hub, and hardware. Replace any damaged or heavily corroded components.

Install the fan hub and engine fan using parts (13 through 16).

Torque the fan bolts to 33 – 35 Nm (24 – 26 lb-ft).

Install the hydraulic oil cooler/engine radiator, and radiator fan shroud (paragraphs 10.9 and 10.10).

Check and ensure that there is no interference between the fan blades and the shroud.

Install the fan guard using parts (1 through 12).



## 10.4 Pump Adapter and Drive Plate

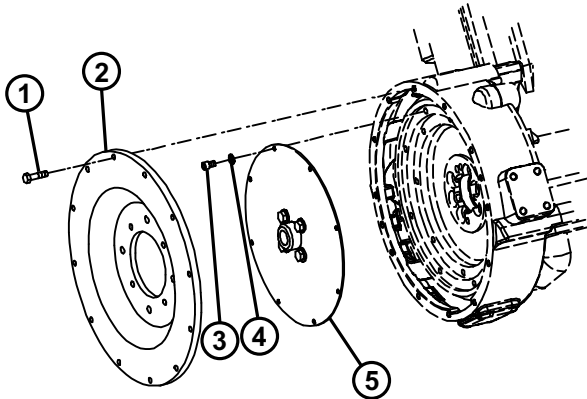
### 10.4.2 Removal

Remove the main pump (Group 20).

Remove the twelve hex head bolts (1) securing the pump adapter (2) to the engine flywheel housing.

Remove the pump adapter from the engine flywheel housing.

Remove the eight hex head bolts (3) and washers (4) securing the drive plate (5) to the engine flywheel.



TJ085

1. Hex Head Bolt
2. Pump Adapter
3. Hex Head Bolt
4. Washer
5. Drive Plate

### 10.4.1 General Information

The pump adapter and drive plate are the interface components used to transfer engine power to the main pump.

The drive plate is bolted onto the engine flywheel and the pump adapter is bolted onto the engine flywheel housing. The main pump is secured to the adapter and connected through a splined coupling to the drive plate.

### 10.4.3 Installation

Clean and inspect all removed components thoroughly. Replace any components that are damaged.

Apply thread lock and sealer (medium strength) to the threads of the eight hex head bolts (3).

Install the drive plate (5) onto the engine flywheel using the eight hex head bolts (3) and washers (4). Torque the bolts to 46 - 54 Nm (34 - 40 lb-ft).

Install the pump adapter (2) onto the engine flywheel housing using the twelve hex head bolts (1). Torque the bolts to 57 - 65 Nm (42 - 48 lb-ft).

Install the main pump (Group 20).

## **10.5 Engine Removal/Installation**

### **10.5.1 Removal**

Remove the access panels from both sides of the engine shroud.

Drain the engine and radiator of coolant.

Loosen the exhaust pipe connections between the turbocharger and the muffler and remove the muffler (paragraph 10.13).

Loosen the clamp (1) securing the air intake elbow (2) to the air intake pipe (3).

Loosen the clamp (4) and remove the hood (5).

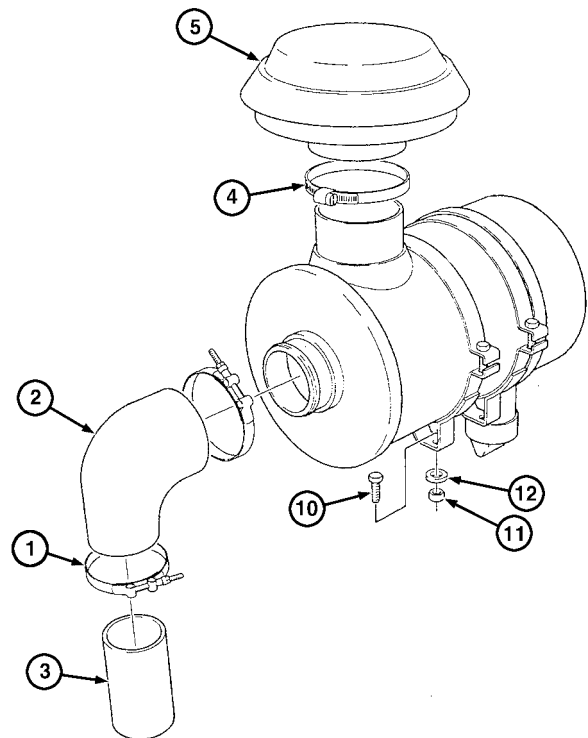
Discharge the A/C system (Group 15).

Disconnect the high pressure and low pressure hoses from the A/C compressor and pull the hoses clear of the engine shroud.

Remove the engine shroud (paragraph 10.3).

Tag and disconnect the wiring harnesses, wires and cables at their respective engine connections.

Wrap the harnesses and loose wires and tuck them out of the way so that they will not interfere with the removal of the engine.



TJ086

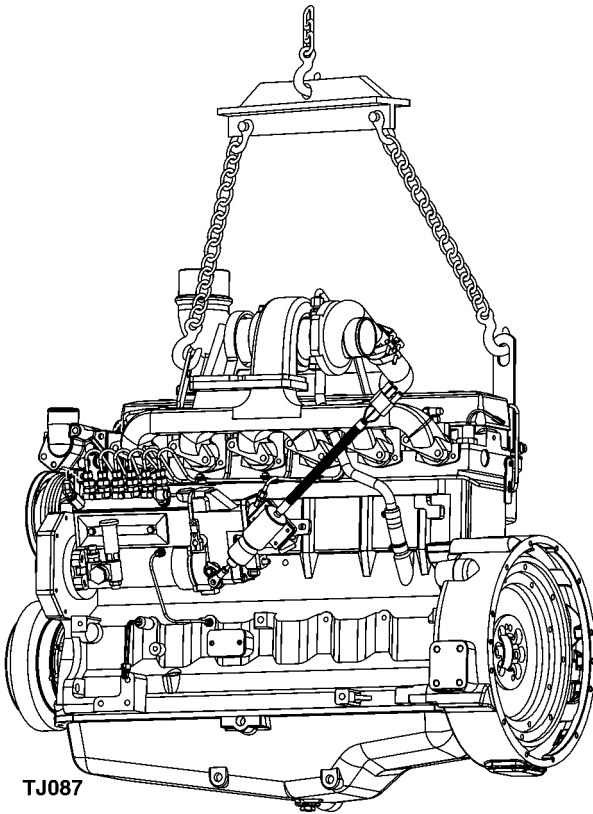
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**NOTE:**

**If there is no response to click on the link above, please download the PDF document first and then click on it.**

## 10.5 Engine Removal/Installation



*NOTE: The hydraulic oil cooler can remain connected in the hydraulic system provided it is protected and secured out of the way so that it does not interfere with the engine removal.*

Drain engine coolant from hydraulic oil cooler/radiator and disconnect hoses. Approximate capacity is 21 L (6 gal).

Remove the fan guard and fan shroud (paragraph 10.13).

Disconnect the throttle actuator from the engine.

Tag and disconnect remaining electrical connectors from engine.

**⚠ CAUTION: Observe strict cleanliness when disconnecting and connecting hydraulic components. Contamination induced into the hydraulic system can result in equipment failure.**

Disconnect the main pump from engine slide back and support (Group 20).

Disconnect the pilot pump inlet and outlet hoses at the pilot pump (Group 20).

Attach an engine lifting sling to the engine and an overhead hoist and take up any slack in the sling.

Remove the center bolts from the engine mounts (paragraph 10.2).

Remove the engine from the loader and place it on an appropriate engine stand.

### 10.5.1 Removal

Disconnect the two cab heater hoses from the engine connections and tuck the hoses out of the way.

Remove the fuel supply and return hoses from the engine fuel lift pump and return tube (paragraph 10.14).

Remove heater/air conditioner hoses and electrical connectors from the engine (Group 15).

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## 10.5 Engine Removal/Installation

### 10.5.2 Installation

Ensure that all auxiliary components removed with or from the engine are attached or reinstalled as when the engine was removed.

Attach an engine lifting sling to the engine and an overhead hoist and take up slack in the sling.

Lift the engine into position in the turntable frame and install the engine rubber mounts and center bolts (paragraph 10.2).

Install the fan guard and fan shroud (paragraph 10.3).



**CAUTION: Observe strict cleanliness when disconnecting and connecting hydraulic components. Contamination induced into the hydraulic system can result in equipment failure.**

Install the inlet and outlet hoses onto the pilot pump (Group 20).

Install the main pump (Group 20).

Connect throttle actuator to engine.

Connect heater/air conditioner hoses and electrical connectors to engine.

Connect hoses to hydraulic oil cooler/radiator.

Install the fuel supply and return hoses onto the engine return tube and fuel lift pump (paragraph 10.14).

Attach the two cab heater hoses to their respective engine inlet and outlet fittings.

Install electrical cables, harness wires and connectors onto engine connections as tagged.

Install the engine shroud (paragraph 10.3).

Install the air intake elbow to the air filter housing and engine air intake pipe.

Install the air intake pipe hood and tighten clamp.

Install the exhaust muffler (paragraph 10.13).

Fill the engine cooling system with fresh coolant. Approximate capacity is 21 L (6 gal). Refer to Section 4 for coolant specifications.

Check the engine oil and add oil as required. Refer to Section 4 for appropriate oil type and viscosity.

Bleed the fuel lines and start the engine.

Install the access panels on both sides of the engine shroud.