

1150K TIER 3 Crawler Dozer

Operator's Manual

Print No. 84272799

English 11/09

Replaces p/n 84146927



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IDENTIFICATION NUMBERS

Write your machine model number, Product Identification Number (P.I.N.) and serial numbers on the lines provided below. Always give these numbers to your dealer when you need parts or information for your machine.

Make a record of the numbers. Keep the record and your Manufacturer's Statement of Origin in a safe place. If the machine is stolen, report the numbers to your local law enforcement agency.

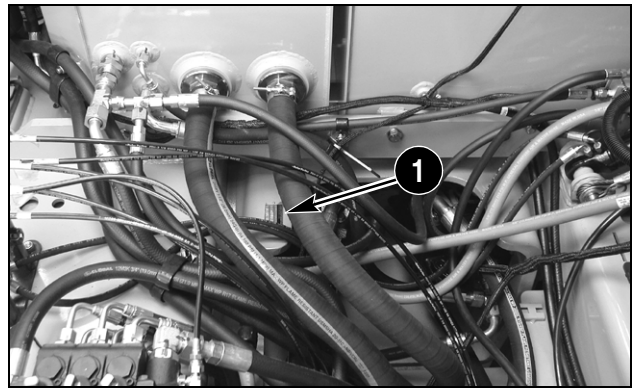
Machine	
➤ _____	Machine Model and Type
➤ _____	Product Identification Number: P.I.N.
➤ _____	Year of Build
Component Serial Numbers	
➤ _____	Engine serial number
➤ _____	Transmission and serial number
➤ _____	ROPS cab or canopy serial number
➤ _____	Dozer blade serial number
➤ _____	



BD06K002

Figure 6

ENGINE



BD02J108

Figure 7

TRANSMISSION

1. ON THE HOUSING UNDER THE CAB



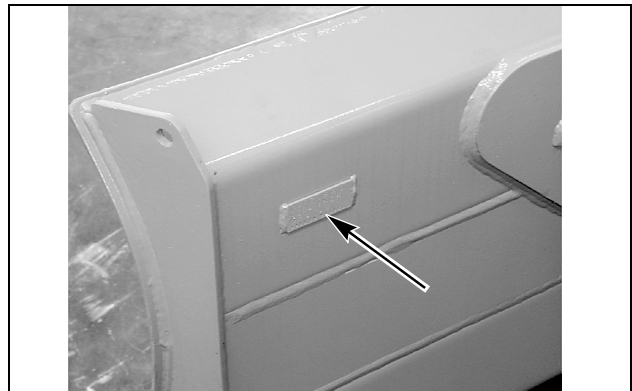
BD02K018/87477990

Figure 5

PRODUCT IDENTIFICATION NUMBER (P.I.N.)

ROPS CANOPY PLATE IS LOCATED ON THE LEFT-HAND UPPER SIDE

CAB PLATE IS LOCATED ON THE RIGHT-HAND SIDE REAR POST



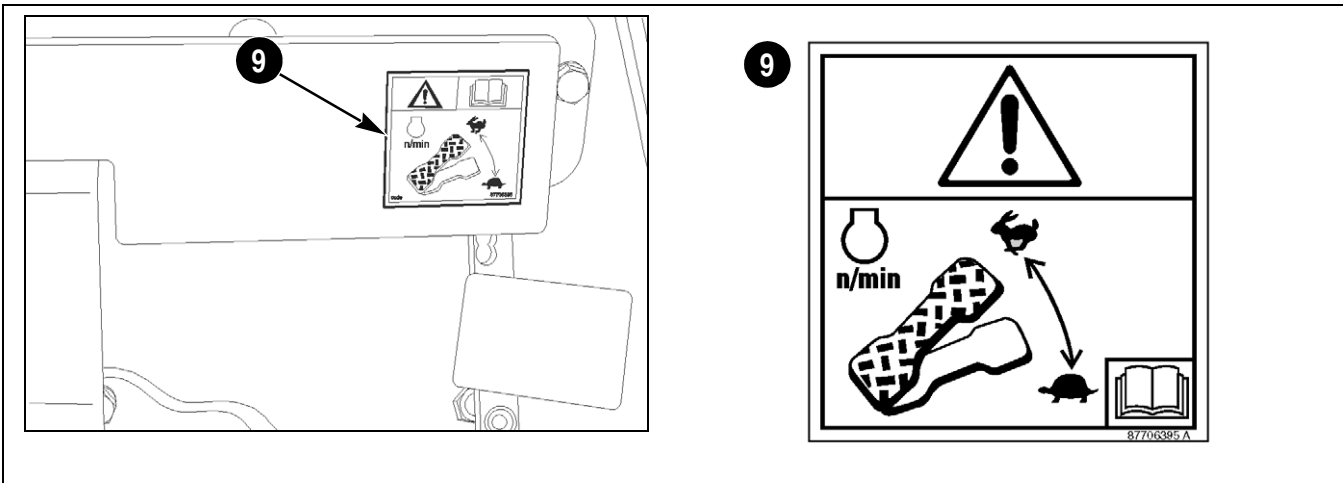
BD99J147

Figure 8

DOZER BLADE

STARTING AND STOPPING PRECAUTIONS

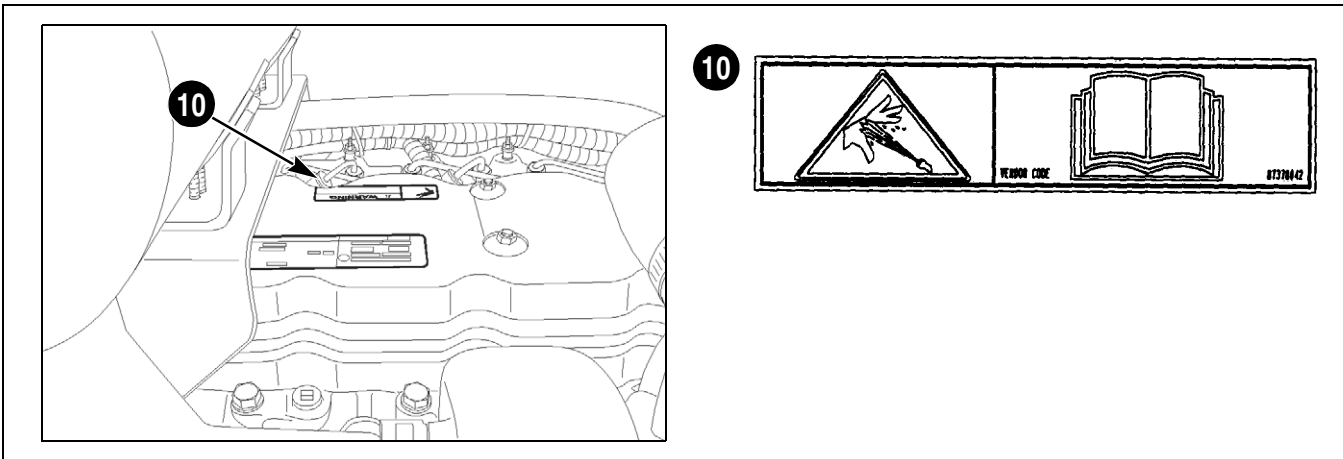
- Walk around the machine and warn all personnel who may be servicing the machine or are in the machine path prior to starting. Do not start until all personnel are clearly away from the machine. Sound the horn, if equipped, before starting.
- Walk around the machines tool, attachment, or furthest contact point to view operation danger area from the work site personnel view and angle.
- Check that the parking device is applied, place the transmission in neutral or park as specified by the manufacturer, before starting the machine.
- Adjust, secure and latch the seat and fasten the seat belt before starting the machine.
- Start and operate the machine only from the operator's station.
- Use jumper cables only in the recommended manner. Improper use can result in battery explosion or unexpected machine motion. Ventilate the battery area before using jumper cables. Make sure that using jumper cables will not interfere or harm electronic processing or computer devices.
- Do not operate the engine in an enclosed area without adequate ventilation.
- Park the machine on level ground whenever possible and apply the parking brake. On grades, park the machine with the wheels or track securely blocked.
- Before leaving the operator station lower the equipment to the ground and shut off the engine.
- Remove the starter key or disconnect switch when leaving the machine parked or unattended.



BD07K090 / 877063595

Figure 20

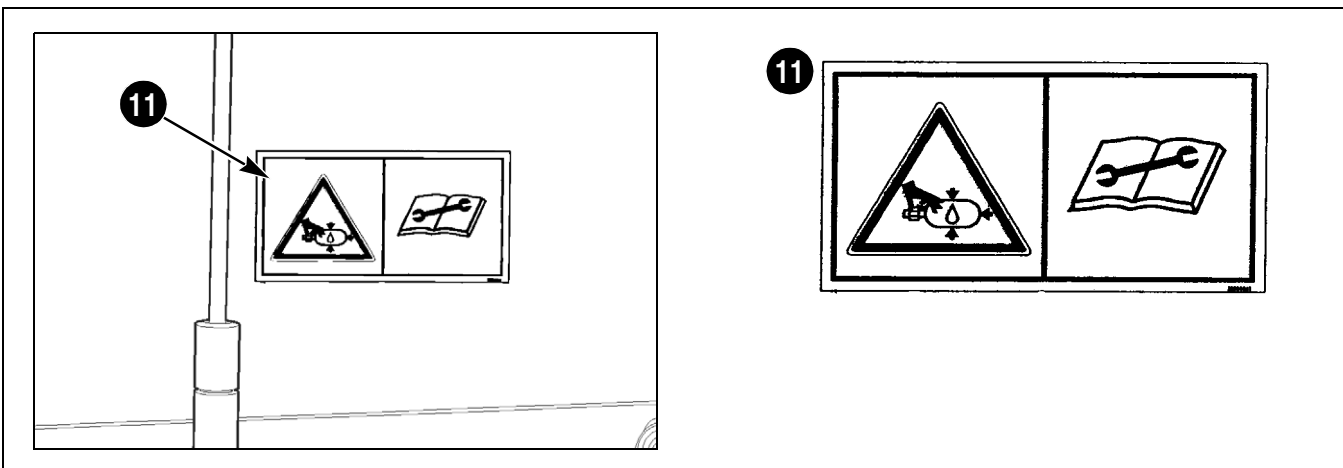
9. 87706395, **WARNING:** READ THE OPERATOR'S MANUAL, ENGINE RPM CHANGE.
Decal 9 is located just left and above the decelerator pedal.



BD06K002 / 87347223

Figure 21

10. 87347223, **WARNING:** PRESSURIZED SYSTEM, READ THE OPERATOR'S MANUAL.
Decal 10 is found on the top of the engine valve cover.



BD07J115 / 328903A1

Figure 22

11. 328903A1, **WARNING:** PRESSURIZED SYSTEM, READ THE SERVICE MANUAL.
Decal 11 is located under the right side, front access door just to the rear of the right cab door.



BD99K104

Figure 29

24. LCD MULTI-FUNCTION DISPLAY

The LCD Multi-Function Display is located in the center of the modular dashboard. On start up the cluster will flash the instructional lamps and the LCD Multi-Display will flash, CASE, with the machine model.

Information will be displayed in three zones on the LCD, as directed by the operator or machine. In **most** situations the operator or technician will be given specific information to follow if conditions are not correct.

The screen image above is the normal driving screen.

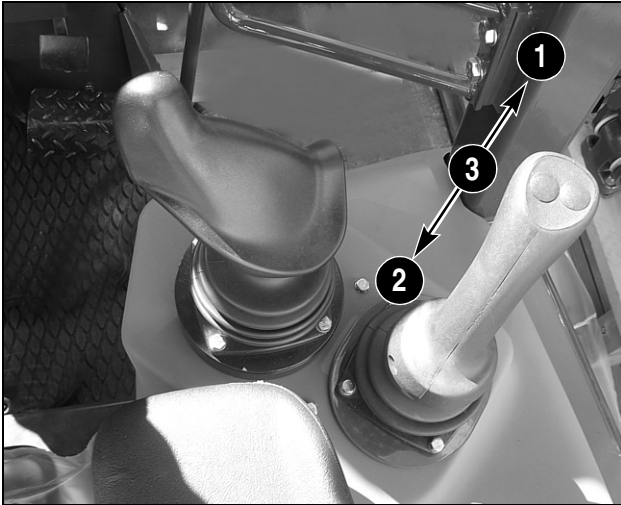
1. **Zone One:** This top 1/3 portion of the display will show the operator messages.

In the example, above, the machine hours are displayed. Machine hours will always be displayed briefly, on start up. After, the machine is started, the display will show engine rpm's. After, beginning travel, the machine will display travel speed.

2. **Zone Two:** This middle 1/3 of the display is dedicated to transmission signals. The example, above, shows the Direction Control Lever in Neutral with the transmission at 60%. 60% is the default speed. When the key switch has been shut off it will default the transmission to this setting.

3. **Zone Three:** This lower 1/3 of the display is in two sections. Zone A will show fault codes and Zone B will show additional and optional information.

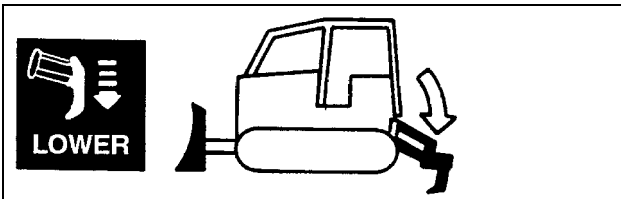
RIPPER CONTROL LEVER



BD06K001

Figure 61

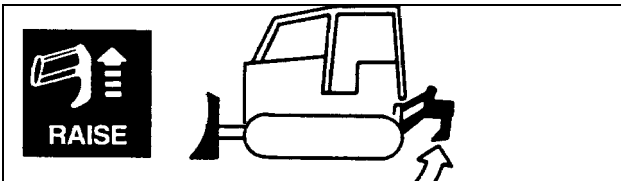
1. LOWER:



BS99J221

Figure 62

2. RAISE:



BS99J222

Figure 63

3. HOLD:

The ripper will stop moving when the control lever is in the HOLD position. When released, the control lever will return to the HOLD position automatically.

ENGINE OPERATION

WALK-AROUND INSPECTION

Do the following items each day before you start the engine.

1. Check for leaks under the machine.
2. Check track tension and check for loose, missing, or broken parts.
3. Check the machine and equipment (dozer, ripper, etc.) for wear, damage, missing, or broken parts.
4. Check the machine for debris, especially around the engine area and radiator. Make sure these areas are clean.
5. Clean or replace any safety or instructional decals that cannot be read.
6. Clean the steps, hand rails, and operator's compartment. Remove any loose items in the operator's compartment.
7. See the Lubrication/Maintenance Chart in this manual and do the items under 10 Hours.

STARTING THE ENGINE

NOTE: *If the weather is cold, if the machine has not been run for several weeks, or if the engine oil filter has been replaced, see Priming the Turbocharger Lines with Oil in this manual.*

1. Adjust the seat and fasten your seat belt. Make sure you can push the brake pedal completely down with your back against the seat cushion.
2. Make sure the parking brakes are engaged by pulling both levers all the way back.
3. Make sure the equipment control levers are in **NEUTRAL** with the equipment on the ground.

NOTE: *The Direction Control Lever must be in Neutral or the engine will not crank. **N** will be displayed on the left side of the Digital Display.*

4. Sound the horn to alert those around the machine that you intend to start.

NOTE: *See Operating in Cold Weather in this manual for starting the engine during cold weather.*

5. Turn the key switch to the **ON** position. Monitor the display panel for gauge and machine functions.

6. Turn the key switch to the **START** position. If the engine starts and stops, do not engage the starter motor again until the starter motor stops turning.

NOTE: *Do not operate the starter motor more than 30 seconds at one time. Let the starter motor cool for three minutes before you engage the starter motor again. While the starter motor is engaged, white or black smoke must be seen at the exhaust pipe. If no smoke is seen, check the fuel supply.*

7. After the engine starts, check the instruments to make sure the gauge indications are correct. Run the engine at 1000 rpm until the coolant temperature is warm.

ENGINE SPEED

Do not run the engine at idle speed for long periods. This can cause a low operating temperature, which can cause acids and deposits in the engine oil. It is recommended that you run the engine at full throttle when operating conditions permit and when safe.

IMPORTANT: *Turbocharged Engines: If the engine stalls during normal operation, start the engine immediately. This will prevent damage to the turbocharger.*

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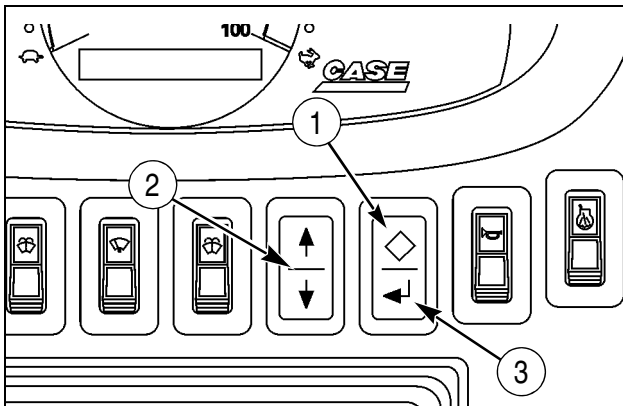


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When The Service Reminder Has Been Activated And Set To (MAN):

1. The operator will be notified when the crawler reaches within 10 hours of the "Next Service" (NS).
2. The Service Soon lamp (1) will illuminate for 5 seconds and the exact information will be on the Digital Display.
3. When the crawler is at, or goes past NS the Service Soon lamp will remain illuminated and the Digital Display will show negative (-) in front of the hours until the operator or service technician manually resets the interval.



BC02M138

Figure 22

6. Press the Service/Enter switch (3) to store the information.

NOTE: After changing the Service Interval, the Service Reminder feature must be reset before Next Service (NS) will be updated.

NOTE: Factory default for Service Interval (SI) is 250 hours.

Resetting The Service Reminder:

This procedure will allow the operator or service technician to reset the next service due (NS).

1. Press and release the Service/Enter switch (3).
2. Use the Up/Down arrows (2) to display the service reminder menu, (SERV_RMDR).
3. Select the service reminder menu by pressing the Service/Enter switch (3).
4. The Digital Display will read (RESET?_).
5. Press the Service/Enter switch (3).

The computer will automatically calculate when the next service (NS) is due, based on the Service Interval (SI).

Changing the Service Interval:

This procedure will allow the operator or service technician to customize the service intervals.

1. Press and release the Service/Enter switch (3).
2. Use the Up/Down arrows (2) to display the service reminder menu, (SERV_RMDR).
3. Select the service reminder menu by pressing the Service/Enter switch (3).
4. The Digital Display will read (RESET?_).
5. Use the Up/Down arrows (2) to change the intervals, I.E., 50 to 100.

BOOSTER BATTERY CONNECTION TO MACHINE BATTERY

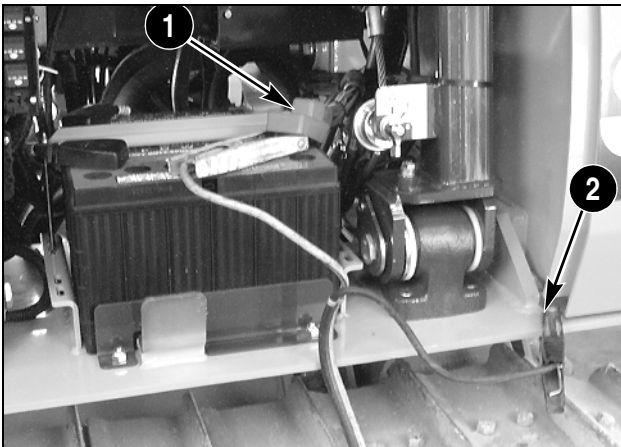


WARNING: Batteries produce explosive gases. Keep sparks, flame, and cigarettes away. Ventilate when charging or using in an enclosed space. Always shield eyes when working near batteries.

SA031

Two persons are required for this procedure. Make sure the person making the connection is wearing face protection.

1. Sit in the operator's seat and have the other person make the connections. Make sure the booster battery is 24 volts.
2. If using another machine for power, make sure the two machines do not touch.
3. Connect the positive (+) jumper cable to the positive (+) battery terminal.
4. Connect the negative (-) jumper cable to a good frame ground away from the battery.
5. See Starting the Engine in this manual and use the correct procedure to start the engine. Have the other person disconnect the negative (-) jumper cable first and the positive (+) jumper cable last.



BD02J063

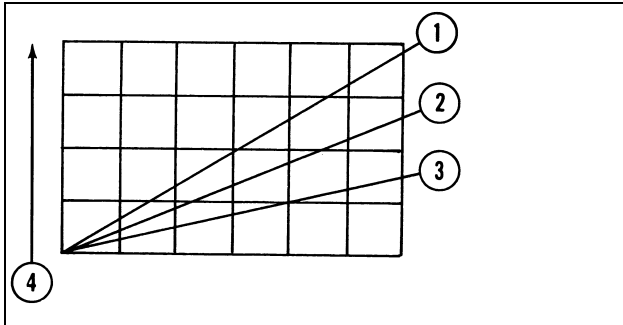
Figure 41

1. POSITIVE (+) JUMPER CABLE
2. NEGATIVE (-) JUMPER CABLE

BUSHING AND SPROCKET WEAR CHART

The tighter you have the tracks, the faster the wear. The following chart illustrates the relationship between wear rate and track sag.

NOTE: *It is recommended that you flip the pins and bushings at the 100% wear limit. The lubrication hole must be down for proper lubrication. Contact your Dealer or see the Service Manual for this procedure and the Wear Charts.*



912347

Figure 62

PERCENT OF WEAR

1. 38 TO 51 MM (1.5 TO 2 INCH) TRACK SAG
2. 25 MM (1 INCH) TRACK SAG
3. 13 MM (0.5 INCH) TRACK SAG
4. HOURS OF USEFUL TRACK LIFE

NOTE: *120% Wear is Running the Track to Destruction.*

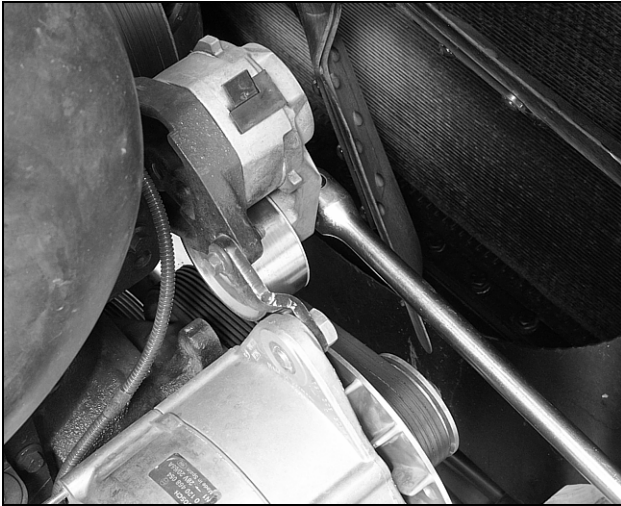
NOTE: *The chart indicates how many less hours of track wear when tracks are operated to tight.*

AS REQUIRED MAINTENANCE

FAN AND AIR CONDITIONING DRIVE BELT

Check the condition of the belt as required by machine hours and working conditions. Check for cracking, deterioration and replace as necessary.

1. Park the machine on a level surface and apply the parking brake.
2. Turn the master disconnect to OFF.



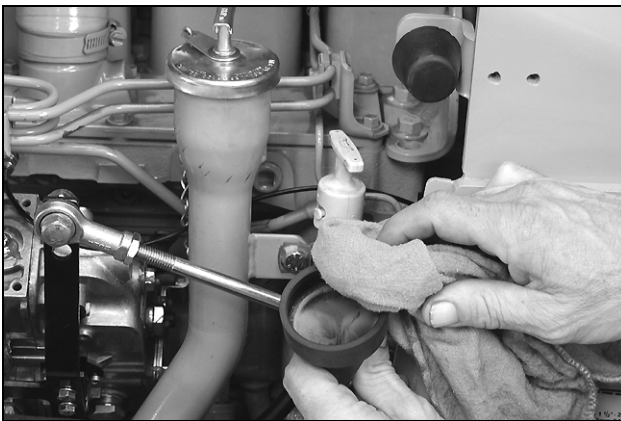
BD06E068

Figure 22

3. Install a 1/2 inch breaker bar in the tension pulley bracket.

Push the breaker bar forward just enough to release the tension on the drive belt. Remove the drive belt from the water pump pulley first and then from the other pulleys.

AIR FILTER DUST VALVE



BD02J088

Figure 23

Under normal conditions the dust valve will clear itself. Under certain conditions, it may be necessary to remove the valve and wipe it clean.

EVERY 250 HOURS**Oil Change and Filter Replacement**

NOTE: For more complete removal of foreign material, change the engine oil while the engine is still warm from operation.

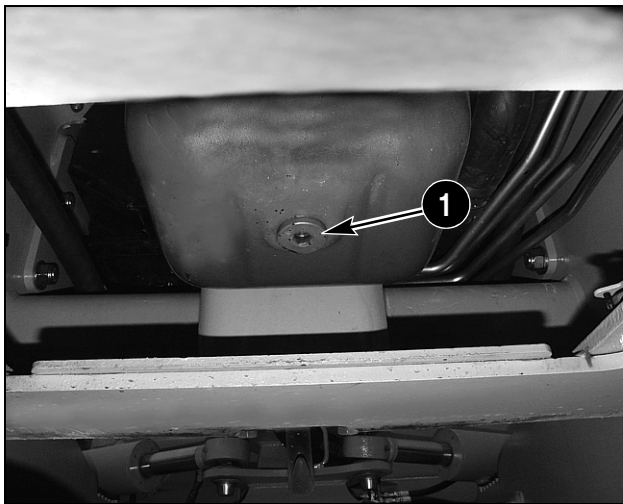
Park the machine on firm, level ground. The old oil and contaminants will drain better if the engine is slightly warm.

Use a 21 mm wrench and remove the four bolts that secure the engine oil access plate under the engine.

1. Before draining the oil, have a container that will hold the suitable quantity.

BD02K002

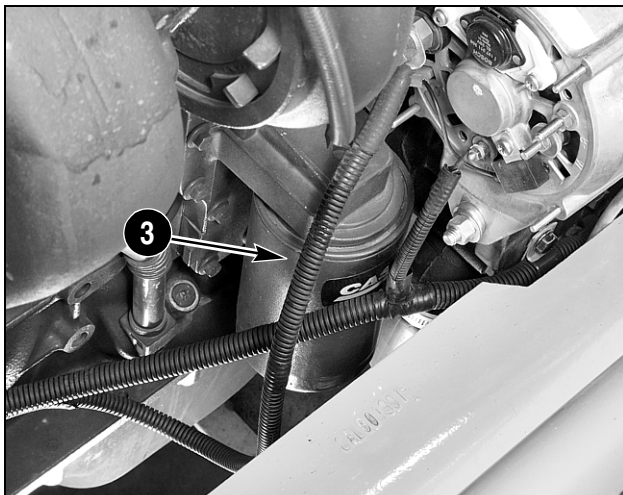
Figure 53



BD06E022

Figure 54

2. Remove the engine oil drain plug (1).



BD06G228

Figure 55

3. Turn the oil filter (3) counterclockwise to remove. Discard the filter.
4. Use a clean cloth and wipe the sealing surface of the oil filter base to remove all dirt or gasket material.

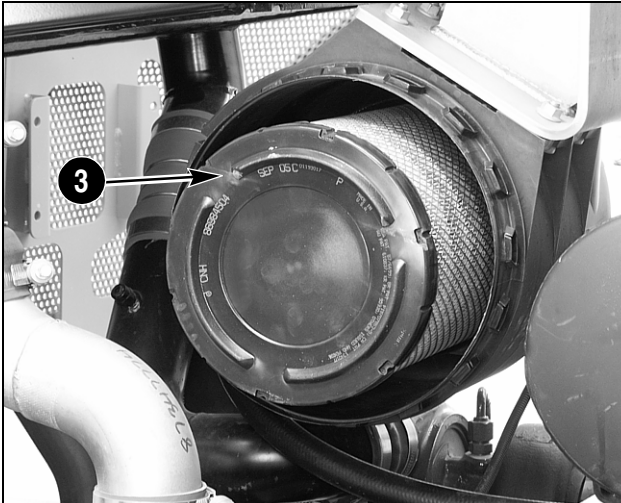
5. Apply a thin layer of clean grease or oil to the gasket of the new oil filter.
6. Turn the new oil filter onto the base until the gasket makes contact with the base. Continue to tighten the filter for 3/4 turn with your hand.

IMPORTANT: Do not use a filter strap wrench to install the oil filter. An oil filter strap wrench can cause a leak if the filter is dented.

IMPORTANT: Clean all dirt and foreign material from the front engine guard a minimum of every thirty days. Dirt will cause rust on the engine oil pan and a loss of engine oil.

7. Install the drain plug. Tighten the drain plug to a torque of 68 to 82 Nm (50 to 60 lb ft). Overtightening can damage the oil pan. Install the guard plate.
8. Put new oil into the engine oil fill tube.
9. Before you start the engine, prime the turbocharger oil lines with oil. See the following topic.
10. Start the engine and run at idle speed. Check the engine oil filter for leaks. After two minutes, stop the engine, wait for 2 or 3 minutes, and check the engine oil level with the dipstick.

EVERY 2000 HOURS

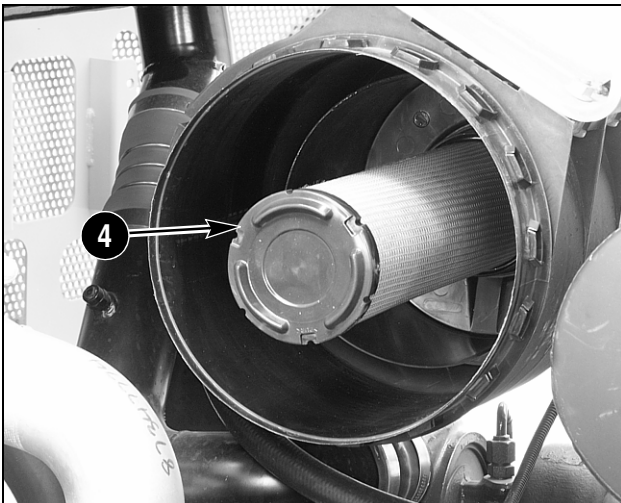


BD06E056

Figure 84

3. PRIMARY (OUTER) ELEMENT

3. Carefully remove the primary (outer) element.

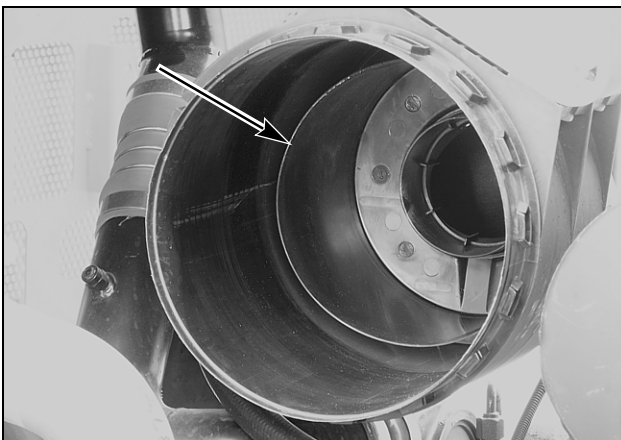


BD06E057

Figure 85

4. SECONDARY (INNER) ELEMENT

4. Remove the secondary element.



BD06E058

Figure 86

5. Use a clean damp cloth and clean inside of the filter body.

6. Install a new secondary element.
7. Install a new primary (outer) element. Make sure the element has full gasket contact.
8. Install the end cover.
9. Make sure other persons are clear of the machine. Start the engine and check the air filter warning lamp.

IMPORTANT: *Each time you service the air filter system make sure both filters are seated properly and the cover is secure.*

TURBO PRECLEANER (OPTIONAL)

The optional turbo precleaner requires no service.

MACHINE STORAGE

STORAGE PREPARATION

If the machine is to be in storage for more than 30 days, park the machine inside a building. If a building is not available, park the machine in a dry area on planks and cover the machine with a waterproof covering.

1. Wash the machine.
2. Lubricate the machine at all grease fittings.
3. Paint any area where the paint has been damaged.
4. Drain the fuel tank.
5. Put approximately 8 litres (2 U.S. gallons) of diesel flushing oil in the fuel tank. Run the engine until the exhaust smoke is blue white.
6. Drain the flushing oil from the fuel tank.
7. Put 15 ml (one teaspoon) of Shell Oil Company VPI crystals in the fuel tank.
8. Move all hydraulic controls to relieve any pressure in the hydraulic circuits.
9. Change the engine oil and replace the oil filter.
10. Drain the cooling system. Leave the drain valves open and do not tighten the radiator cap. Put a Do Not Operate tag on the instrument panel.
11. Clean the primary element for the air filter.
12. Cover the exposed cylinder rods, equipment valve spools, and transmission valve spools with Case Rust and Corrosion Preventive (Part Number B17510).
13. Charge the battery. Remove the battery from the machine and put the battery on a wooden pallet in a cool dry area. If possible, keep the battery in a building where the temperature is above freezing 0°C (32 F). Make sure the battery is clean.

NOTE: Check the battery periodically for the correct electrolyte level. Test the electrolyte with a hydrometer. When the hydrometer reading is near 1.215, charge the battery.

REMOVAL FROM STORAGE

Do not start the engine until steps 1 through 13 have been done.

1. Change the fuel filters.
2. Put coolant in the engine cooling system.
3. Check the condition of the drive belt. Replace if required.
4. Check the engine oil level.
5. Check the hydraulic oil level.
6. Check the transmission oil level.
7. Check the final drives oil level.
8. Lubricate the machine at all grease fittings.
9. Use petroleum base solvent and remove the Case Rust and Corrosion Preventive from the hydraulic cylinder rods, equipment valve spools and transmission valve spools.
10. See Battery Service in this manual. Install the battery.
11. Fill the fuel tank.
12. Remove the air from the fuel system. See Removing Air from Fuel system in this manual.
13. If the machine is equipped with a turbocharger, you must prime the turbocharger oil lines with oil. See Priming the Turbocharger in this manual.
14. Start the engine. It is important that you refer to the procedure on Starting the Engine in this manual.

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