9045B EXCAVATOR

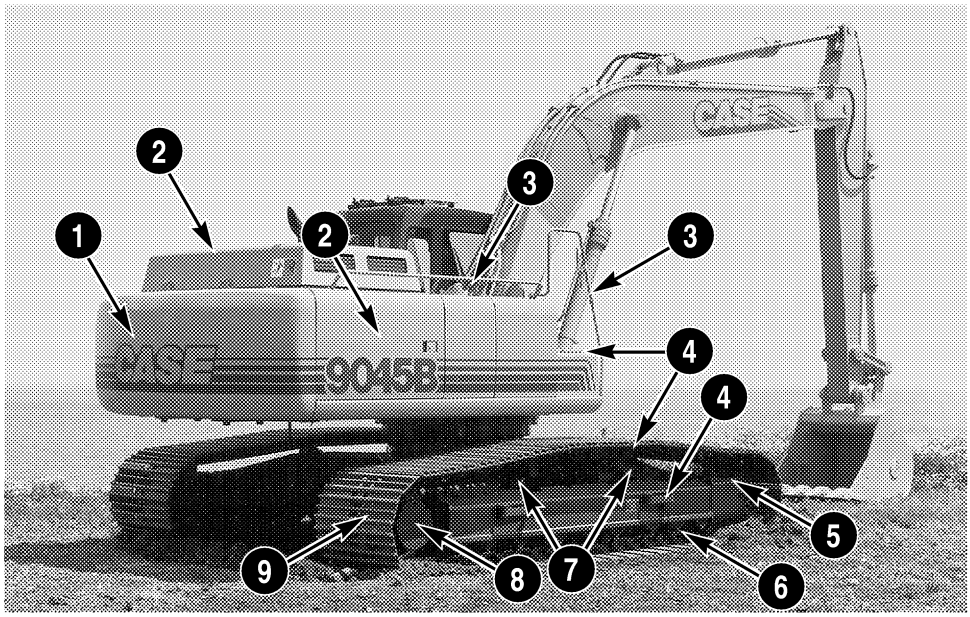
Operator's Manual

Bur 6-1250NA

Reprinted

CASE

MACHINE COMPONENTS (Cont'd)



BP97K015

1. REAR COUNTERWEIGHT
2. ENGINE COMPARTMENT
3. HAND RAILS
4. STEPS
5. IDLER
6. TRACK ROLLERS
7. TRACK CARRIER ROLLERS
8. DRIVE SPROCKET
9. TRACK CHAIN

PARKING THE MACHINE

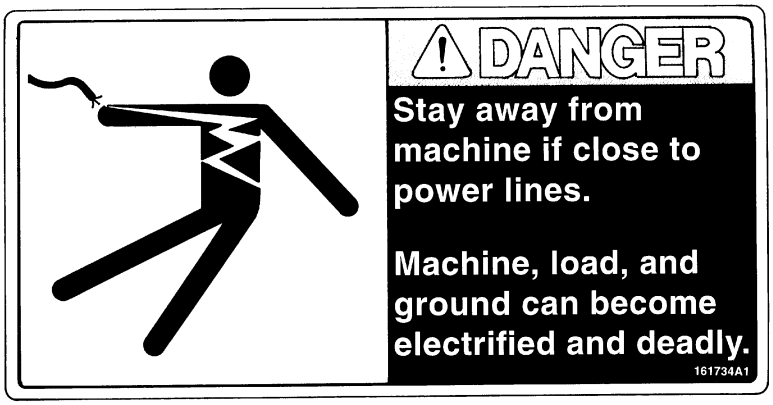
- Before you leave the machine, make sure the machine is parked on level ground. If you must park on a hillside, see the IMPORTANT information that follows:

1. Swing the upper structure around to the front TRAVEL position and lower the bucket or attachment to the ground.
2. Push the Swing Brake Button to engage the swing brake.
3. Stop the engine, remove the key and put the Control Lock Switch in the LOCKED position.
4. Raise the left control console and raise the Gate Lock Control Lever.
5. When leaving the machine, always face the machine and use the hand rails and steps. Do not rush and do not jump from the machine.
6. Close and lock the cab door.

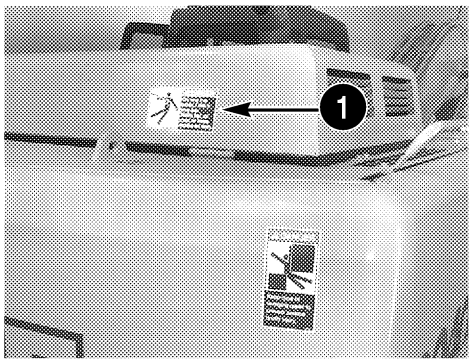
If you must temporarily park the machine on a hillside, put the front of the machine toward the bottom of the hill. Make sure the machine is behind an object that will not move. Put blocks in front of each track on the downhill side.

BURN PREVENTION

- Batteries contain sulfuric acid which can cause severe burns. Avoid contact with skin, eyes, or clothing. Antidote - EXTERNAL: flush with water. INTERNAL: drink large quantities of water or milk. Follow with milk of magnesia, beaten egg or vegetable oil. Call a doctor immediately. EYES: flush with water for 15 minutes and get prompt medical attention.
- When the battery electrolyte is frozen, the battery can explode if, (1) you try to charge the battery, or (2) you try to jump start and run the engine. To prevent the battery electrolyte from freezing, keep the battery at full charge. If you do not follow these instructions, you or others in the area can be injured.
- Hot coolant can spray out if the radiator cap is removed too quickly. To remove the radiator cap, let the cooling system cool, turn the cap to the first notch, wait until the pressure is released, then remove the cap.



161734A1



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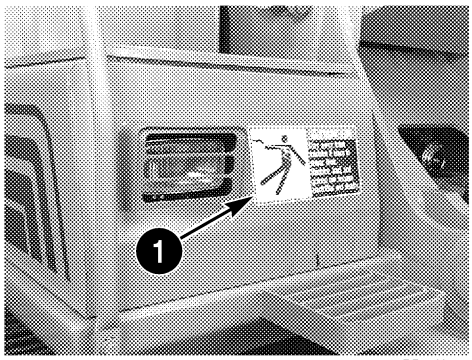
1. 161734A1 (REAR)



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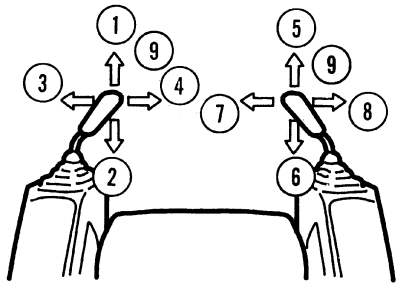
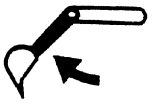
1. 161734A1 (FRONT)

STANDARD CONTROLS
(Control Pattern D When Quick Change Kit Is Installed)



1 ARM OUT

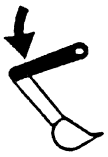


2 ARM IN

3 SWING LEFT

4 SWING RIGHT

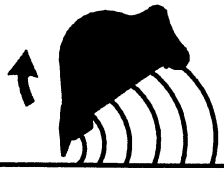
5 BOOM DOWN



6 BOOM UP

7 BUCKET IN

8 BUCKET OUT



9 NEUTRAL (HOLD)

When released, both control levers return to NEUTRAL (HOLD) automatically at which point all movement stops.

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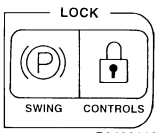

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LOCK INDICATORS: There are two lock indicators, the Swing Lock and the Controls Lock. The Swing Lock is actuated by the Swing Lock button and the Control Lock is actuated by the Control Lock button.

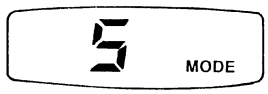

B9408126

SWING LOCK: When this symbol appears, the Swing Lock is actuated. The upper structure will not swing.


B9408127

CONTROL LOCK: When this symbol appears, the equipment controls and travel controls are locked. The machine will not function.

3. Work Mode Indicator



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WORK MODE INDICATOR: This indicator shows the four modes of operation for the machine; **H** heavy digging, **S** standard mode, **L** light digging mode, and **F** fine mode. When the engine starts, the **S** standard mode is automatically selected.

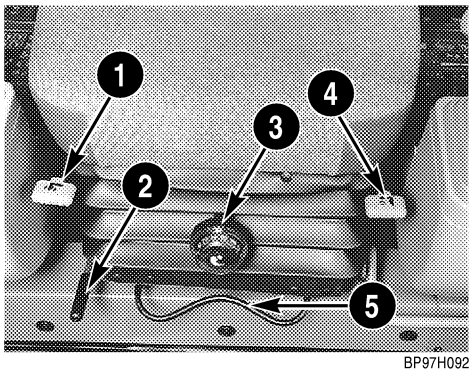
4. Clock Indicator

B9408124

CLOCK TIME INDICATOR: This indicator shows the time in hours and minutes. The time indicates up to 12 hours. See the controls on page 50 to program the clock.

Continued on next page

OPERATOR'S SEAT



BP97H092

1. SEAT BACK (TILT) CONTROL
2. PLATFORM ADJUSTMENT CONTROL
3. SUSPENSION ADJUSTMENT CONTROL KNOB
4. SEAT CUSHION (TILT) CONTROL
5. SEAT (FORWARD/REARWARD) CONTROL

NOTE: Before adjusting the seat or platform, first adjust the seat forward or rearward for easy reach to the two control levers; then, adjust the platform forward or rearward for correct reach to the foot pedals.

1. Seat Back (Tilt) Control: Pull up on this control and tilt the seat back either forward or rearward. Release the control to lock the seat back in position.

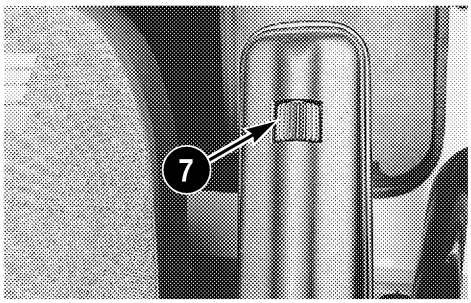
2. Platform Adjustment Control: Pull this control up and move the platform forward or rearward. Release the control when your back is against the seat cushion and your feet are on the foot pedals.

3. Suspension Adjustment Control Knob: Turn this knob in for more support (heavier operator), or out for less support (lighter operator). Sit in the seat when you make this adjustment.

4. Seat Cushion (Tilt) Control: Pull up on this control and tilt the seat cushion either up or down. When you are comfortable, release the control to lock the seat cushion in position.

5. Seat (Forward/Rearward) Control: Pull up on this control and adjust the seat so the two control levers are in the best position for you. Once adjusted release the control to lock the seat in place.

6. Seat Lumbar Adjustment Control: Squeeze and release the bulb to inflate the lumbar increasing the support. Push the button on the bulb to deflate the lumbar decreasing the support.



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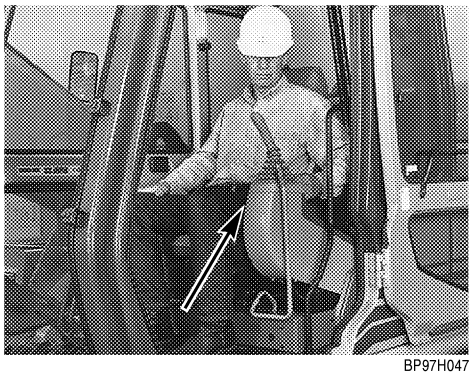
6. ARM REST ADJUSTMENT CONTROL

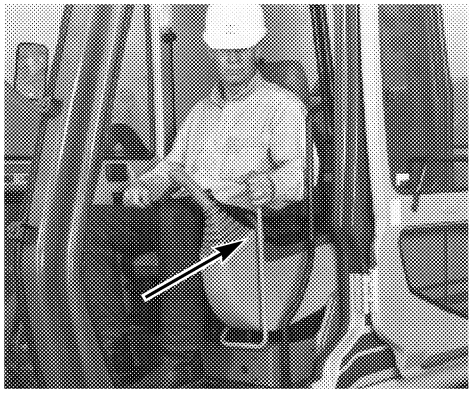
7. Arm Rest Adjustment Control: Turn this control to tilt the arm rest either up or down.

3. Push the Control Lock button to actuate the Control Lock ON position.
4. Run the engine at 1/2 throttle for a few minutes if the engine has been working with a heavy load. This decreases the temperature of the engine parts evenly.
5. Stop the engine, remove the key.
6. Raise the left hand arm rest.
7. Rotate the left control console up.



BP97H047

8. Raise the Gate Lock Control Lever.



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9. When leaving the machine, always face the machine and use the hand rails and steps. Do not rush and do not jump from the machine.

BP97H046

10. Close and lock the cab door.

BP97H045

WARNING: *Jumping on or off the machine can cause an injury. Always face the machine, use the hand rails and steps, and get on or off the machine slowly.*

SA038

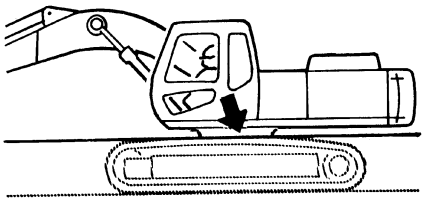
Operating in Water

1. The water level must not be deeper than the top of the tracks.
2. Make sure that the bottom of the stream or pond where you will work will support the machine.
3. Do not operate your machine in a fast current.
4. If the water level increases to the level of the swing bearings, refer to the lubrication section of this manual and do the following procedure:

   A. Add new grease to the swing bearings.

   B. Replace the grease in the swing ring gear. Remove the two belly plates below the swing ring gear and clean the compartment.

   C. Change the oil in each final drive gear box. If water is found, replace the seals.



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1. MAXIMUM WATER DEPTH

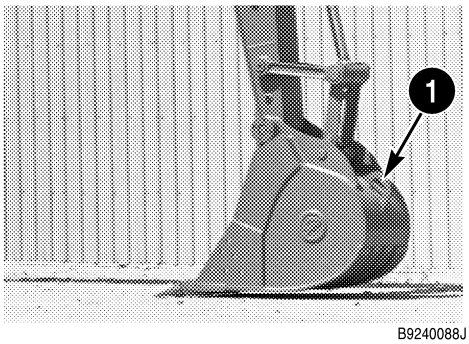
LIFTING LOADS WITH THE MACHINE

WARNING: *This machine is not a crane. For this reason, be very careful if you lift a load. You or others in the area can be injured or killed if you do not follow the instructions below.* SA141

This machine is not a crane. For this reason, always be very careful when you lift a load.

F Mode: Lifting capacities are increased in the F (Fine Mode). It is recommended that you use this mode when you lift loads. See the lifting capacity charts in the specifications section of this manual. Do not use the Power Boost button to lift a load.

H, S, or L Modes: If you lift loads in the H (Heavy Mode), S (Standard Mode), or L (Light Mode), use the lifting capacity charts in the specifications section of this manual and the lifting capacity charts in the cab.



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1. LIFTING POINT - ATTACH RIGGING HERE

- If this excavator is to be used to lift loads, for safety purposes it is recommended that the machine is properly equipped. Contact your Case dealer and install a “Load Holding Control Device” on your machine’s boom cylinders. This system prevents the sudden lowering of the load in the event of a failure of a hydraulic hose, line, or fitting in the boom hydraulic system. Such a failure can cause personal injury or death.
- Know and understand each signal from the signal person before you start. See pages 28.
- Always know the location of all persons in your work area before you start.
- Be sure there is no damage to the wire rope that is used to lift loads.
- Be sure the wire rope and rigging parts are strong enough for the load being lifted.
- Do not exceed either the radius or the height restrictions shown on the lift capacity charts posted in the cab or in this manual.
- Always move the load slowly. Do not move the load over the top of persons. Keep all persons away from the load.
- When the load is raised, keep all persons away until the load is placed on blocks or on the ground.
- It is dangerous if the load being lifted begins to swing.
- Be very careful to balance the load correctly.

FLUIDS AND LUBRICANTS

ENGINE CRANKCASE
- Capacity with filter change ..... 23.2 litres (24.5 U.S. quarts)
- Specifications ..... See Engine Oil Viscosity Chart on page 96

FUEL TANK
- Capacity .....310 litres (82 U.S. gallons)
- Specifications ..... See page 114

ENGINE COOLING SYSTEM
- Capacity with coolant reservoir..... 25.8 litres (27.2 U.S. quarts)
- Specifications ..... 50% water and 50% ethylene glycol

IMPORTANT: *A mixture of* 50% ethylene glycol and 50% water must be used in this machine. This mixture is used if the lowest ambient temperature is above *-37°C (-34°F). If the ambient temperature is lower, adjust the mixture to attain a lower freeze point using the freeze point concentration chart on the label of your antifreeze concentrate container.* ***Never use a coolant solution containing more than 60% glycol.*** *It is recommended that ethylene glycol and water be used in your machine all year.*

NOTE: *When completely draining the cooling system and refilling, mix the ethylene glycol and water completely by running the engine at operation temperature for approximately five minutes. This procedure must be done to protect against freezing when the ambient temperature is below 0° C (32° F).*

HYDRAULIC RESERVOIR
- Reservoir refill capacity ..... 120 litres (31.7 U.S. gallons)
- Total system capacity .....224 litres (59 U.S. gallons)
- Specifications ..... See the Hydraulic Fluid Chart on page 97

SWING REDUCTION GEAR BOX
- Capacity ..... 6 litres (6.3 U.S. quarts)
- Specifications ..... API GL-4, SAE 90 Gear Lube or Case 135H EP Gear Lube

FINAL DRIVE GEAR BOX
- Capacity (Each Side) ..... 4.7 litres (5 U.S. quarts)
- Specifications ..... API GL-4, SAE 90 Gear Lube or Case 135H EP Gear Lube

SWING RING GEAR
- Capacity ..... 20 kg (44 pounds)
- Specifications ..... No. 2 EP Lithium Grease

BOOM, ARM, BUCKET AND SWING PIVOT GREASE FITTINGS
- Quantity ..... As required
- Specifications ..... No. 2 EP Lithium Grease or Molydisulfide Grease

AIR FILTER SYSTEM

Service Specifications

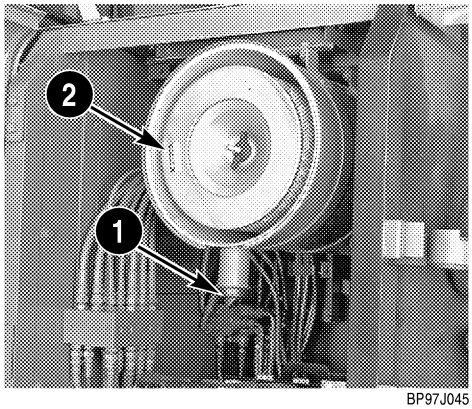
As required ..... Clean air filter cap
Every 10 hours ..... Dust valve check
Air Filter Element Service Interval ..... See the following Note

NOTE: *Service the elements if the Message Panel shows that air cleaner service is required. Also, you must replace both filter elements after one year in the machine.*

1. The shelf life of a new air filter element is five years; do not install a new element that is more than five years old. The date of manufacturer is on the end cap of the element.
2. Do not remove the elements from the machine to check for restriction; always follow the recommended service instructions in this section.
3. Each time you service the air filter system, make sure all hose connections and flanges are air tight. Replace all damaged parts.

Dust Valve

Check the dust valve every 10 hours of operation or more often in severe wet or heavy dust conditions.

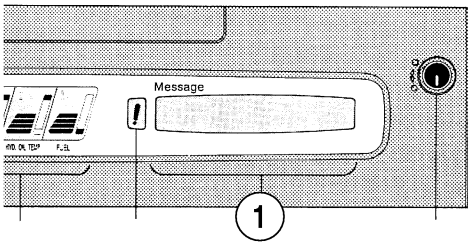


BP97J045

1. DUST VALVE
2. AIR FILTER

Air Filter Service Indicator

You must service the air filter when the Message Panel shows the AIR FILTER message.



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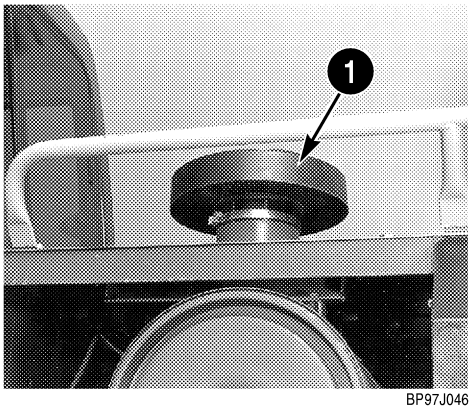
1. MESSAGE PANEL

Air Filter Intake Cap

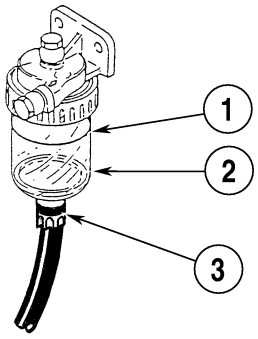
Check the cap and clean as required. Clean with compressed air or wash in warm water and detergent.



BP97J046

1. AIR INTAKE CAP

Fuel Sediment Bowl



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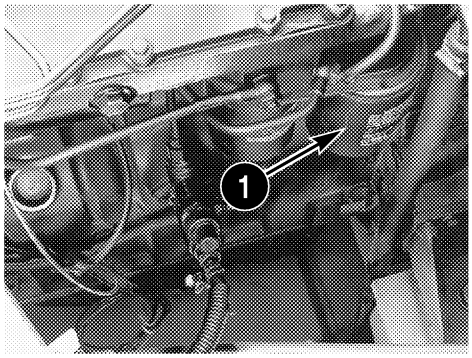
1. RED LINE
2. FLOAT
3. WATER DRAIN VALVE

Check the float in the fuel sediment bowl. Water in the sediment bowl will cause the float to raise. Open the water drain valve at the bottom of the bowl to drain the water. Close the water drain valve. Do not let the water level raise up to or above the red line on the sediment bowl.

First Stage Fuel Filter

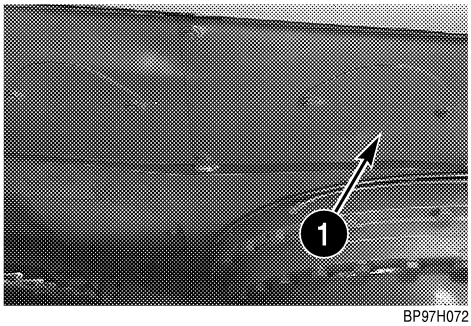


BP97J062

1. FIRST STAGE FUEL FILTER

Drain water from the first stage fuel filter every 50 hours of operation or if you find water in the fuel sediment bowl. Open the drain valve at the bottom of the filter to drain the water (rotate the drain valve one or two turns). Close the drain valve.

Fuel Tank Drain



BP97H072

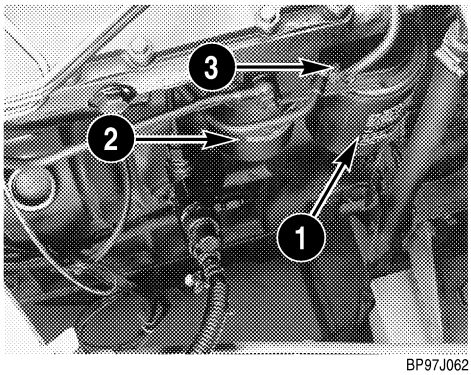
1. COVER FOR THE FUEL TANK DRAIN

Remove the two cover bolts and cover (under the fuel tank) and open the drain valve to drain water from the fuel tank. Close the valve when all water is removed. Install the cover.

Filters

Replace the two fuel filters and the in-line filter after every 500 hours of operation.

1. Clean the filter head and the outside of the old fuel filters.



BP97J062

1. FIRST STAGE FUEL FILTER
2. SECOND STAGE FUEL FILTER
3. FILTER HEAD

2. Turn each filter counterclockwise and remove. Discard the old filters.
3. Apply a thin layer of clean oil to the gasket of each new filter.

Continued on next page

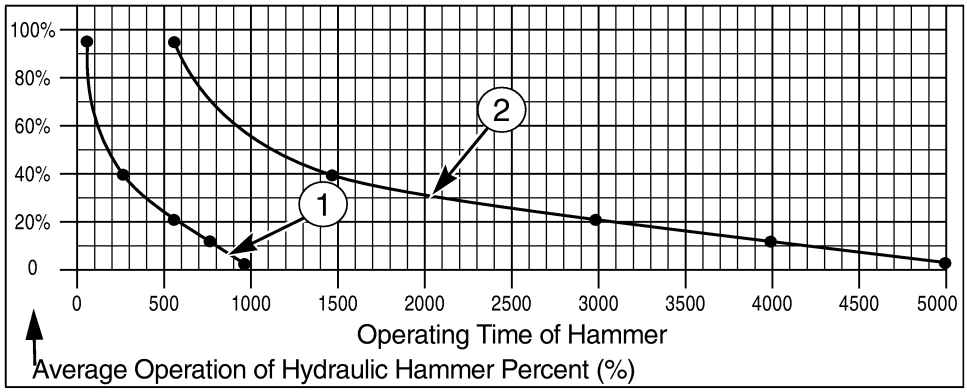
Oil Change and Filter Replacement Intervals with Hydraulic Hammer

When using the hydraulic hammer attachment, hydraulic fluid deteriorates and is contaminated faster than when you dig with a bucket.

Using the graph below, replace all of the hydraulic filters on the machine and change the hydraulic fluid.

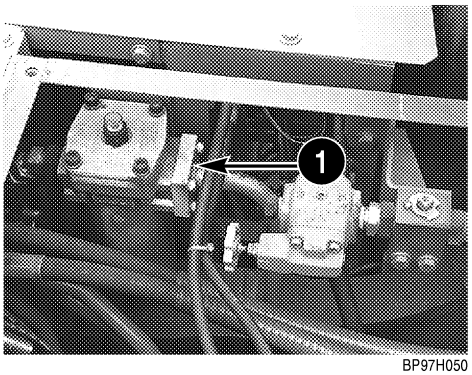
If the hammer operates for a short period of time and the hourmeter exceeds 100 hours during that period, replace both auxiliary return filter and the hydraulic reservoir return filter every 100 hours of operation.

Check the hoses, tubes, plugs, connectors and fittings each day for oil leaks. Also, check the mounting bolts and nuts for looseness. Repair, replace, or tighten as required.



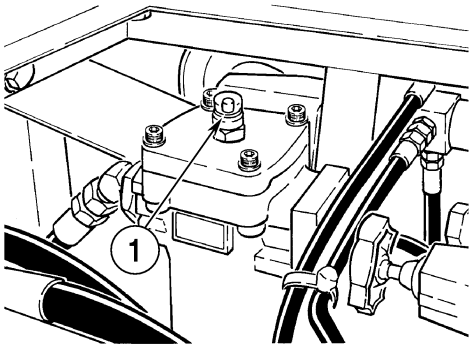
1. Filter Element Replacement Interval *2. Hydraulic Oil Change Interval*

Auxiliary Return Filter



BP97H050

1. AUXILIARY RETURN FILTER



B9409057

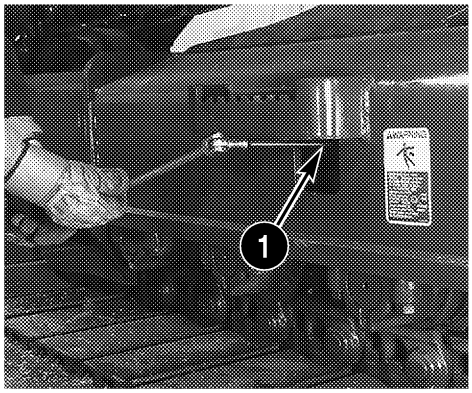
1. CONDITION INDICATOR - REPLACE THE FILTER WHEN THE RED BAND IS IN VIEW

To Loosen the Track Chain

WARNING: *High pressure grease: Grease injected into your skin can cause severe injury or death. Keep your hands and body away from any pressurized leak. If fluid is injected into your skin, see a doctor immediately and have the fluid removed.* SA024

WARNING: *Grease is under heavy spring pressure. Disassembly without releasing pressure may result in serious injury or death. Do not disassemble the track compensating system before completely releasing the grease pressure. Release grease pressure by loosening check valve. Do not remove the check valve or retaining bracket.* CSM121

1. Use a deep socket and slowly loosen the check valve until grease flows from the adjustment cylinder. Grease will flow from a groove in the check valve. DO NOT REMOVE the check valve. The grease in the adjustment cylinder is highly pressurized. Do not remove the check valve mounting bracket.
2. When the track tension is correct, tighten the check valve.
3. Clean the grease from the check valve.
4. Start the engine and lower the track to the ground. Check the track tension on the other side using the same procedure.



BP97H083

1. USE DEEP SOCKET ON CHECK VALVE

Arm Length	**3.40 m (11 ft 2 in)**	**3.98 m (13 ft 0 in)**
A Overall height	3.42 m (11 ft 3 in)	3.80 m (12 ft 6 in)
B Cab height	3.04 m (10 ft 0 in)	3.04 m (10 ft 0 in)
C Overall length	10.01 m (32 ft 10 in)	9.93 m (32 ft 7 in)
D Overall length (wo/attachment	5.31 m (17 ft 5 in)	5.31 m (17 ft 5 in)
E Width of upperstructure	2.50 m (8 ft 2 in)	2.50 m (8 ft 2 in)
F Track overall length	4.84 m (15 ft 11 in)	4.84 m (15 ft 11 in)
G Track overall width with 800 mm (31.5 in) shoes	3.40 m (11 ft 2 in)	3.40 m (11 ft 2 in)
H Track shoe width	800 mm (31.5 in)	800 mm (31.5 in)
J Centerline to centerline (idler to sprocket)	3.91 m (12 ft 10 in)	3.91 m (12 ft 10 in)
K Upper structure ground clearance	1.18 m (3 ft 10 in)	1.18 m (3 ft 10 in)
L Minimum ground clearance	0.50 m (1 ft 8 in)	0.50 m (1 ft 8 in)
M Tail swing radius	3.00 m (9 ft 10 in)	3.00 m (9 ft 10 in)

BOLT TORQUES

Check the bolts and nuts according to the following table after the first 50 hours of operation with a new machine and every 250 hours of operation thereafter. At the end of each day, check for missing or loose bolts and nuts.

Special Bolt Torques

			Tightening Torques	
	Bolt Size	**Hex Size**	**N m**	**pound-feet**
*Travel Motor	M16	24 mm	266.6 to 311.6	197 to 230
*Drive Sprockets	M16	24 mm	266.6 to 311.61	97 to 230
*Idlers	M16	24 mm	266.6 to 311.6	197 to 230
*Carrier Rollers	M20	30 mm	520.4 to 607.6	385 to 450
*Lower Track Rollers	M18	27 mm	370.4 to 432.2	275 to 320
*Track Guards	M18	27 mm	379.3 to 443.0	280 to 325
Shoe Bolts	M16	24 mm	372.4 to 450.8	275 to 335
Counterweight	M27	41 mm	1058 to 1235	780 to 910
*Turntable Bearing (Lower Frame)	M20	30 mm	520.4 to 607.6	385 to 450
*Turntable Bearing (Swing Frame)	M20	30 mm	520.4 to 607.6	385 to 450
*Swing Equipment	M20	30 mm	521 to 608	385 to 450
*Engine Mounts	M16	24 mm	265 to 313	195 to 230
*Engine Mounts	M20	30 mm	289 to 337	215 to 247
*Engine Bracket	M12	19 mm	108.8 to 126	80 to 93
Radiator	M16	24 mm	147 to 176	108 to 130
*Hydraulic Pump	M10	17 mm	64.7 to 75	50 to 55
*Hydraulic Oil Tank	M16	24 mm	232.3 to 289	170 to 215
*Fuel Tank	M16	24 mm	251.9 to 289	185 to 215
*Control Valve	M16	24 mm	266.6 to 311	197 to 230
*Rotating Joint Swivel	M12	19 mm	108.8 to 126	80 to 90
Cab	M16	24 mm	127.4 to 142	95 to 105
Batteries	M10	17 mm	19.6 to 29	15 to 20

NOTE: *Items with an asterisk (*) have Loctite #262 on the bolt threads. When installing these bolts, always use Loctite #262 and tighten bolts to the above specifications on the table.*