

# Operation & Maintenance Manual

SEAM010801



# D375A-3

**BULLDOZER**

SERIAL NUMBERS **D375A-3 - 17001** and up

# KOMATSU

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**IN OPERATOR'S CAB**

- Do not leave tools or spare parts lying around in the operator's compartment. They may damage or break the control levers or switches.  
Keep tools in the tool box on the inside at the front of the right fender.
- Keep the cab floor, controls, steps and handholds free of oil, grease, snow, and excess dirt.
- Check the seat belt, buckle and hardware for damage or wear. Replace any worn or damaged parts. Always use seat belts when operating your machine.  
**Seat belts → See "27. USING SEAT BELT".**

**VENTILATION FOR ENCLOSED AREAS**

- If it is necessary to start the engine within an enclosed area, provide adequate ventilation. Exhaust fumes from the engine can KILL.



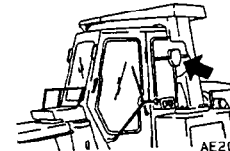
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**PRECAUTIONS FOR MIRRORS, WINDOWS AND LIGHTS**

- Remove all dirt from the surface of the windows and lights to ensure that you can see well.
- Adjust the rear view mirror so that you can see clearly from the operator's seat, and always keep the surface of the mirror clean. If any glass is broken, replace it with a new part.
- Check that the head lamps and rear lamps are installed to match the operating conditions. Check also that they light up properly.

**PRECAUTIONS FOR SLIDING GLASS INTERMEDIATE LOCK**

The sliding glass intermediate lock is to prevent rattling of the glass. Even when the lock is used, the glass may move because of the shock when starting or stopping suddenly. Do not put your head or hands out of the window during operations.



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**CHECK THOROUGHLY BEFORE STARTING**

Always carry out all checks before starting.

**RULES TO FOLLOW WHEN ADDING FUEL OR OIL**

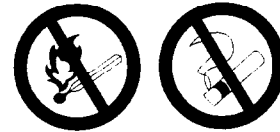
- Spilled fuel and oil may cause you to slip, so always wipe it up immediately.
- Always tighten the cap of the fuel and oil fillers securely.
- Never use fuel for washing any parts.
- Always add fuel and oil in a well-ventilated place.



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**RADIATOR WATER LEVEL**

- When checking the water level, stop the engine and wait for the engine and radiator to cool down first.
- If removing the radiator cap, turn it slowly to release the internal pressure.



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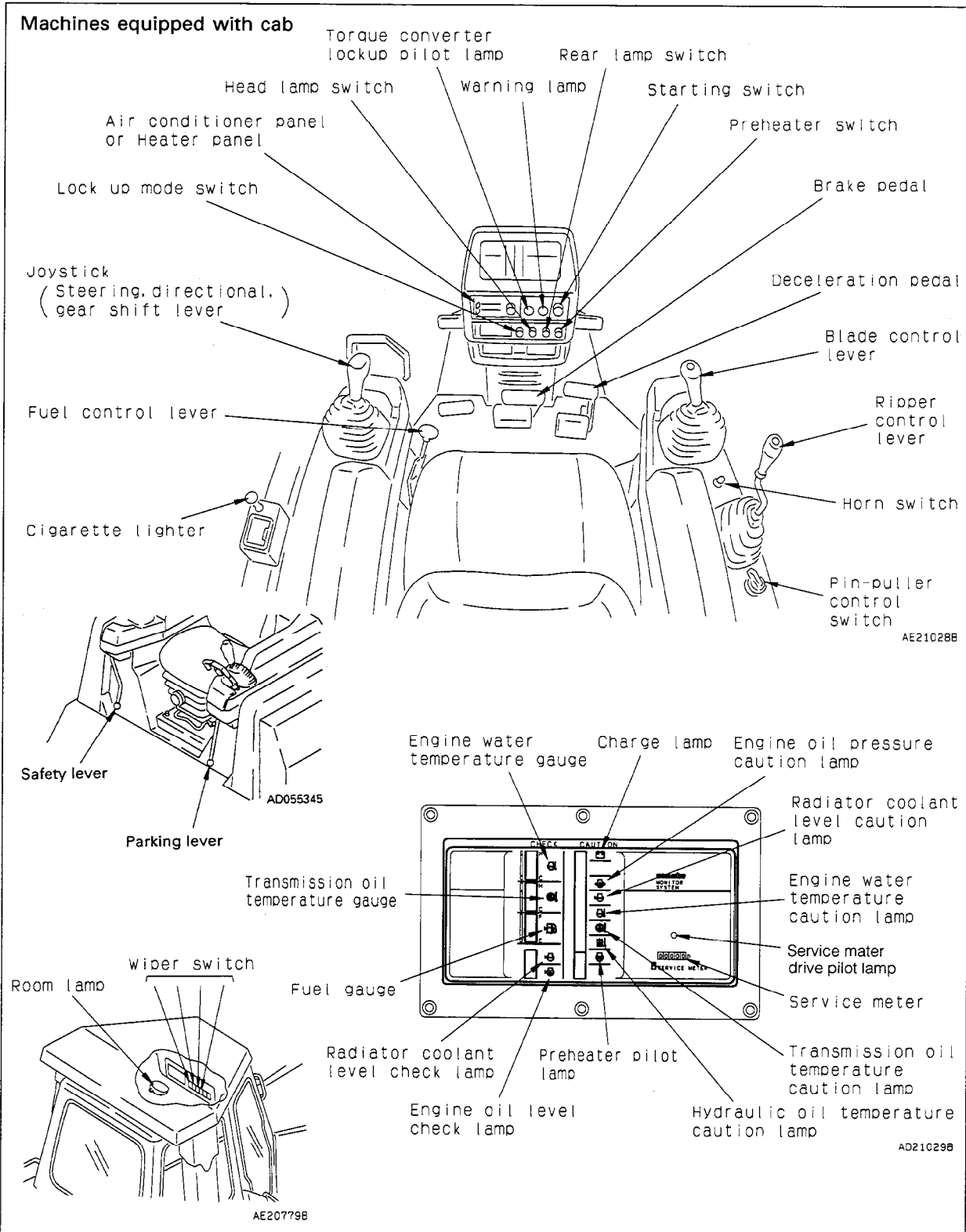
**USE OF LIGHTING**

- When checking fuel, oil, coolant, or battery electrolyte, always use lighting with antiexplosion specifications. If such lighting equipment is not used, there is danger of explosion.

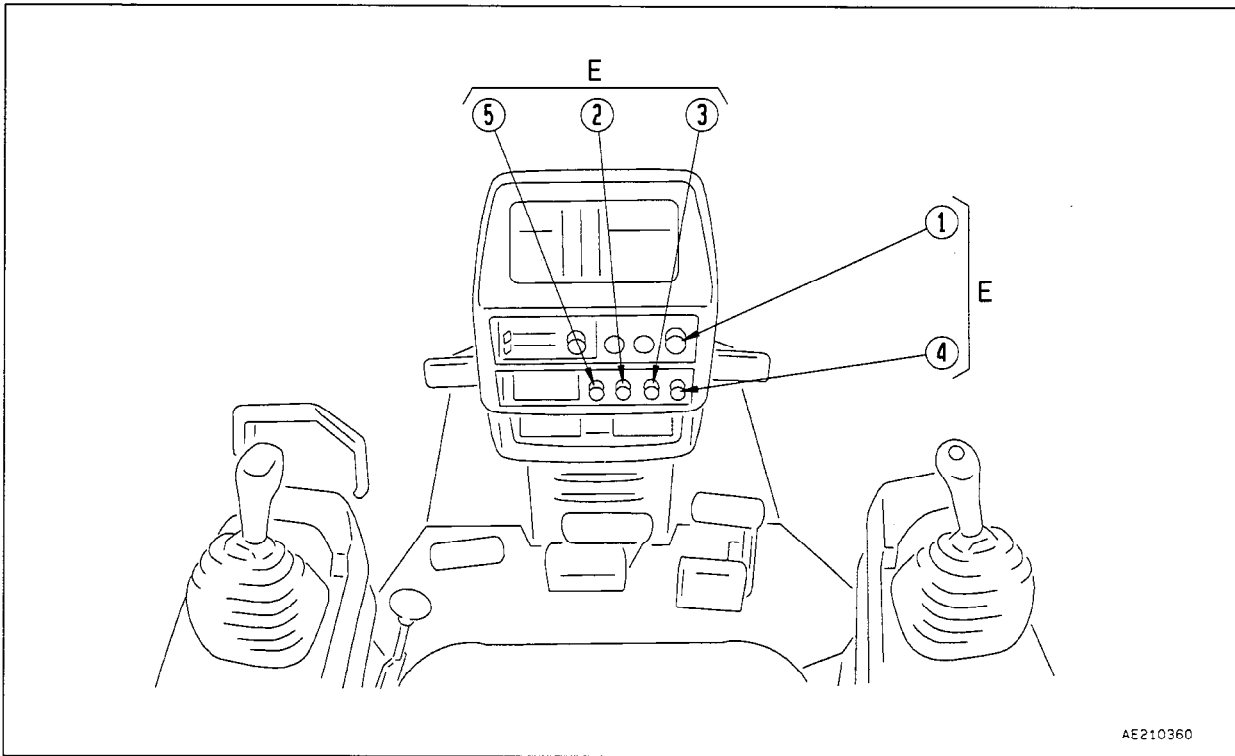


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10.2 GENERAL VIEW OF CONTROLS AND GAUGES



**11.1.5 E: SWITCHES (MACHINES EQUIPPED WITH CAB)**



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**1. STARTING SWITCH**

This switch is used to start the engine.

**OFF**

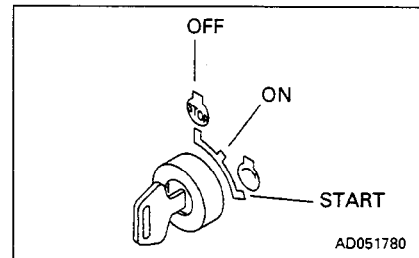
Key insertion-withdrawal position. None of electrical circuits activate.

**ON**

Charging and electric device circuits activate. Keep key at ON after starting.

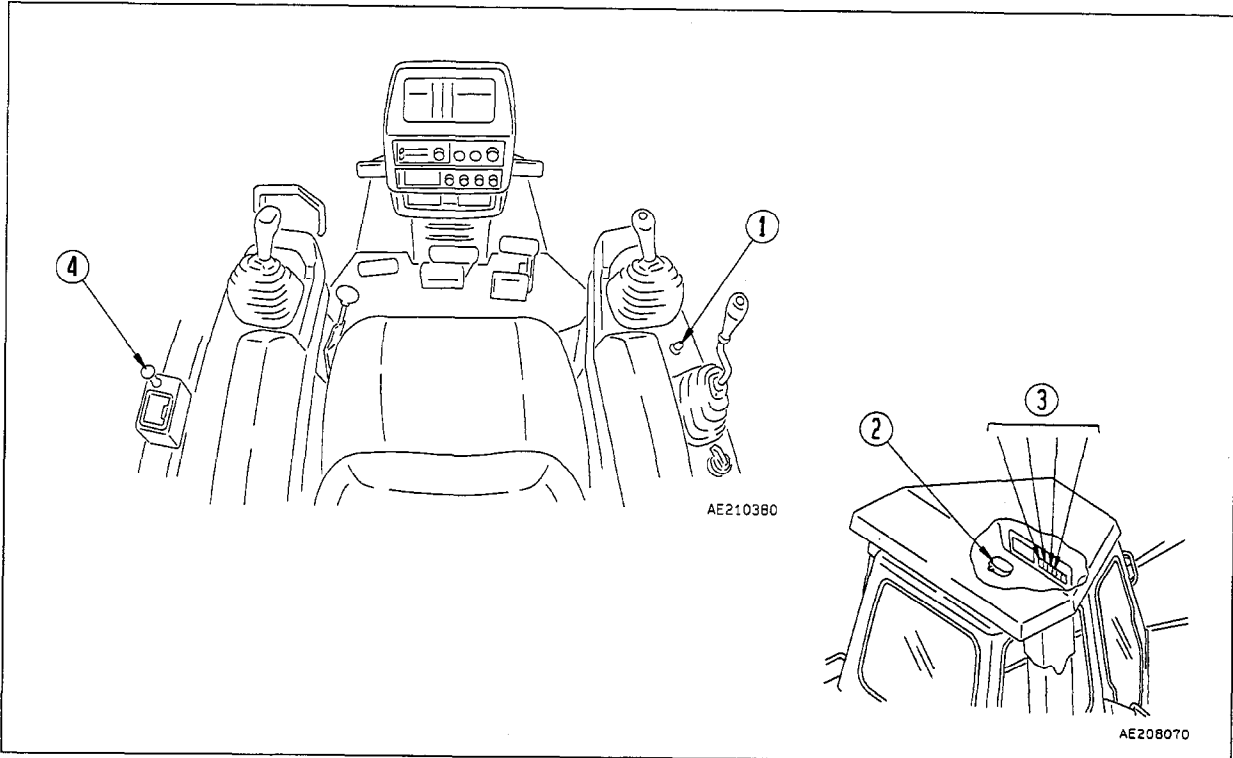
**START**

At this key position, the starting motor will crank the engine. Immediately after starting the engine, release the key which will automatically return to the ON position.



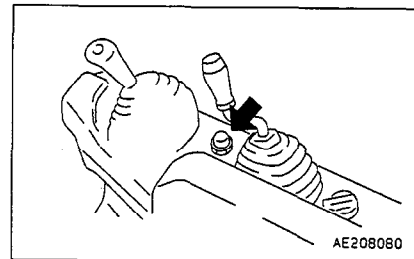
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**11.2 SWITCHES**



**1. HORN SWITCH**

The horn sounds when the button at the rear of the blade control lever at the right side of the operator's seat is pressed.

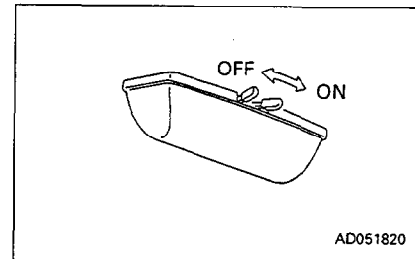


**2. ROOM LAMP SWITCH (MACHINES EQUIPPED WITH CAB)**

This lights up the room lamp.

ON position: Lamp lights up

OFF position: Lamp is out



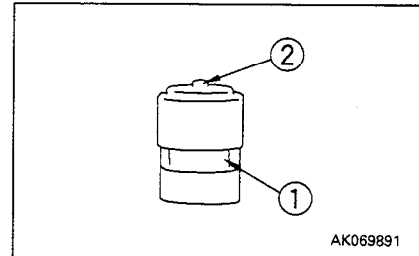
### 11.4 DUST INDICATOR

This device indicates clogging of the air cleaner element.

When the red piston appears in transparent part ① of this indicator, the element is clogged. Clean the element immediately.

After cleaning, push indicator button ② to return the red piston to its original position.

The dust indicator is on the air cleaner bracket inside the engine room.



### 11.5 POWER SOURCE

The cigarette lighter socket can be used as a power source.

#### NOTICE

The power from the cigarette lighter socket is 24V. Do not use this as the power source for any 12V equipment.

The capacity of the cigarette lighter power source is 120W (24V x 5A).

### 11.6 FUSE BOX

#### NOTICE

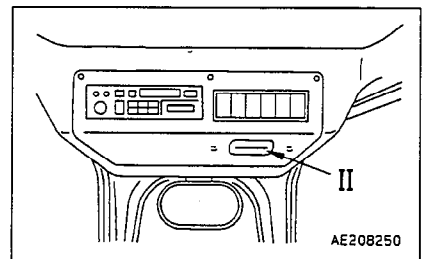
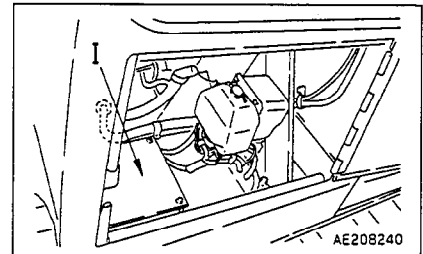
Before replacing a fuse, be sure to turn off the starting switch.

The fuses protect the electrical equipment and wiring from burning out.

If the fuse becomes corroded, or white powder can be seen, or the fuse is loose in the fuse holder, replace the fuse.

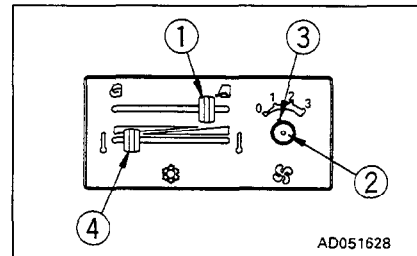
Replace a fuse with another of the same capacity.

- Chassis  
Fuse box I is installed inside the cover (left).
  
- Cab (machines equipped with cab)  
Fuse box II is installed at the bottom of the overhead panel.



### 11.13.2 HEATING OPERATION

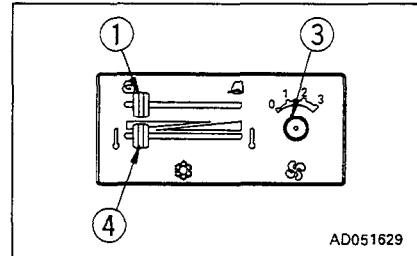
When the heating operation is carried out, the inside of the cab is heated.



#### Heating (RECIRC)

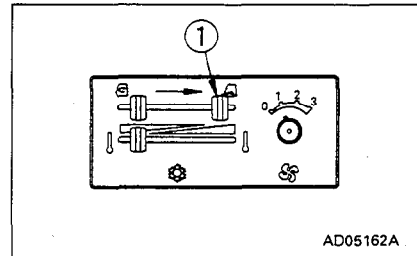
When the control switch and lever are operated as shown in the diagram, warm air is sent out. Use this position when strong cooling is needed.

- Place levers ① and ④ in the position shown in the diagram.
- Set switch ③ to the desired position.



#### Heating (FRESH)

If the air inside the cab is no longer fresh, set FRESH/RECIRC selector lever ① to FRESH to bring in fresh air. Keep the other switches at the same positions as for heating (RECIRC). In this position, the inside of the cab is pressurized to prevent the entry of dust.



#### REMARK

If the cab is not heated up sufficiently, turn FRESH/RECIRC selector lever ① back to RECIRC. This increases the heating effect.

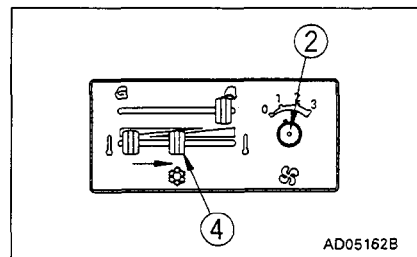
#### Dehumidifying and heating

Push switch ②. When temperature control lever ④ is placed at the central position, dry warm air blows out.

Keep the other switches at the same positions as for heating (FRESH).

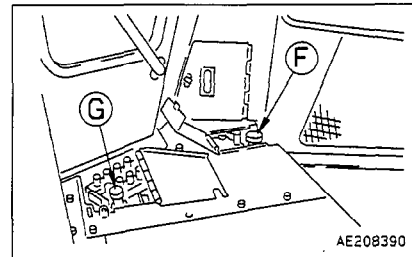
#### REMARK

If this is used in spring and fall on rainy days when the air inside the cab is damp, there is no problem of the windows misting up, and the cab be warmed up to a comfortable temperature.



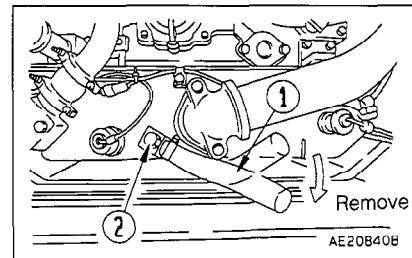
**CHECK OIL LEVEL IN POWER TRAIN CASE (INCL. TRANSMISSION, TORQUE CONVERTER AND BEVEL GEAR CASES), ADD OIL**

1. Start the engine and run at idling for 5 minutes, then check the oil level with the COLD side of dipstick ⑥.
2. Remove dipstick ⑥, and wipe the oil off with a cloth.
3. Insert dipstick ⑥ fully in the oil filler pipe, then take it out again.
4. The oil level should be between the H and L marks on dipstick ⑥.  
If the oil level is below the L mark, add engine oil through oil filler ⑦.



For details of the oil to use, see "20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".

5. If the oil is above the H mark, pull out hose ①, and loosen drain plug ② to drain the excess oil, then check the oil level again.
6. If the oil level is correct, tighten the oil filler cap securely.

**REMARKS**

- If the machine is at an angle, make it horizontal before checking.
- When the engine is stopped, the oil level will rise, so it is impossible to check the oil level correctly. When checking while the engine is running, run the engine at idling and check with the HOT side of dipstick ⑥.
- When working on a slope of more than 20°, check that the oil is up to the H level.

## 12.2 STARTING ENGINE

### 12.2.1 NORMAL STARTING

**WARNING**

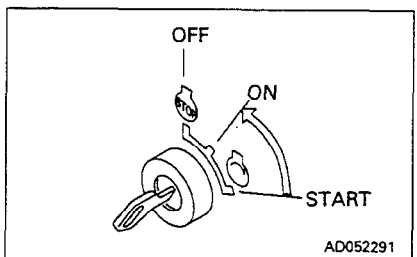
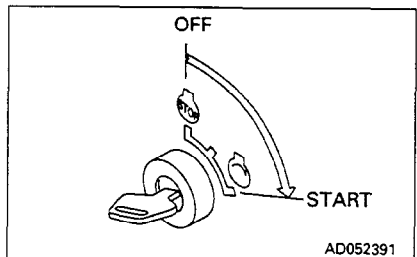
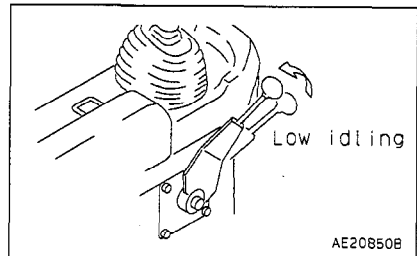
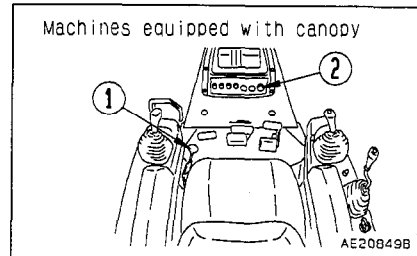
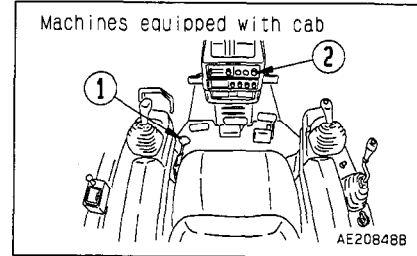
Check that there are no persons or obstacles in the surrounding area, then sound the horn and start the engine.

**NOTICE**

Do not keep the starting motor rotating continuously for more than 20 seconds.

If the engine will not start, wait for at least 2 minutes before trying to start the engine again.

1. Pull fuel control lever ① a little toward you from the low idling position.
2. Turn the key of starting switch ② to the START position.
3. When engine is started, release the key of starting switch ② and the key will return automatically to ON.



## 12.7 STEERING MACHINE

### WARNING

- Avoid as much as possible turning the machine on a slope. The machine will tend to slip sideways. Particular care should be taken on soft or clay land.
- Never make a pivot turn at high speed.

### 12.7.1 NORMAL TURNING

To turn the machine while traveling, incline joystick ① in the direction to turn.

- Turning gradually to left while traveling forward  
If the joystick is pushed forward and moved partially to the left (L), the steering clutch is disengaged and the machine turns gradually to the left.

#### REMARK

When turning gradually to the right, push the joystick forward, and move it partially to the right.

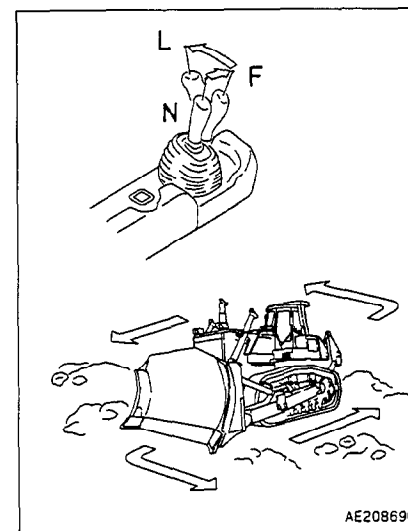
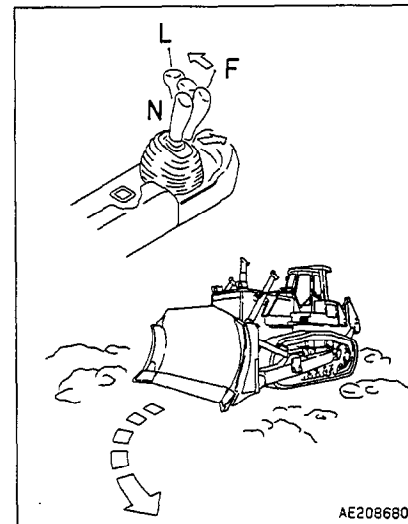
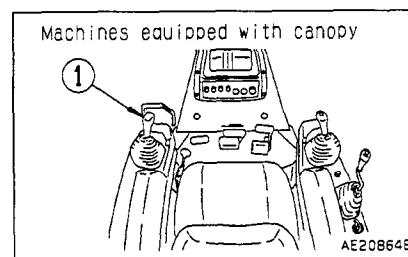
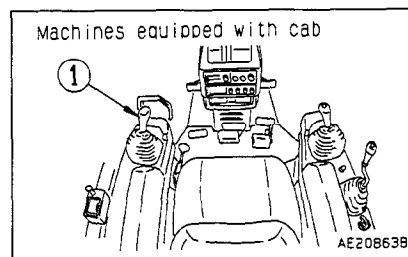
Do the same when traveling in reverse.

- Making sharp turns to left while traveling forward  
If the joystick is pushed forward and moved fully to the left (L), the steering clutch is disengaged, the brake is applied, and the machine turns sharply to the left.

#### REMARK

When making sharp turns to the right, push the joystick forward, and move it fully to the right.

Do the same when traveling in reverse.



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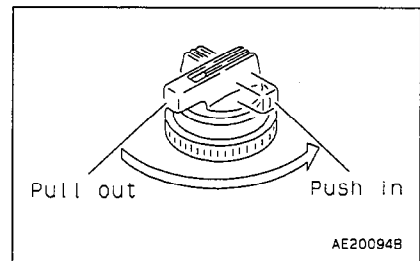
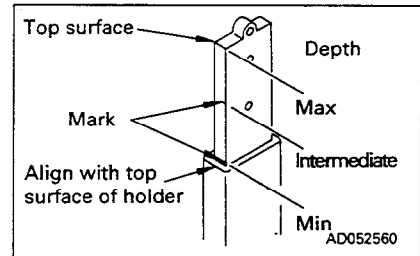
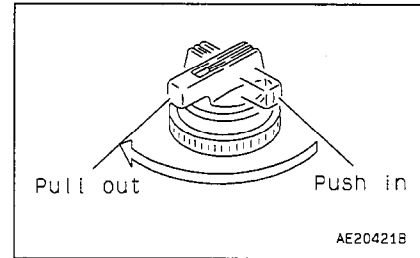
**12.11.5 METHOD OF OPERATING PIN PULLER**

This is used only on machines equipped with a giant ripper.

1. Stop the machine in a safe place and lower the shank to the ground.
2. Operate the pin puller controller switch to the PULL OUT position and remove the mounting pin.
3. Move the ripper up or down to set to the desired shank position.
4. Operate the pin puller control switch to insert the mounting pin. If the pin does not match the position of the hole in the shank, set the pin puller control switch to the PUSH IN position and slowly move the ripper up or down.

**REMARK**

When raising the pin position to increase the digging depth, use a long protector to prevent wear of the shank.



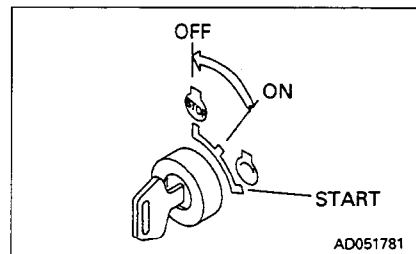
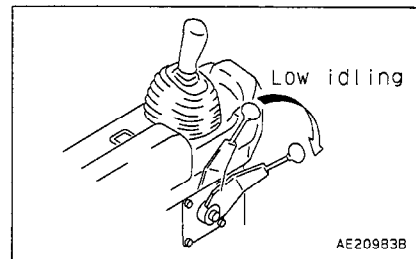
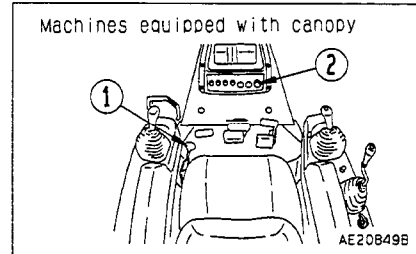
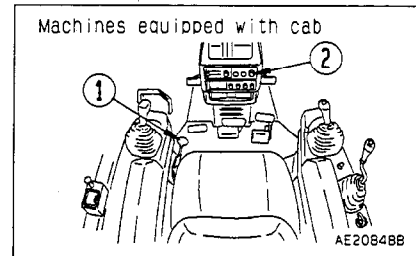
## 12.16 STOPPING ENGINE

### NOTICE

If the engine is abruptly stopped before it has cooled down, engine life may be greatly shortened. Consequently, do not abruptly stop the engine apart from an emergency.

In particular, if the engine has overheated, do not abruptly stop it but run it at low speed to allow it to cool gradually, then stop it.

1. Place fuel control lever ① in the low idling position and run the engine at low idling speed for about 5 minutes to allow it to gradually cool down.
2. Push fuel control lever ① in the engine stop position and stop the engine.
3. Turn the key in starting switch ② to the OFF position and remove the key.



## 14.2 AFTER COMPLETION OF WORK

To prevent mud, water, or the undercarriage from freezing and making it impossible for the machine to move on the following morning, always observe the following precautions.

- Mud and water on the machine body should be completely removed. This is to prevent damage to the seal caused by mud or dirt getting inside the seal with frozen drops of water.
- Park the machine on concrete or hard ground. If this is impossible, park the machine on wooden boards.
- Open the drain valve and drain any water collected in the fuel system to prevent it from freezing.
- As the battery capacity drops markedly in low temperatures, cover the battery or remove it from the machine, keep it in a warm place, and install it again the next morning.

## 14.3 AFTER COLD WEATHER

When season changes and the weather becomes warmer, do as follows.

- Replace the fuel and oil for all parts with oil of the viscosity specified.  
For details, see "20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".
- If for any reason permanent antifreeze cannot be used, and an ethyl glycol base antifreeze (winter, one season type) is used instead, or if no antifreeze is used, drain the cooling system completely, then clean out the inside of the cooling system thoroughly, and fill with fresh water.
- When it is unnecessary to use the automatic starting aid (APS) (when the ambient temperature is above 15°C), always keep the fuel valve closed.

## 16.5 IF MODE SELECTION SYSTEM FLASHES

If the [Electronic system] caution lamp lights up and the caution lamp flashes, or if it becomes impossible to control the engine speed with the throttle lever and decelerator pedal, stop operations immediately and check the LED display on the controller. Then contact your Komatsu distributor to ask for repairs.

In addition to the above, if any of the problems in the table below occur, there is probably some abnormality in the work equipment lever switch or transmission speed range sensor, so please contact your Komatsu distributor for repairs.

Mode	Operation	Problem
Shoe slip control	Ripping	<ul style="list-style-type: none"> <li>● Power is not restricted when shoe slip occurs</li> <li>● Not possible to control even when shoe slip occurs</li> <li>● Power is slow to recover when slippage stops</li> <li>● Difficult to rip rock by operating lever TILT and RAISE</li> <li>● Travel speed increases when shank penetrates</li> <li>● Travel speed is slow and there is lack of drawbar pull</li> <li>● No feeling of control, engine remains at full throttle or partial speed</li> <li>● When ripping starts, machine moves suddenly</li> </ul>
Economy	Dozing	<ul style="list-style-type: none"> <li>● Engine speed changes, difficult to carry out operation</li> <li>● No feeling of control, engine remains at full throttle or partial speed</li> </ul>
Reverse slow	Reverse	<ul style="list-style-type: none"> <li>● Ripper RAISE speed is slow</li> <li>● Travel speed increases in reverse slow</li> </ul>
Lock-up	All operations	<ul style="list-style-type: none"> <li>● Lock-up is not actuated</li> <li>● Transmission shock increases</li> </ul>
-	Traveling under own power	<ul style="list-style-type: none"> <li>● Engine drops to partial speed when traveling under own power</li> </ul>

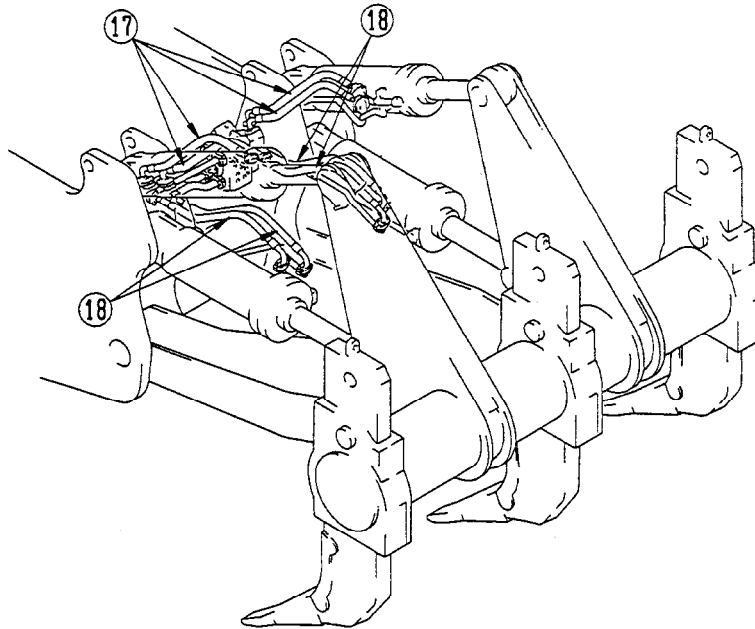
## 20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE

### PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS

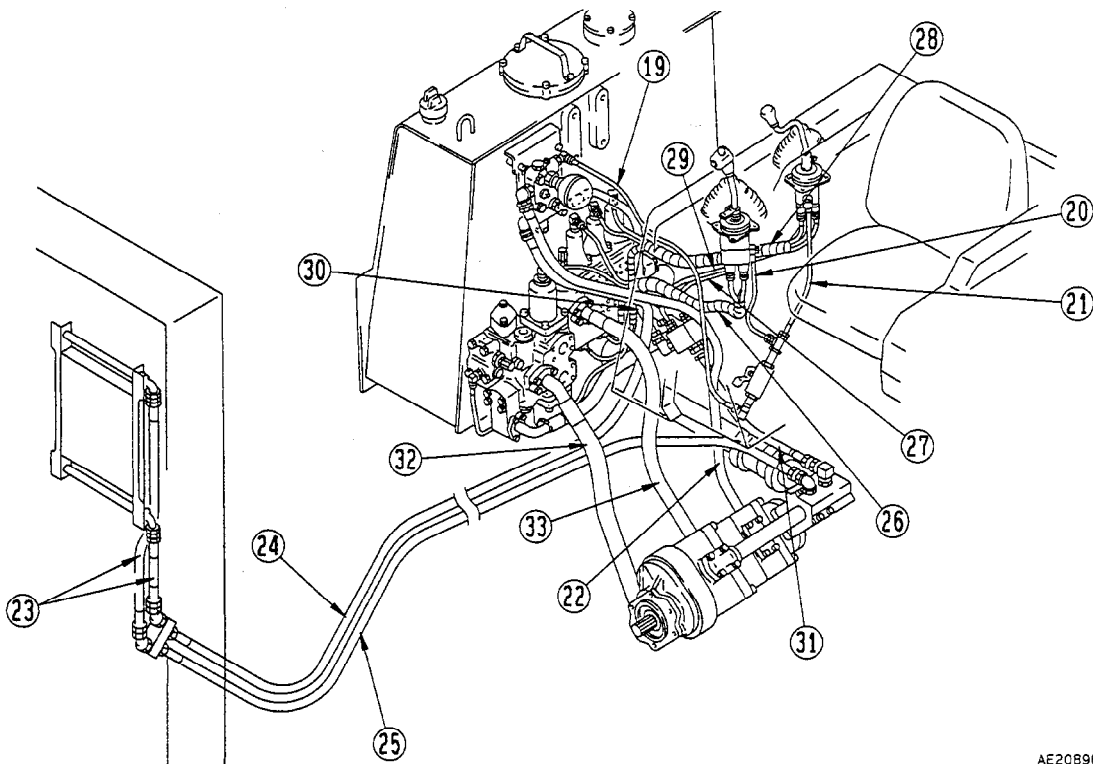
RESERVOIR	KIND OF FLUID	AMBIENT TEMPERATURE								CAPACITY	
		-4 -20	14 -10	32 0	50 10	68 20	86 30	104°F 40°C	Specified amount	Refill capacity	
Engine oil pan	Engine oil	SAE 30						58 ℓ 15.31 US gal 12.76 UK gal	51 ℓ 13.46 US gal 11.22 UK gal		
		SAE 10W									
		SAE 10W-30									
		SAE 15W-40									
Power train oil pan (incl. transmission, torque converter and bevel gear cases)		SAE 30						250 ℓ 66 US gal 55 UK gal	150 ℓ 39.6 US gal 33 UK gal		
		SAE 10W									
Damper case		SAE 30								2.1 ℓ 0.55 US gal 0.46 UK gal	2.1 ℓ 0.55 US gal 0.46 UK gal
Hydraulic system		SAE 10W								270 ℓ 71.28 US gal 59.4 UK gal	120 ℓ 31.68 US gal 26.4 UK gal
Final drive case (each)		SAE 30								65 ℓ 17.16 US gal 14.3 UK gal	65 ℓ 17.16 US gal 14.3 UK gal
Fuel tank		Diesel fuel	※								1050 ℓ 277.2 US gal 231 UK gal
	ASTM D975 No.2										
Cooling system	Water	Add antifreeze								165 ℓ 43.56 US gal 36.3 UK gal	-

※ ASTM D975 No. 1

22. PERIODIC REPLACEMENT OF SAFETY CRITICAL PARTS



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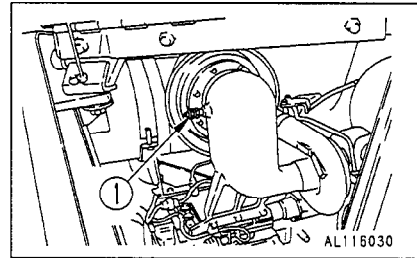


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### 24.2.2 CHECK, CLEAN AND REPLACE AIR CLEANER ELEMENT

**⚠ WARNING**

- Never clean or replace the air cleaner element with the engine running.
- When using pressure air to clean the element wear safety glasses or goggles to protect the eyes.

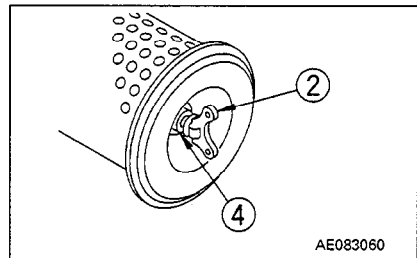
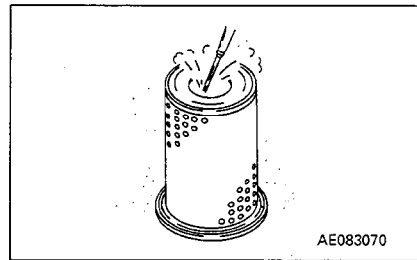
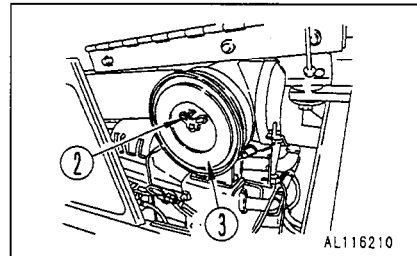


**CHECK**

If the red piston can be seen in transparent portion of dust indicator ①, clean the air cleaner element.

**CLEAN, REPLACE OUTER ELEMENT**

1. Loosen wing nut ②, then remove the outer element ③.
2. Clean the air cleaner body interior.
3. Direct dry compressed air (less than 700 kPa (7 kg/cm<sup>2</sup>, 100 psi)) to the element from inside along its folds, then direct it from outside along its folds and again from inside.
  - 1) Remove one seal from the outer element. The number of times the outer element has been cleaned can be seen by the number of removed seals.
  - 2) Replace the outer element which has been cleaned 6 times repeatedly or used throughout a year. Replace the inner element at the same time.
  - 3) Replace the element when the air cleaner clogged warning lamp lights up soon after installing the cleaned element even though it has not been cleaned 6 times.
  - 4) Check inner element mounting nuts for looseness and, if necessary, retighten.
  - 5) Replace seal washer ④ or wing nut ② with new parts if they are broken.



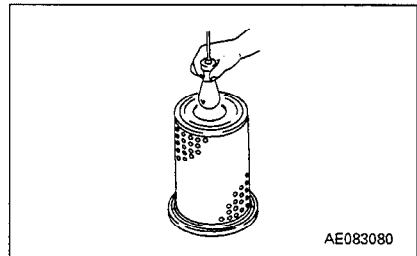
**NOTICE**

If small holes or thinner parts are found on the element when it is checked with an electric bulb after cleaning and drying, replace the element.

Do not use an element whose folds or gasket or seal are damaged.

When cleaning the element, do not hit it or beat it against something.

4. Set the cleaned element.



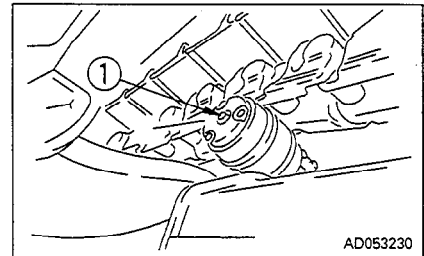
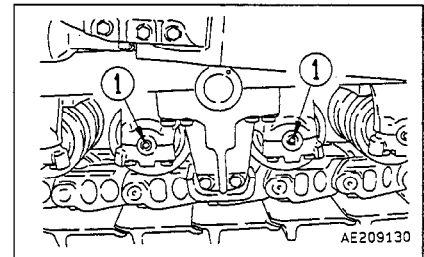
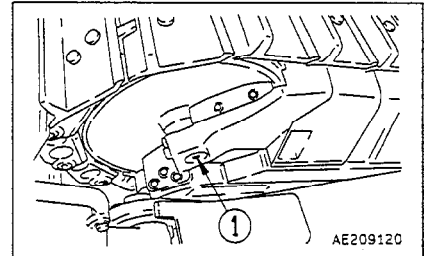
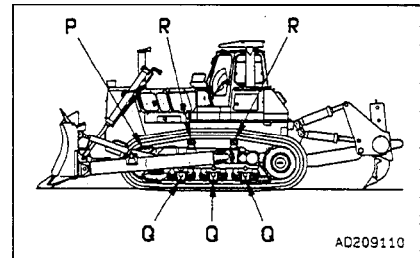
### 24.2.13 CHECK UNDERCARRIAGE OIL

Stop the machine on level ground, and check for any reduction in the oil at the idler (portion P), track roller (portion Q), bogie shaft (portion Q), and carrier roller (portion R).

1. Loosen seal bolt ① slowly and check if oil oozes out from the thread. If oil oozes out, the oil level has not gone down, so tighten the bolt.
2. If no oil comes out even when seal bolt ① is removed, the oil level is low, so please contact your Komatsu distributor for repair.

#### REMARK

There is one bogie shaft seal bolt ① each on the inside and outside.

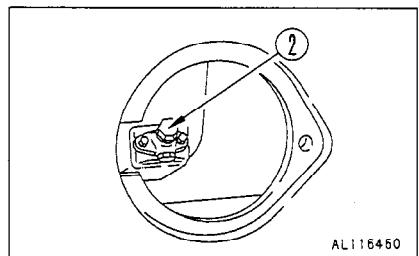
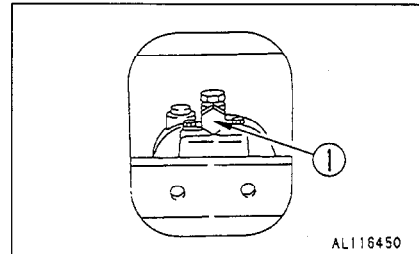
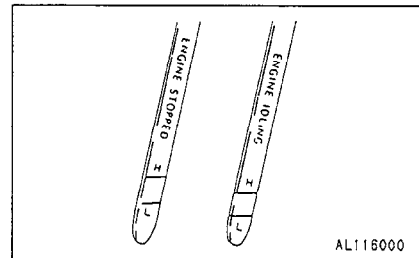
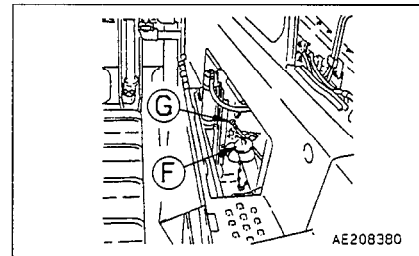


**24.3.4 CHECK OIL LEVEL IN ENGINE OIL PAN, ADD OIL**

1. Open the engine side cover on the right side of the chassis.
2. Remove dipstick ⑥ and wipe the oil off with a cloth.
3. Insert dipstick ⑥ fully in the oil filler pipe, then take it out again.
4. The oil level should be between the H and L marks on dipstick ⑥.  
If the oil level is below the L mark, add engine oil through oil filler ⑤.
5. If the oil is above the H mark, remove drain plug ①, loosen drain valve ② to drain the excess oil, then check the oil level again.
6. If the oil level is correct, tighten the oil filler cap securely and close the engine side cover.

**REMARK**

- Check the oil level with the engine stopped.
- When checking the oil level after the engine has been operated, wait for at least 15 minutes after stopping the engine before checking.
- If the machine is at an angle, make it horizontal before checking.
- When adding oil, remove the dipstick from the holder to release the air inside the crankcase.



7. When installing the filter cartridge, bring the packing surface into contact with the filter holder, then tighten a further 3/4 – 1 turn.
8. After replacing the filter cartridge, add engine oil through oil filler ⑤ until the oil level is between the H and L marks on the dipstick.  
For details of the oil to use, see "20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".
9. Run the engine at idling for a short time, then stop the engine, and check that the oil level is between the H and L marks on the dipstick. For details, see "24.3 CHECK BEFORE STARTING".

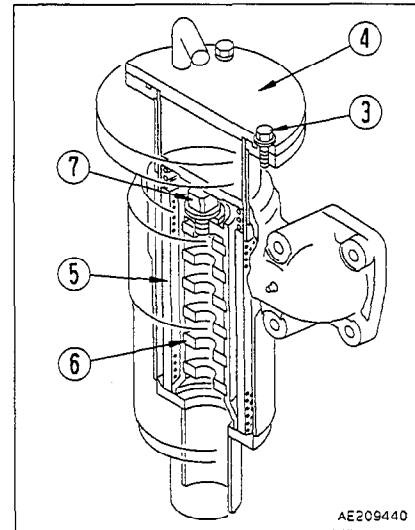
**NOTICE**

**Even if the machine has not been operated for 250 hours, the oil and filter cartridge must be replaced when the machine has been operated for 6 months.**

**In the same way, even if the machine has not been operated for 6 months, the oil and filter cartridge must be replaced when the machine has been operated for 250 hours.**

## 24. SERVICE PROCEDURE

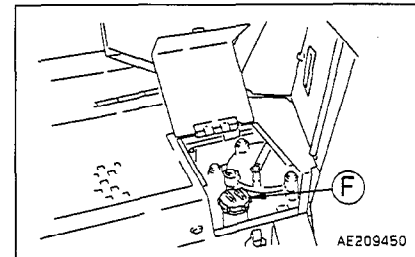
6. Take out strainer ⑤ and magnet ⑥.  
If any damage to strainer ⑤ or magnet ⑥ is found, replace with a new one.
7. Loosen bolt ⑦, then divide into strainer ⑤ and magnet ⑥.  
Tightening torque of bolt ⑦: 46 – 59 Nm (4.7 – 5.9 kgm, 34 – 43 lbft)
8. Remove all dirt from strainer, then wash in clean diesel oil or flushing oil.  
Clean the case interior and the removed parts.
9. Install the strainers to their original position.
10. After installing, replace the element in the power train oil filter.  
For details, see "24.5 EVERY 500 HOURS SERVICE".



11. Refill the specified quantity of engine oil through oil filler ⑥.

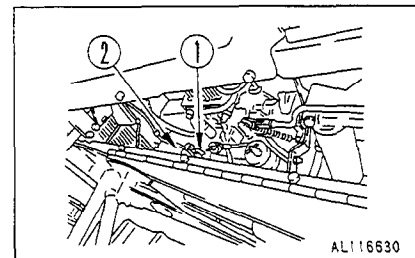
For details of the oil to use, see "20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".

12. Check that the oil is at the specified level.  
For details, see "24.2 CHECK BEFORE STARTING".



### 24.6.2 CHECK, CLEAN FUEL STRAINER

1. Tighten valve ①.
2. Remove cap ②, and wash the strainer and strainer case.  
The strainer forms one unit with the cap.
3. After checking and cleaning, set the strainer in the case, then tighten cap ②.
4. After installing, open valve ①.



# **SPECIFICATIONS**



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