

# Operation & Maintenance Manual

SEAM012900

## JV100A-2 JV100WA-2 JV100WP-2 VIBRATORY ROLLER

JV100A-11001  
SERIAL NUMBERS JV100WA-21026 and up  
JV100WP-31001

### WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept near the machine for reference and periodically reviewed by all personnel who will come into contact with it.

### NOTICE

Komatsu has Operation & Maintenance Manuals written in some other languages. If a foreign language manual is necessary, contact your local distributor for availability.

# KOMATSU

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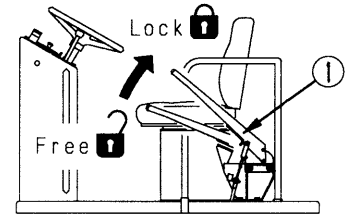


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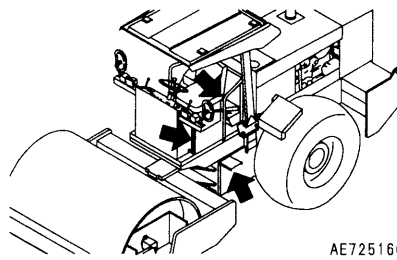
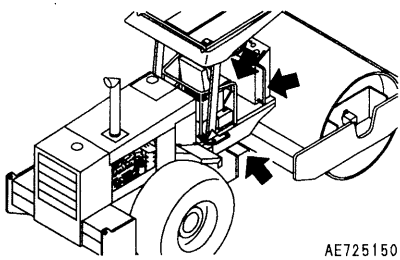
**ALWAYS APPLY LOCK WHEN LEAVING OPERATOR'S SEAT**

- When standing up from the operator's seat, always place the parking brake lever ① securely in the LOCK position. If you accidentally touch the levers when they are not locked, the machine may suddenly move and cause serious injury or damage.
- When leaving the machine, set the parking brake lever ① to the LOCK position, then stop the engine. Use the key to lock all the equipment. Always remove the key and take it with you.  
**Work equipment posture → See "12.10 PARKING MACHINE".**



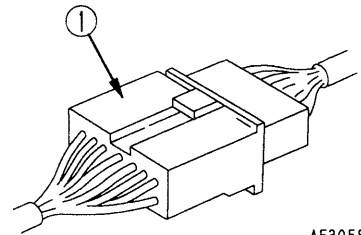
**MOUNTING AND DISMOUNTING**

- Never jump on or off the machine. Never get on or off a moving machine.
- When getting on or off the machine, always face the machine and use the handrails and steps.
- Never hold any control levers or lock levers when getting on or off the machine.
- To ensure safety, always maintain three-point contact (both feet and one hand, or both hands and one foot) with the handrails and steps to ensure that you support yourself.
- If there is any oil, grease, or mud on the handrails or steps, wipe it off immediately. Always keep these parts clean. Repair any damage and tighten any loose bolts.
- When getting on or off the machine, or when moving along the top of the track, if you hold the handrail inside the door when moving on top of the track shoe, and the door lock is not locked securely, the door may move and cause you to fall.  
**Always lock the door securely.**



**PRECAUTIONS IN COLD AREAS**

- After completing operations, remove all water, snow, or mud stuck to the wiring harness, connector ①, switches, or sensors, and cover these parts.  
If the water freezes, it will cause malfunctions of the machine when it is next used, which may lead to unexpected accidents.
- Carry out the warming-up operation thoroughly. If the machine is not thoroughly warmed up before the control levers are operated, the reaction of the machine will be slow, and this may lead to unexpected accidents.
- Operate the control levers to relieve the hydraulic pressure (raise to above the set pressure for the hydraulic circuit and release the oil to the hydraulic tank) to warm up the oil in the hydraulic circuit. This ensures good response from the machine and prevents malfunctions.
- If the battery electrolyte is frozen, do not charge the battery or start the engine with a different power source. There is danger that this will ignite the battery.  
When charging or starting the engine with a different power source, melt the battery electrolyte and check for leakage of battery electrolyte before starting.  
**Battery charge rate → See "14. COLD WEATHER OPERATION".**



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### WORK ON TOP OF MACHINE

- When carrying out maintenance on top of the machine, make sure that the footholds are clean and free of obstructions, and follow the precautions below to prevent yourself from falling.
  - Do not spill oil or grease.
  - Do not leave tools lying around.
  - Mind your step when you are walking.
- Never jump down from the machine. When getting on or off the machine, always use the steps and handrails, and maintain three-point contact (both feet and one hand or both hands and one foot) at all times.
- Use protective equipment if necessary.

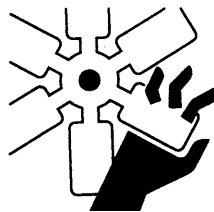


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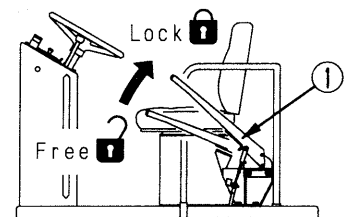
### MAINTENANCE WITH ENGINE RUNNING

To prevent injury, do not carry out maintenance with the engine running. If maintenance must be carried out with the engine running, carry out the operation with at least two workers and do as follows.

- One worker must always sit in the operator's seat and be ready to stop the engine at any time. All workers must maintain contact with the other workers.
- When carrying out operations near rotating parts, there is danger of being caught in the parts, so be extremely careful.
- When cleaning inside the radiator, set the parking brake lever ① to the LOCK position.
- Never touch the fan blade or fan belt with any tool or any part of your body. There is danger of serious injury.



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# OPERATION

## 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.

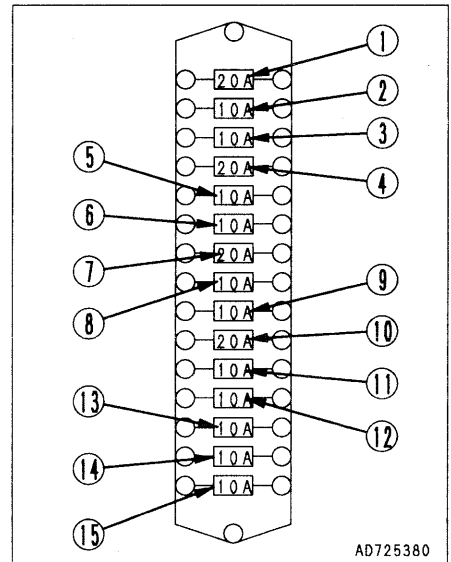
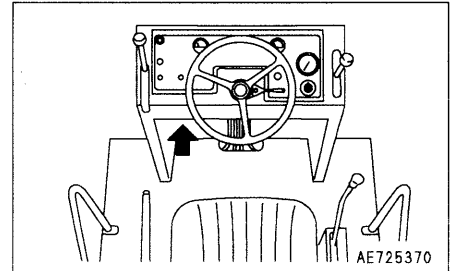
If the fuse becomes corroded, or white powder can be seen, or the fuse is loose in the fuse holder, replace the fuse.

Replace a fuse with another of the same capacity.

### 11.6.1 FUSE CAPACITY AND NAME OF CIRCUIT

#### FUSE BOX

No.	Fuse capacity	Name of circuit
①	20A	Starting switch
②	10A	Spare
③	10A	Parking brake
④	20A	Main lamp circuit
⑤	10A	Vibration relay
⑥	10A	Engine water temperature gauge, Fuel gauge
⑦	20A	Engine stop relay
⑧	10A	Buckup alarm, Horn
⑨	10A	Turn signal lamp
⑩	20A	Spare
⑪	10A	Tail lamp
⑫	10A	Side marker lamp, Panel lamp, Head lamp
⑬	10A	Vibration switch
⑭	10A	Spare
⑮	10A	Spare



### 12.1.3 ADJUSTMENT BEFORE OPERATION OPERATOR'S SEAT

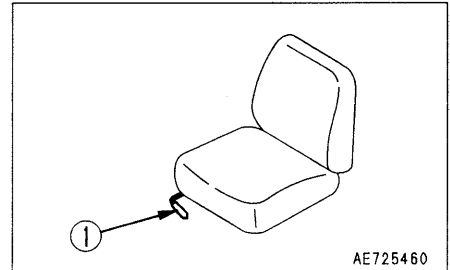
**⚠ WARNING**

- Park the machine in a safe place and stop the engine when carrying out adjustment of the operator's seat.
- Adjust the seat before starting operations or when changing operators.
- Check that you can depress the brake pedal fully with your back against the seat backrest.

#### A: Forward-backward adjustment

Move lever ① to the right, move the seat to the best position and release the lever.

Fore-and-aft adjustment: 140 mm (5.5 in)  
7 stages



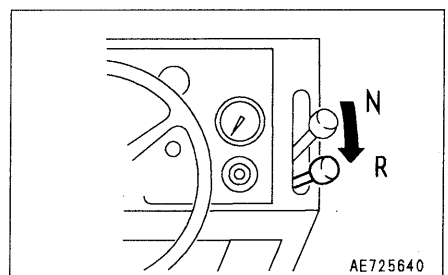
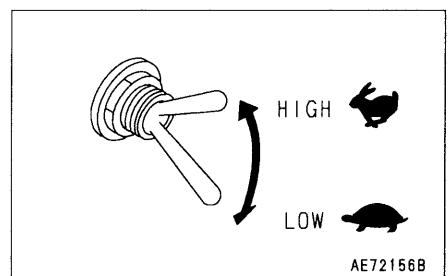
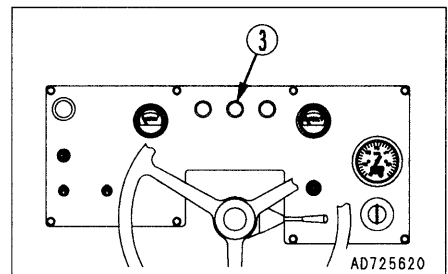
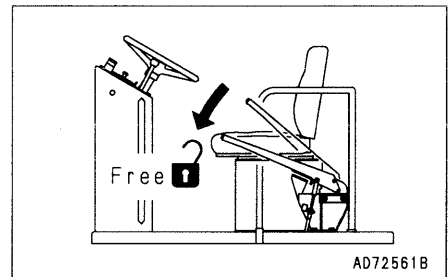
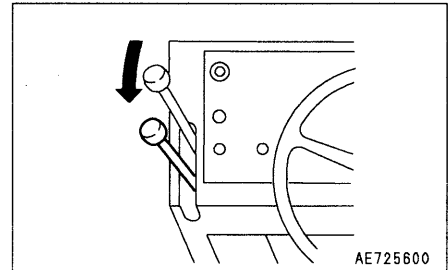
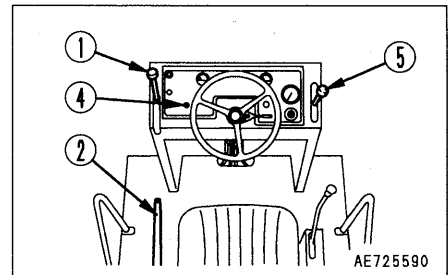
## 12.4.2 MOVING MACHINE BACKWARD

**⚠ WARNING**

- When moving the machine off, check that the area around the machine is safe, then sound the horn before starting.
- There is a blind spot behind the machine, so be particularly careful when traveling in reverse.

**Clear the travel road.**

1. Pull fuel control lever ① to heighten the engine speed.
2. Set parking brake lever ② free to release the parking brake. At the same time, confirm that parking brake pilot lamp ③ is turned off.
3. Set speed change switch ④ to the LOW or HIGH position.
4. Turn directional lever ⑤ to the R (Reverse) position to start the machine.



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## 12.11 CHECKS AFTER COMPLETION OF OPERATION

Check the engine water temperature, engine oil pressure, and fuel level with the meter and lamps.

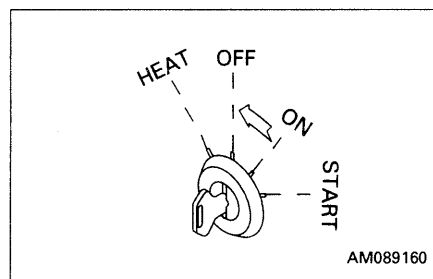
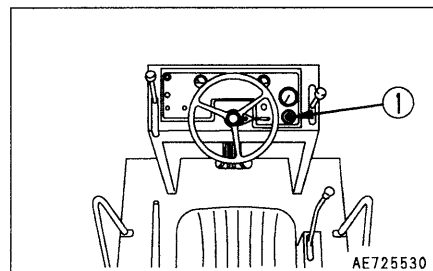
## 12.12 STOPPING ENGINE

### 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 medium speed to allow it to cool gradually, then stop it.

1. Turn the key in starting switch ① to the OFF position and stop the engine.
2. Remove the key from starting switch ①.



## 12.13 CHECK AFTER STOPPING ENGINE

1. Walk around the machine and check the work equipment, body work, and undercarriage, and check also for leakage of oil and water. If any leakage or abnormality is found, carry out repairs.
2. Fill the fuel tank.
3. Remove any waste paper or dead leaves from inside the engine room. These may cause a fire.
4. Remove any mud stuck to the undercarriage.

## 15. LONG-TERM STORAGE

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### 15.1 BEFORE STORAGE

When putting the machine in storage for a long time, do as follows.

- After every part is washed and dried, house the machine in a dry building. Never leave it outdoors.  
If the machine must be left outdoors, park it on well-drained concrete and cover it with canvas, etc.
- Completely fill the fuel tank, lubricate, and change the oil before storage.
- Apply a thin coat of grease to the metal surface of the hydraulic piston rods.
- Disconnect the negative terminals of the battery and cover it, or remove it from the machine and store it separately.
- If the ambient temperature is expected to drop below 0°C, always add antifreeze to the cooling water.
- Set the directional lever to the N (Neutral) position and the vibration switch to the OFF position. Do not lock the parking brake. Secure the roller by placing chocks, etc. to its front and rear sides.

### 15.2 DURING STORAGE

 **WARNING**

**If it is unavoidably necessary to carry out the rust-prevention operation while the machine is indoors, open the doors and windows to improve ventilation and prevent gas poisoning.**

Operate the engine and move the machine for a short distance once a month so that a new film of oil will be coated over movable parts and component surfaces. At the same time, also charge the battery.

### 15.3 AFTER STORAGE

#### NOTICE

**If the machine is stored without carrying out the monthly rust prevention operation, request your Komatsu distributor for service.**

Carry out the following procedure when taking the machine out of long-term storage.

- Wipe off the grease from the hydraulic cylinder rods.
- Add oil and grease to all places.

**16.4.3 ENGINE**

- ( ): Always contact your Komatsu distributor when dealing with these items.
- In cases of abnormalities or causes which are not listed below, please contact your Komatsu distributor for repairs.

Problem	Main causes	Remedy
Engine oil pressure caution pilot lamp lights up	<ul style="list-style-type: none"> <li>● Engine oil pan oil level is low (sucking in air)</li> <li>● Clogged oil filter cartridge</li> <li>● Defective tightening of oil pipe joint, oil leakage from damaged part</li> <li>● Defective caution lamp</li> </ul>	<ul style="list-style-type: none"> <li>● Add oil to specified level, see CHECK BEFORE STARTING</li> <li>● Replace cartridge, see EVERY 250 HOURS SERVICE</li> <li>(● Check, repair)</li> <li>(● Replace caution lamp)</li> </ul>
Steam is emitted from top part of radiator (pressure valve)	<ul style="list-style-type: none"> <li>● Cooling water level low, water leakage</li> <li>● Loosen fan belt</li> <li>● Dirt or scale accumulated in cooling system</li> </ul>	<ul style="list-style-type: none"> <li>● Add cooling water, repair, see CHECK BEFORE STARTING</li> <li>● Adjust fan belt tension, see EVERY 250 HOURS SERVICE</li> <li>● Change cooling water, clean inside of cooling system, see WHEN REQUIRED</li> </ul>
Water temperature gauge is in red range	<ul style="list-style-type: none"> <li>● Clogged radiator fin or damaged fin</li> <li>● Defective thermostat</li> <li>● Loose radiator filler cap (high altitude operation)</li> <li>● Defective water level sensor</li> </ul>	<ul style="list-style-type: none"> <li>● Clean or repair, see EVERY 500 HOURS SERVICE</li> <li>(● Replace thermostat)</li> <li>● Tighten cap or replace packing</li> <li>(● Replace sensor)</li> </ul>
Water temperature gauge is in white range	<ul style="list-style-type: none"> <li>● Defective thermostat</li> <li>● Defective water level sensor</li> </ul>	<ul style="list-style-type: none"> <li>(● Replace thermostat)</li> <li>(● Replace sensor)</li> </ul>
Engine does not start when starting motor is turned	<ul style="list-style-type: none"> <li>● Lack of fuel</li> <li>● Air in fuel system</li> <li>● Defective fuel injection pump or nozzle</li> <li>● Starting motor cranks engine sluggishly</li> <li>● Defective compression <ul style="list-style-type: none"> <li>○ Defective valve clearance</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Add fuel, see CHECK BEFORE STARTING</li> <li>● Repair place where air is sucked in</li> <li>(● Replace pump or nozzle)</li> <li>● See ELECTRICAL SYSTEM</li> <li>(○ Adjust valve clearance)</li> </ul>
Exhaust gas is white or blue	<ul style="list-style-type: none"> <li>● Too much oil in oil pan</li> <li>● Improper fuel</li> </ul>	<ul style="list-style-type: none"> <li>● Add oil to specified level, see CHECK BEFORE STARTING</li> <li>● Change to specified fuel</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	
		-22 -30	-4 -20	14 -10	32 0	50 10	68 20	86 30	104 40	122 50	°F	Specified
Engine oil pan	Engine oil	SAE 30									21.8 l 5.76 US gal 4.80 UK gal	19.5 l 5.15 US gal 4.29 UK gal
		SAE 10W										
		SAE 10W-30										
		SAE 15W-40										
P.T.O. case	Engine oil										2.1 l 0.55 US gal 0.46 UK gal	2.1 l 0.55 US gal 0.46 UK gal
Transfer case		SAE 30									2.6 l 0.69 US gal 0.57 UK gal	2.6 l 0.69 US gal 0.57 UK gal
		SAE 10W										
Vibratory roller											40 l 10.56 US gal 8.80 UK gal	40 l 10.56 US gal 8.80 UK gal
Final drive case	Gear oil	SAE 80									27 l 7.13 US gal 5.94 UK gal	27 l 7.13 US gal 5.94 UK gal
Travel motor		SAE 90									3.9 l 1.03 US gal 0.86 UK gal	3.9 l 1.03 US gal 0.86 UK gal
Hydraulic system	Engine oil	SAE 10W									92 l 24.29 US gal 20.24 UK gal	60 l 15.84 US gal 13.20 UK gal
Fuel tank	Diesel fuel	ASTM D975 No.2									235 l 62.04 US gal 51.70 UK gal	-
		※										
Cooling system	Water	Add antifreeze									21 l 5.54 US gal 4.62 UK gal	-

※ ASTM D975 No. 1

SERVICE ITEM	PAGE
<b>EVERY 250 HOURS SERVICE (continued)</b>	
Check for loose wheel hub bolts, tighten	3-42
<b>EVERY 500 HOURS SERVICE</b>	
Replace fuel filter cartridge and additional fuel filter cartridge	3-43
Clean and inspect radiator fins and oil cooler fins	3-45
Clean air breather	3-46
● Vibratory roller	3-46
● P.T.O. case	3-46
● Transfer case	3-46
● Final drive case	3-46
<b>EVERY 1000 HOURS SERVICE</b>	
Change oil in hydraulic tank, replace hydraulic filter element	3-47
Supply grease to drive shaft	3-49
Clean inside of fuel tank	3-49
Change oil in P.T.O. case	3-50
Change oil in transfer case	3-51
Change oil in final drive case	3-52
Change oil in vibratory roller	3-53
Change oil in travel motor	3-54
Check tightening parts of turbocharger	3-55
Check play of turbocharger rotor	3-55
Check fan belt tension, adjust	3-55
Replace corrosion resistor cartridge	3-55
<b>EVERY 2000 HOURS SERVICE</b>	
Check alternator, starting motor	3-56
Check engine valve clearance, adjust	3-56
Check vibration damper	3-56

## 24.2.5 ADJUST PARKING BRAKE

### CHECKING

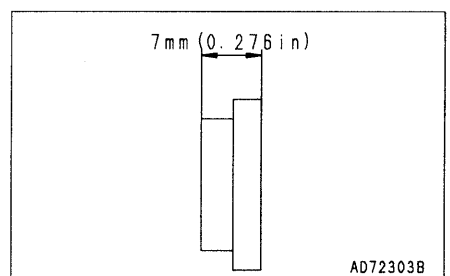
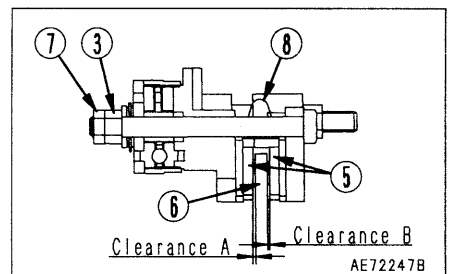
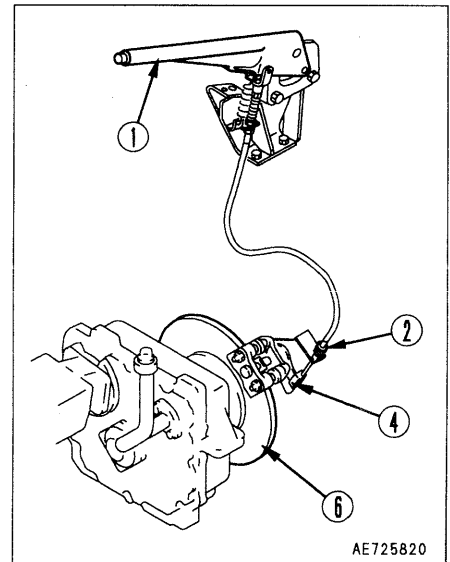
Pull the grip of the parking brake lever from the brake release point with the force about 196N (20 kgf). It moves 8 teeth on the ratchet or more, adjust it according to the following procedure.

### ADJUSTING

#### **⚠ WARNING**

- When adjusting, always block the tires and prevent the machine from slipping. Secure the front and rear frames with the articulate lock pin.
- Do not permit oil, grease, etc. to stick to the surface of the brake pad and disc.

1. Release the parking brake lever ① and open calipers ⑤.
2. Loosen locknut ② and remove clevis pin ④.
3. Tighten the adjustment nut until clearances A and B between the disc and pad are eliminated.  
Loosen adjustment nut ③ by 1/2 turn (180°) from the point at which pad ⑤ and disc ⑥ touched each other.
4. After setting adjustment nut ③, tighten jam nut ⑦ to 67.8 N·m {6.9 kgf·m, 49.9 lbft}.
5. When the pad (including the backing metal) is worn to 7 mm (0.3 in), replace pad ⑤ and spring ⑧.  
Replace the two pads as a set.  
For replacement of the pads, ask your Komatsu distributor.
6. After adjustment, install clevis pin ④ again.
7. Pull parking brake lever ① with the force about 196N (20kgf), and confirm that it moves by 4 – 5 teeth on the ratchet.



### 24.5.6 CHANGE OIL IN ENGINE OIL PAN, REPLACE ENGINE OIL FILTER CARTRIDGE

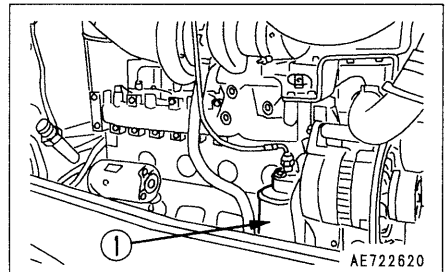
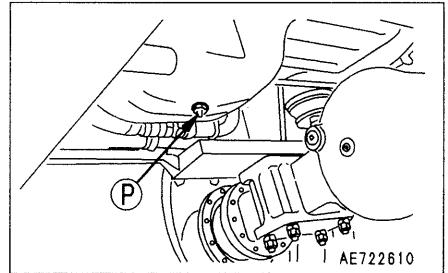
#### **⚠ WARNING**

The oil is at high temperature after the engine has been operated, so never change the oil immediately after finishing operations. Wait for the oil to cool down before changing it.

Prepare the following

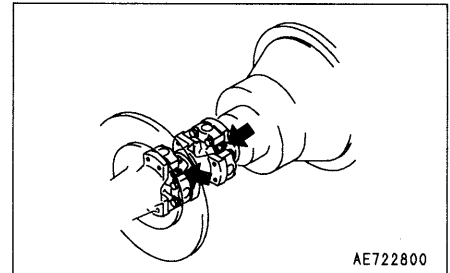
- Container to catch drained oil: Min 20 l capacity
- Refill capacity: 19.5 l (5.15 US gal, 4.29 UK gal)
- Filter wrench
- Container to catch oil drained from filter cartridge

1. Place a container to catch the oil under drain plug **(P)**.
2. Loosen drain plug **(P)**, and drain the oil.
3. Check the drained oil, and if there are excessive metal particles or foreign material, please contact your Komatsu distributor.
4. Install drain plug **(P)**.
5. Place a container to catch oil under the filter cartridge.
6. Using the filter wrench, turn filter cartridge **(1)** counterclockwise to remove it.  
In particular, if this operation is carried out immediately after stopping the engine, a large amount of oil will come out, so wait for 10 minutes before starting the operation.
7. Clean the filter holder, then coat the seal and thread of the filter cartridge with engine oil (or coat thinly with grease) and install.
8. When installing, bring the seal surface into contact with the filter holder, then tighten a further 3/4 – 1 turns.



**24.7.2 SUPPLY GREASE TO DRIVE SHAFT**

Supply grease to the grease fittings indicated by the arrows.

**24.7.3 CLEAN INSIDE OF FUEL TANK****⚠ WARNING**

When supplying fuel, do not let it overflow since it can cause a fire.

Perform the following procedure before starting the machine.

1. Place a container to receive fuel to be drained under drain plug ①.
2. Loosen drain plug ① to drain the sediment and water on the bottom together with fuel.

**REMARK**

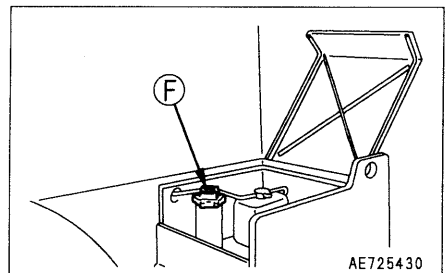
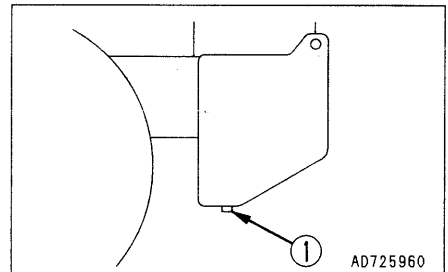
At this time, loosen drain plug ① slowly so that you will not be soaked with fuel.

3. After draining fuel through drain plug ①, remove the cap from fuel filler ② and supply fuel to flush away the dirt accumulated on the bottom.

**NOTICE**

Do not use trichloroethylene to clean the inside of the tank.

4. After clean fuel flows out, close drain plug ① and supply fuel.
5. After supplying fuel, tighten the cap of fuel filler ② securely.



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