

Operation & Maintenance Manual

SEAM000802

HD325-6

DUMP TRUCK

SERIAL NUMBERS HD325-5001 and up

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

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

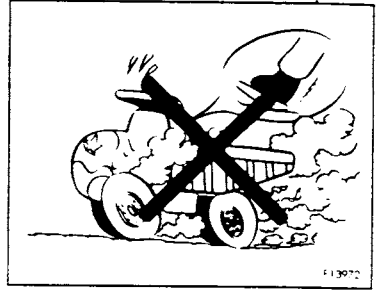
- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



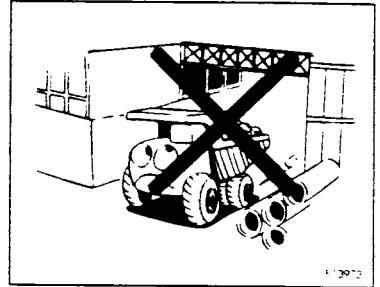
- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- If you attempt to control the speed of your truck by pressing lightly on the brake pedal, this may cause breakdowns coming from overheating of the brakes (fading or separation of the lining). This can be the cause of unexpected accidents, so do not use the brakes in this way.

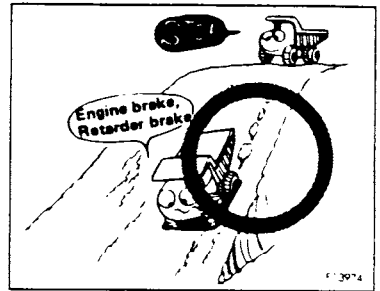


- Where visibility is bad, such as at corners, or when entering or leaving a narrow road, slow down and sound the horn.

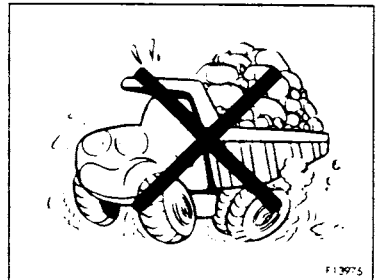


TRAVELING DOWNHILL

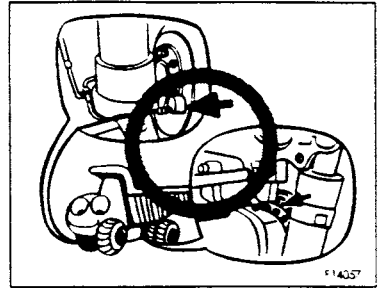
Never overrun the engine. Before starting to descend downhill slopes, stop and check that the brakes are working. It is dangerous to use only the brake pedal to control speed on a long downhill slope. In such a case see the Operation & Maintenance Manual for instructions on how to use the retarder. Then, descend the hill using the engine and retarder to brake the machine.



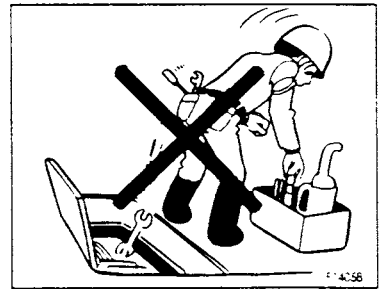
- Take care not to overload the dump body. Overloading not only shortens the service life of the truck, but also overheats the tires, causing them to burst.



- If air gets into the hydraulic brake line, the brakes will not work properly. In such cases bleed all the air from the circuit. If the air pressure in the air brake line drops, the brakes will not work. Check for leaks in the air circuit, and if any faults are found, repair them.

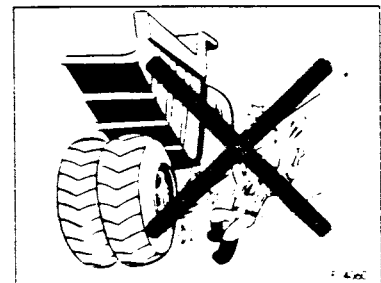
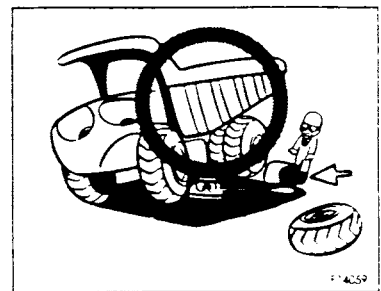


- When leaning over to inspect cases, there is a risk of dropping things in. Before removing the covers to inspect such cases, empty everything from your pockets. Be particularly careful to remove wrenches and nuts.



Precautions when changing tires

- When replacing the tires, please contact your Komatsu distributor. It is dangerous to jack up the machine without taking due care.
- Always block the wheels on the opposite side before jacking up the machine. After jacking up the machine, always insert blocks under the machine to prevent it from falling.
- Do not loosen or remove any part except those needed to be removed when taking off the tire. The tire is under high pressure, so it is extremely dangerous to loosen anything carelessly. In particular, repair of tires should be left to the tire manufacturer's dealer.



METERS AND LAMPS

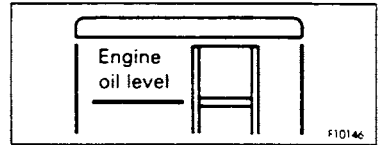
Ⓐ CHECK GROUP (Checks before starting)

- ★ When carrying out checks before starting, do not simply rely on the monitor. Always refer to the periodic maintenance items to carry out the checks.

1. ENGINE OIL LEVEL MONITOR

This monitor indicates a low oil level in the engine oil pan.

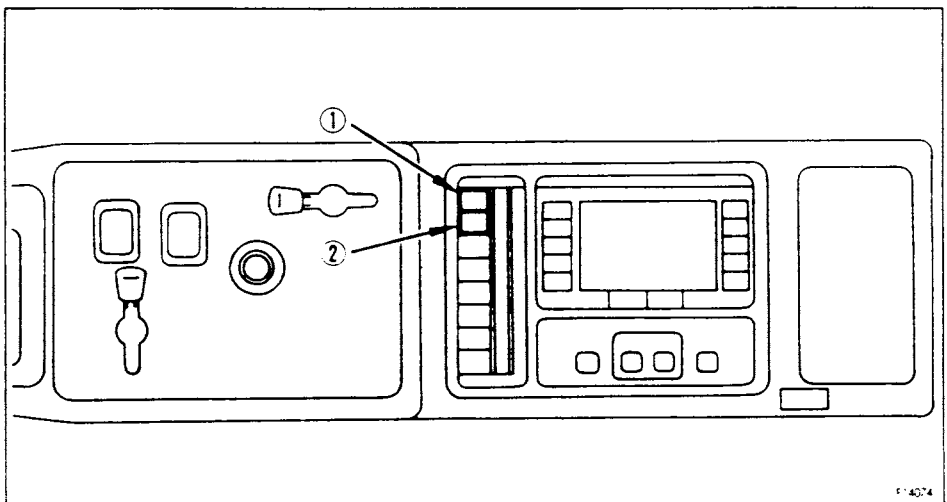
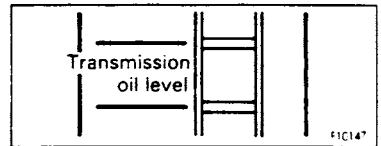
If the monitor lamp flashes, check the oil level in the engine oil pan and add oil as required.



2. TRANSMISSION OIL LEVEL MONITOR

This monitor indicates a low oil level in the transmission oil pan.

If the monitor lamp flashes, check the oil level in the transmission oil pan and add oil as required.



© CAUTION GROUP (Emergency warning items)

- ★ If any monitor flashes, stop the engine immediately or run it at low idling and take the necessary action.

1. AIR PRESSURE MONITOR

This monitor indicates a drop in the air pressure in the air tank.

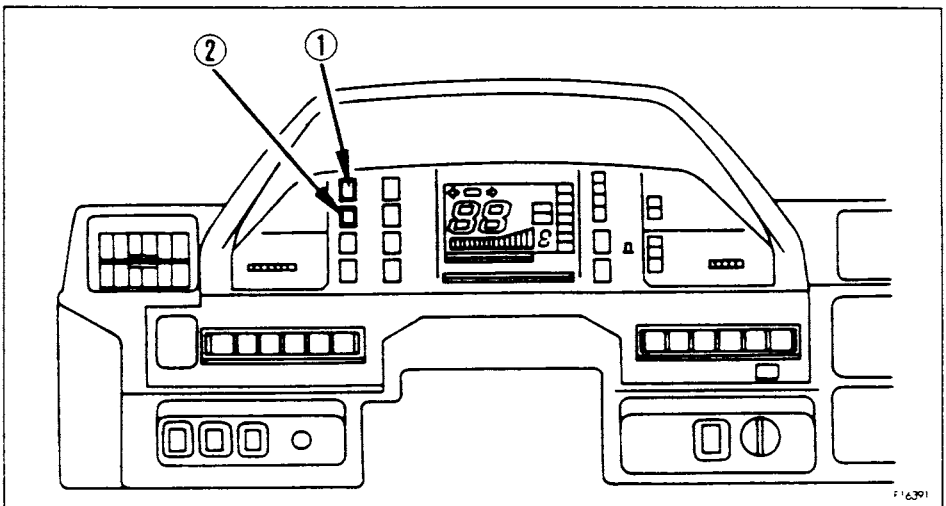
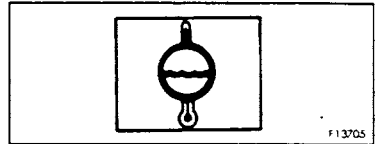
If the lamp flashes, increase the engine speed and wait until the lamp goes out.



2. COOLANT TEMPERATURE MONITOR

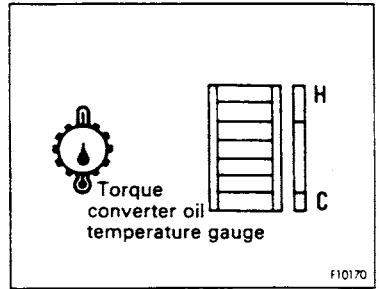
This monitor indicates a rise in the cooling water temperature.

When the monitor lamp flashes, run the engine with no load at midrange speed until the green range of the engine water temperature gauge lights.



8. TORQUE CONVERTER OIL TEMPERATURE GAUGE

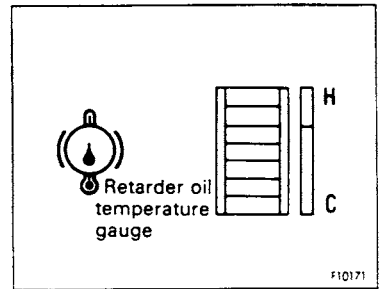
This gauge indicates the temperature of the torque converter oil. If the temperature is normal during operation, the green range will light. If the red range lights during operation, the alarm buzzer will sound, the central warning lamp will light up and the torque converter oil temperature monitor lamp will flash at the same time. If this occurs, stop the machine and run the engine with no load at midrange speed until the green range lights.



9. RETARDER OIL TEMPERATURE GAUGE

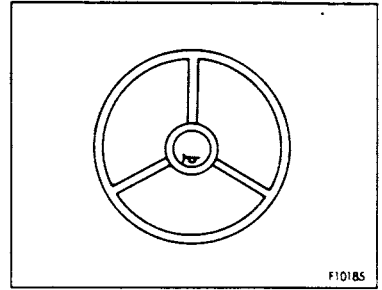
This indicates the temperature of the retarder cooling oil. During normal operation, a lamp in the green range should light up.

If the lamp in the red range lights up during operation, the alarm buzzer will sound, the central warning lamp will flash, and the retarder oil temperature monitor lamp will flash at the same time. If this happens, stop the machine and run the engine at midrange speed under no load, and wait until the lamps in the green range light up.



16. HORN BUTTON

When the button in the center of the steering wheel is pressed, the horn will sound.



F10185

17. WIPER SWITCH

This operates the wipers.

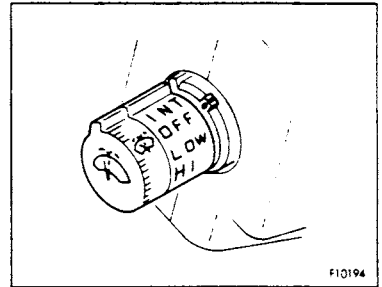
INT: Operates intermittently

OFF: OFF

LOW: Operates at low speed

HI: Operates at high speed

Press this switch to spray washer liquid.



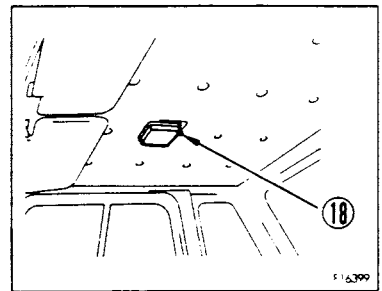
F10194

18. ROOM LAMP SWITCH

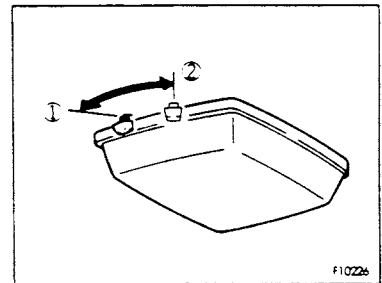
This switch turns the room lamp on and off.

① OFF

② ON



F10399



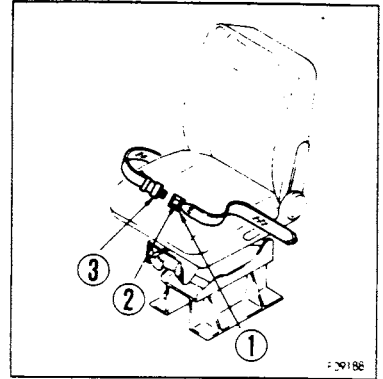
F10226

SEAT BELT

⚠ Before using seat belt, make sure that no unusual conditions are observed in the belt fittings and the belt itself.

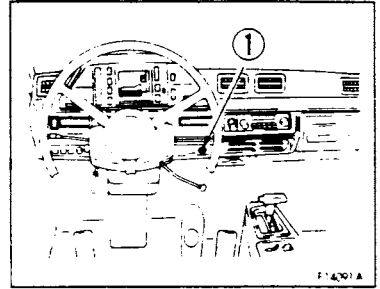
FASTENING THE SEAT BELT

1. Sit in the seat and adjust the seat so that your back will be against the backrest when the brake pedal is fully depressed.
 2. Sit in the seat. Holding buckle (1) with your left hand and tongue (3) with your right hand, put the tongue into the buckle. Make sure that the belt is securely locked by pulling the belt.
 3. To remove the belt, press button (2) on buckle (1) to unlock the belt.
- ★ Make sure the belt is not twisted when fastened. Adjust the belt length on both sides so that the buckle will be positioned in the front center of your body.



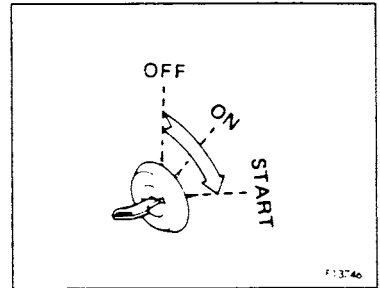
TO START THE ENGINE

- !** Before starting the engine, check that the surrounding area is safe.

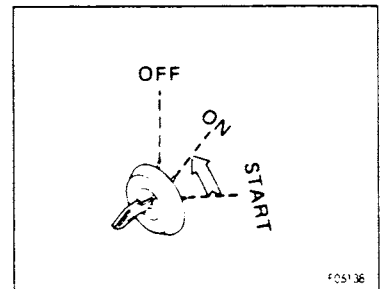


NORMAL STARTING

1. Turn the key of starting switch (1) to the START position to start the engine.

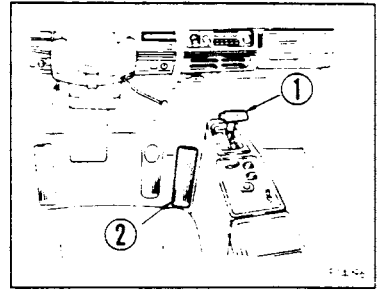


2. When the engine is started, release the key of starting switch (1) and the key will return automatically to ON.
 - ★ Do not leave the key in START for more than 20 seconds.
 If engine will not start, repeat the starting procedure after about 2 minutes.

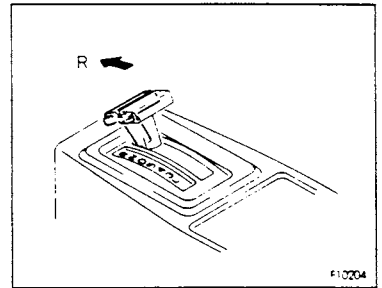


REVERSING

Stop the machine and check carefully that the area to the rear is safe.



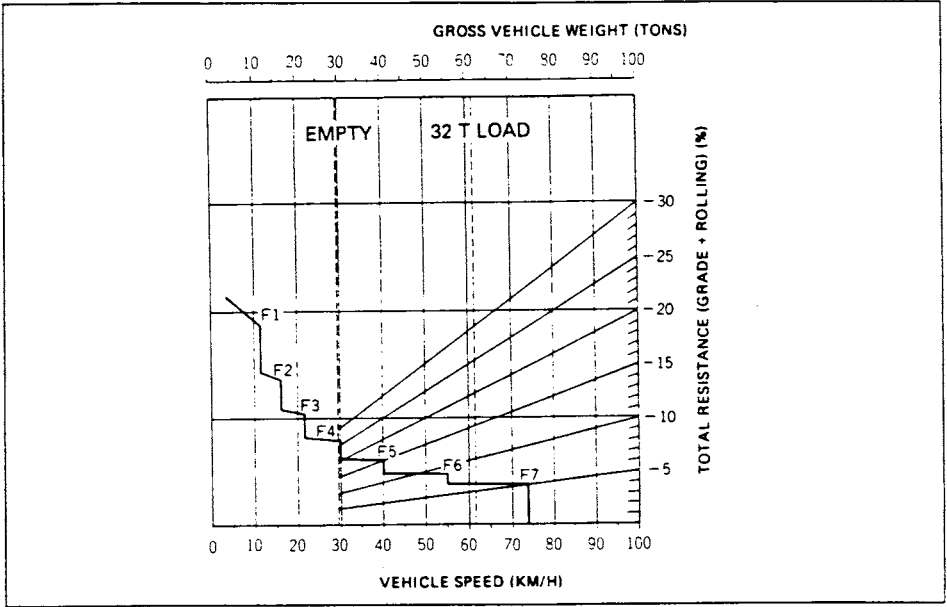
1. Set gear shift lever (1) in the R position, and depress accelerator (2) gradually to drive the machine.



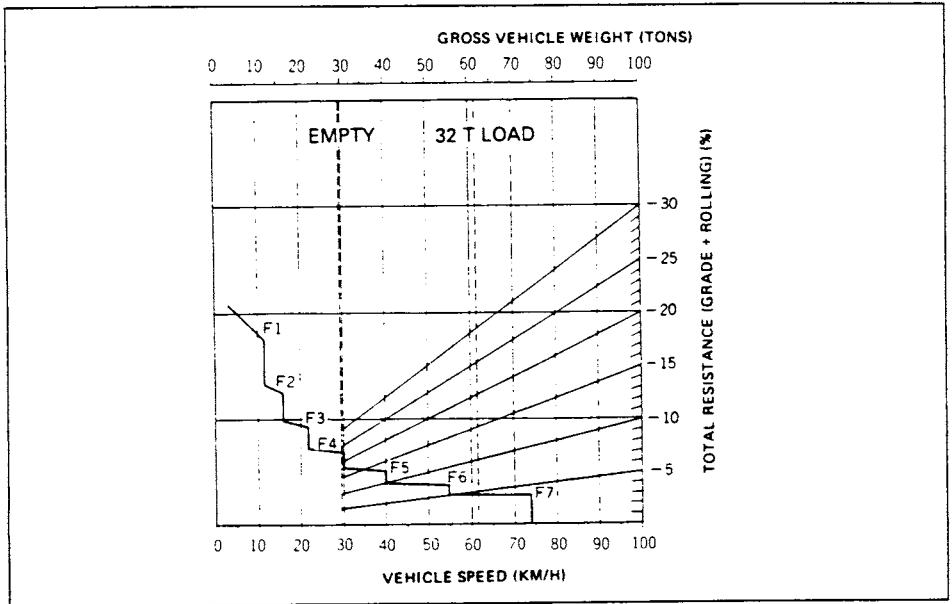
- ★ If the dump lever is in any position other than FLOAT, it is impossible to travel in reverse. Place the lever in the FLOAT position before setting the gear shift lever at the R position.
- ★ Do not operate the gear shift lever while depressing the accelerator pedal. This action will cause a large shock, and will also shorten the service life of the machine.
- ★ When switching between FORWARD and REVERSE, always stop the machine completely before moving the lever.

BRAKE PERFORMANCE GRAPH

- Brake performance (length of slope: 1500 m)
(without exhaust brake)





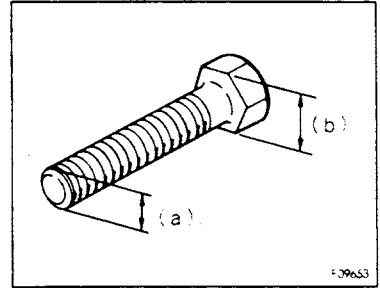
- Brake performance (length of slope: continuous)
(without exhaust brake)



STANDARD TIGHTENING TORQUE OF BOLTS AND NUTS

The following charts give the standard tightening torques of bolts and nuts. Exceptions are given in sections of "MAINTENANCE".

Thread diameter of bolt (mm) (a)	Width across flat (mm) (b)		
		kgm	Nm
6	10	1.35 ± 0.15	13.2 ± 1.4
8	13	3.2 ± 0.3	31.4 ± 2.9
10	17	6.7 ± 0.7	65.7 ± 6.8
12	19	11.5 ± 1.0	112 ± 9.8
14	22	18.0 ± 2.0	177 ± 19
16	24	28.5 ± 3	279 ± 29
18	27	39 ± 3	383 ± 39
20	30	56 ± 6	549 ± 58
22	32	76 ± 8	745 ± 78
24	36	94.5 ± 10	927 ± 98
27	41	135 ± 15	1320 ± 140
30	46	175 ± 20	1720 ± 190
33	50	225 ± 25	2210 ± 240
36	55	280 ± 30	2750 ± 290
39	60	335 ± 35	3280 ± 340



- ★ The tightening torque is determined by the width across the flats (b) of the nut and bolt.
- ★ If it is necessary to replace any nut or bolt, always use a Komatsu genuine part of the same size as the part that was replaced.

This torque table does not apply to the bolts with which nylon packings or other non-ferrous metal washers are to be used, or which require tightening to otherwise specified torque.

- ★ Nm (newton meter): 1Nm ≅ 0.1 kgm

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



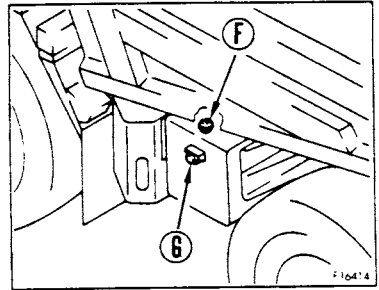
- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

g. CHECK OIL LEVEL IN HYDRAULIC TANK

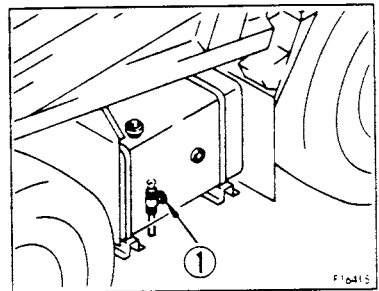
⚠ When removing the oil filler cap, turn it slowly to relieve inner pressure.

1. Check with sight gauge (G).
 2. If the oil level is not up to the window of gauge (G), add engine oil through oil filler (F).
- ★ When checking the levels, stop the machine on flat ground, lower the dump body, and stop the engine before checking.
 - ★ The type of lubricant used depends on the ambient temperature. Select according to the table "FUEL, COOLANT AND LUBRICANTS".



h. DRAIN WATER AND SEDIMENT FROM FUEL TANK

Loosen drain valve (1) at the bottom of the fuel tank, and drain the water and sediment collected at the bottom together with the fuel.



EVERY 250 HOURS SERVICE

- ★ Maintenance for every 50 hours should be carried out at the same time.

Carry out the following maintenance only after the first 250 hours.

- TRANSMISSION FILTER (VALVE END, TANK END), REPLACE ELEMENT
- FUEL FILTER, REPLACE CARTRIDGE
- TRANSMISSION CASE, CHANGE OIL AND CLEAN STRAINER
- HYDRAULIC FILTER, REPLACE ELEMENT
- HYDRAULIC TANK, CHANGE OIL
- FINAL DRIVE CASE, CHANGE OIL
- DIFFERENTIAL CASE, CHANGE OIL
- ENGINE VALVE CLEARANCE, CHECK AND ADJUST

For details of method of replacing or maintaining, see the section on EVERY 500 HOURS, 1000 HOURS AND 2000 HOURS SERVICE.

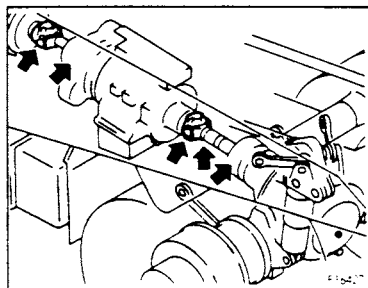
a. LUBRICATING

Apply grease to the grease fittings shown by arrows.

- ★ Carry out greasing every day for operations in places where the grease is likely to flow out, such as when traveling on muddy or wet ground.

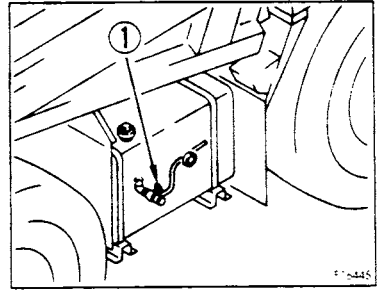
1. Drive shaft (5 points)

- ★ Supply grease to the spider portion until grease comes out from the cap seal (5 places).



b. FUEL FILTER

1. Close supply valve (1) of fuel tank.



2. Using the filter wrench, remove filter cartridge (2) by turning it counterclockwise.

3. Clean the filter head, fill a new cartridge with clean fuel and refit it after applying a dab of oil to the packing face.

★ To refit the cartridge, place the packing face in contact with the seal face of the filter holder, then screw up the cartridge 1/2 to 3/4 of a turn.

4. After replacing cartridge (2), loosen air bleeding plug (3) and open supply valve (1).

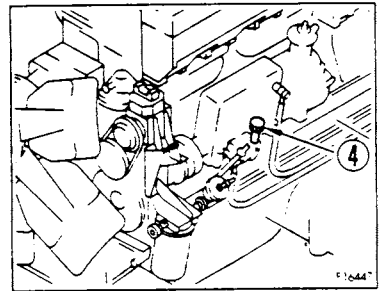
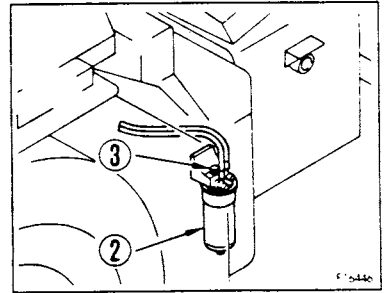
5. Loosen feed pump knob (4) and move the pump up and down to draw off fuel until air ceases to come out of air bleeding plug (3).

6. Tighten air bleeding plug (3).

7. Push feed pump knob (4) into place, and tighten it.

★ Be sure to use a genuine Komatsu cartridge.

★ After replacing the cartridge, start up the engine and check the filter seal face for possible oil leakage.



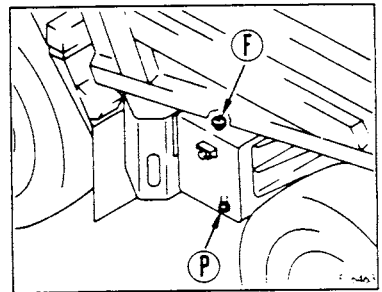
EVERY 2000 HOURS SERVICE

- ★ Maintenance for every 50, 250, 500 and 1000 hours should be carried out at the same time.

a. HYDRAULIC TANK

- ⚠ When removing the oil filler cap, turn it slowly to relieve inner pressure.

1. Lower the dump body and stop the engine.
 2. Turn the cap of oil filler (F) slowly to release the internal pressure, then remove the cap.
 3. Remove drain plug (P), and drain the oil. After draining the oil, tighten again.
 4. Pour in the specified amount of engine oil from oil filler (F).
 5. After adding the oil, check that the oil is at the specified level (for details, see CHECK BEFORE STARTING).
- ★ Refill capacity: 129 ℓ
 - ★ The type of lubricant used depends on the ambient temperature. Select according to the table "FUEL, COOLANT AND LUBRICANTS".



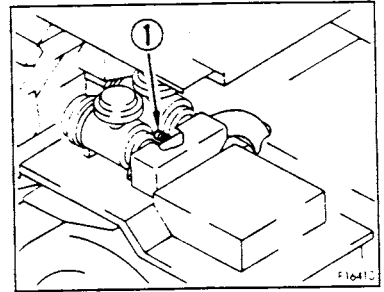
WHEN REQUIRED

b. CHECK, CLEAN AND REPLACE AIR CLEANER ELEMENT

! Do not clean or replace the air cleaner element with the engine running.

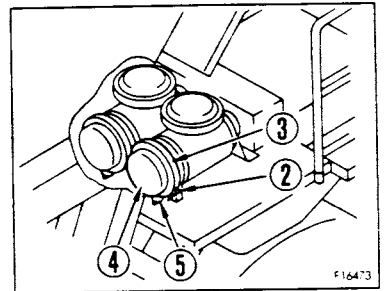
Checking

Whenever the red piston in dust indicator (1) appears, clean the air cleaner element.



Cleaning or replacing outer element

1. Loosen bolt (2) and remove band (3) and cover (4).
 2. Remove wing nut and outer element.
 3. Clean the air cleaner body interior and the removed cover.
 4. Clean and inspect the element. (See the item "Cleaning outer element" for cleaning procedure.)
 5. Install the cleaned element.
 6. Push the dust indicator reset button to return the red piston to the original position.
- ★ When inspecting or cleaning the air cleaner, remove evacuator valve (5) and clean with compressed air.



ADJUSTMENT

Measure the thickness of the pad, and if the thickness is less than 1.5 mm, please contact your Komatsu distributor.

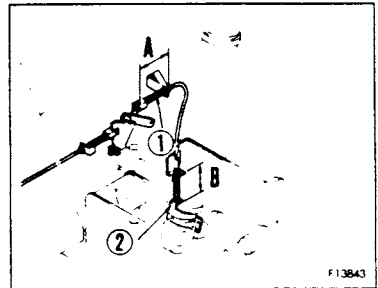
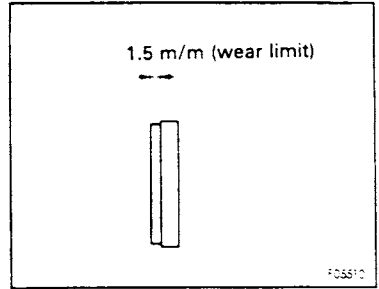
- ★ When carrying out the first adjustment after replacing the pad, turn bolt (1) back one turn (6 clicks) in a counterclockwise direction.

ADJUSTING BODY POSITIONER

It is possible to stop the body automatically without any shock when it reaches the lift position (body turning angle) specified by the positioner.

Adjustment

1. Set the dump lever at the HOLD position.
2. Adjust push cable (1) to the standard length.
 - ★ Standard length (A): 183 mm
3. Raise the body to 50 mm before the end of the stroke of the hoist cylinder, then adjust plate (2) so that the hoist valve lever is released from the detent.
 - ★ Reference dimension (B): 136 mm

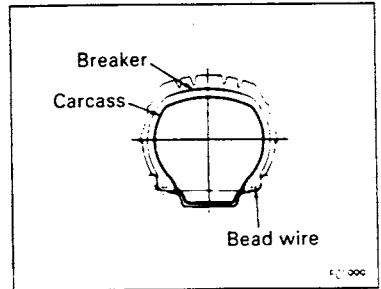


HANDLING THE TIRES

! Defective tires as shown in 1) to 6) below should be replaced with new tires for safe operations:

- 1) Tires with cuts, broken or excessively deformed bead wire.
- 2) Excessively worn tires in which the carcass ply (excluding breaker) is exposed along 1/4 the circumference.
- 3) Tires whose carcass is damaged more than 1/3 the tire width.
- 4) Tires with ply separation.
- 5) Tires with radial cracks which reach the carcass.
- 6) Aged, deformed or abnormally damaged tires.

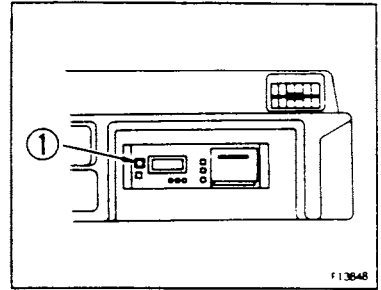
★ When replacing the tires, please contact your Komatsu distributor.
It is dangerous to jack up the machine without taking due care.



When checking the sensor.

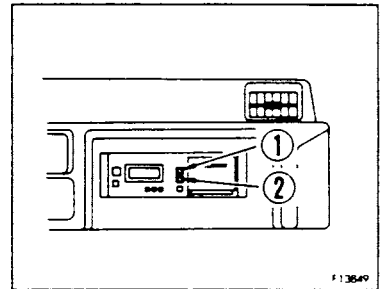
1. Travel with the truck empty on flat ground.
 2. Set the gear shift lever to N, and press calibration switch (1) for at least 2 seconds, then press calibration switch (1) again for at least 2 seconds. (The letters SCH flash.)
 3. When the travel speed is about 10 km/h, press calibration switch (1) again. (the letters SCH light up.) If the display shows the time, the operation is completed.
- If there is any abnormality in the sensor, an error code is displayed.

★ Check the sensor at least once a month.



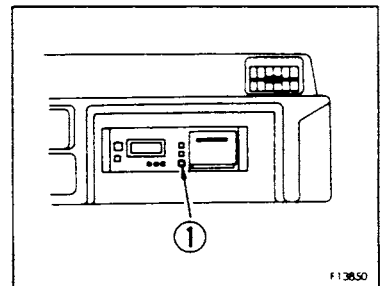
When printing out

1. Press print switch (1) for at least 2 seconds, and the data is printed out.
- ★ If it is necessary to stop the print during print out, keep the print switch pressed for at least 2 seconds.
 - ★ Do not hold down the paper coming out of the printer during the print out. This will cause lines to overprint.
2. Press print feed switch (2) for at least 2 seconds to feed the paper.



When deleting data from memory

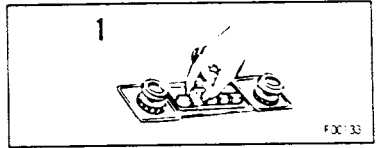
1. Before deleting anything, print out the necessary data.
2. Press the memory data clear switch (1) for at least 2 seconds. (The letters CLEA flash)
3. Press memory data clear switch (1) again for at least 2 seconds to complete the deletion.



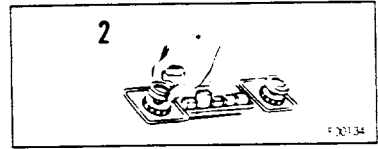
OPERATING THE CAR RADIO

How to set station selector buttons

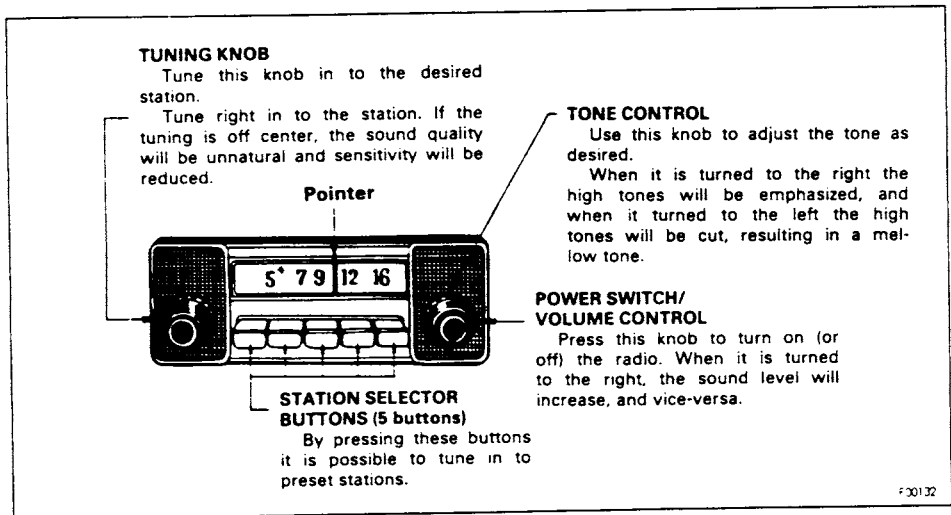
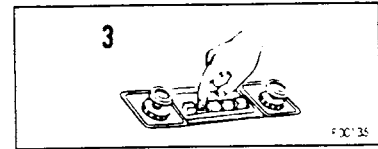
1. Pull back the button corresponding to the station to be preselected.



2. Turn the station selector knob until the pointer is in front of the desired station.
★ Carefully tune in so that noise disappears and the broadcast is heard plainly.



3. Carefully push back the button with the fingertip until it clicks into place.



COLD WEATHER OPERATION

PREPARATION FOR LOW TEMPERATURE


If the temperature becomes low, it becomes difficult to start the engine, and the coolant may freeze, so do as follows.

FUEL AND LUBRICANTS

Change to fuel and oil with low viscosity for all components.

For details of the specified viscosity, see the TABLE OF FUEL, COOLANT AND LUBRICANTS.

COOLANT

 **Antifreeze is flammable, so keep it away from any flame.**

After cleaning inside of the cooling system, add antifreeze to the coolant to prevent the coolant from freezing when the machine is not being used.

★ For details of the antifreeze mixture when changing the coolant, see WHEN REQUIRED.

Care in using Antifreeze

Use a Permanent Antifreeze (ethylene glycol mixed with corrosion inhibitor, antifoam agent, etc.) meeting the standard requirements as shown below. With permanent antifreeze, no change of coolant is required for a year. If it is doubtful that an available antifreeze meets the standard requirements, ask the supplier of that antifreeze for information.

Standard requirements for permanent antifreeze

- SAE J1034
- FEDERAL STANDARD O-A-548D
- ★ Never use methanol, ethanol or propanol based antifreeze.
- ★ Where no permanent antifreeze is available, an ethylene glycol antifreeze without corrosion inhibitor may be used only for the cold season. In this case, clean the cooling system twice a year (in spring and autumn). When refilling the cooling system, add antifreeze in autumn, but do not add any in spring.
- ★ Absolutely avoid using any water leak preventing agent irrespective of whether it is used independently or mixed with an antifreeze.
- ★ Do not mix one antifreeze with a different brand.

Oil consumption is large.

Exhaust gas is white or blue.

- Check and repair oil leakage.
- Adjust to specified oil quantity.
- Replace piston, ring and cylinder liner.
- Replace with specified fuel.
- Check and replace the turbocharger.

Exhaust gas occasionally turns black.

- Clean or replace the air cleaner element.
- Check and repair piston, ring and cylinder liner.
- Adjust valve clearance.
- Check and replace the turbocharger.

Combustion noise occasionally changes to breathing sound.

- Repair air leakage into fuel supply line.

Unusual combustion noise or mechanical noise.

- Replace with specified fuel.
- Check over-heating.

FUEL, COOLANT AND LUBRICANTS

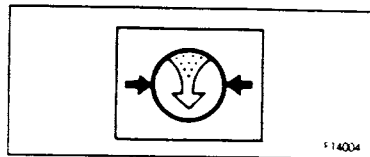
PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS

RESERVOIR	KIND OF FLUID	AMBIENT TEMPERATURE									CAPACITY (ℓ)			
		-22 -30	-4 -20	14 -10	32 0	50 10	68 20	86 30	104 40	122°F 50°C	Specified	Refill		
Engine oil pan	Engine oil											42	37	
Transmission case												195	90	
Front brake oil tank												2	—	
Hydraulic tank												165	129	
Front suspension												13.8 (each)	—	
Rear suspension												9.2 (each)	—	
Differential case												50	45	
Final drive case												17 (each)	13 (each)	
Fuel tank		Diesel fuel											500	—
Cooling system			Water										126	—

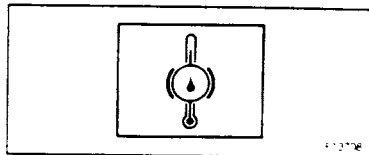
↔ ASTM D975 No.1

2. AIR PRESSURE CAUTION LAMP

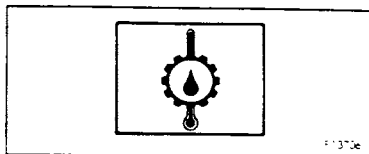
If the air tank pressure drops below $5.2 \pm 0.5 \text{ kg/cm}^2$, the central warning lamp and caution lamp come on and at the same time, a buzzer sounds.

**3. REAR BRAKE OIL TEMPERATURE CAUTION LAMP**

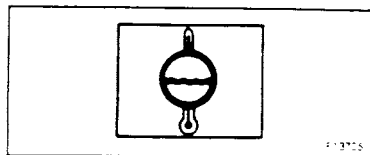
If the rear brake oil temperature exceeds $120^\circ \pm 4^\circ\text{C}$, the central warning lamp and caution lamp come on and at the same time, a buzzer sounds.

**4. TORQUE CONVERTER OIL TEMPERATURE CAUTION LAMP**

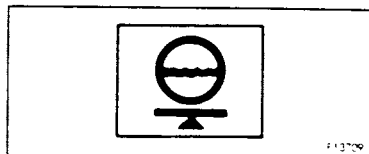
If the torque converter oil temperature exceeds $120^\circ \pm 4^\circ\text{C}$, the central warning lamp and caution lamp come on and at the same time, a buzzer sounds.

**5. COOLANT TEMPERATURE CAUTION LAMP**

If the engine cooling water temperature exceeds $102^\circ \pm 4^\circ\text{C}$, the central warning lamp and caution lamp come on and at the same time, a buzzer sounds.

**6. RADIATOR COOLANT LEVEL CAUTION LAMP**

If the water level in the radiator sub-tank drops below the specified level, the central warning lamp and caution lamp come on and at the same time, a buzzer sounds.



CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL