

SEAM05660503

Operation & Maintenance Manual

KOMATSU

HD352-5

WHEEL LOADER

SERIAL NUMBER
HD325-12264 and up

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

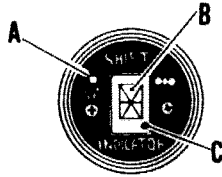
- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- 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

SHIFT INDICATOR

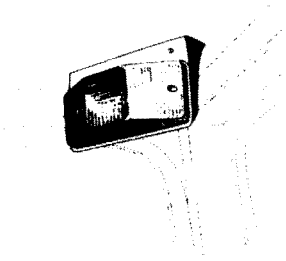


Indicates

- A: Lock up lamp "ON" (Green)
 B: Indicates speed range (Red)
 C: Indicates speed sensor condition (Red)

Indicates what gear the transmission is in. When the lock-up clutch is applied, the lock-up lamp (green) in the meter lights up to show direct drive travel. The lamp on the lower right side indicates the operation of the speed sensor.

CENTRAL WARNING LAMP (RED)

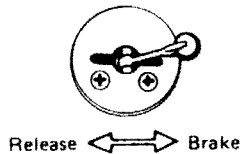


In case any abnormality occurs, this warning lamp lights and warning buzzer sounds. Then, immediately stop machine and check the causes.

- i) **Air pressure is lower than the specified value;**
 Check the air leakage point.
 After the repair, wait for the rise of air pressure.

- ii) **Retarder oil temperature exceeds the allowable limit;**
 Stop machine and wait for the lowering of the temperature under idling the engine at 2000 rpm.
- iii) **Gear shift lever is placed in any speed range other than NEUTRAL position during parking brake or emergency brake is applied;**
 Release parking brake or emergency brake.
- iv) **Gear shift lever is placed in any speed range other than NEUTRAL and the dump lever in a position other than FLOAT;**
 Shift the dump lever to the FLOAT position.
- v) **When the coolant level in the radiator drops because of leakage or some other reason;**
 Correct the trouble which caused the level drop and add water.

PARKING BRAKE VALVE LEVER



When the parking brake valve lever is put in the "BRAKE" position, the parking brake will be applied to the wheels. Simultaneously, the parking brake pilot lamp is lighted in red.

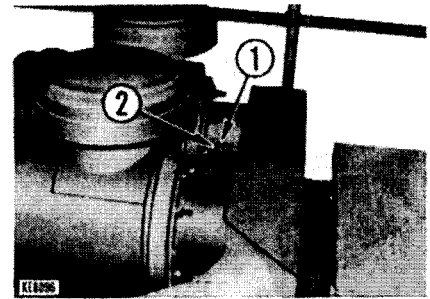
- ★ In case the gear shift lever is placed in any position other than NEUTRAL while the parking brake is applied, the central warning lamp lights and the buzzer sounds.

- ★ If the brake air pressure drops to 2.2 kg/cm^2 or less, the emergency brake and the parking brake are automatically applied. For the releasing method of the braking force after this emergency application, refer to the section RELEASE OF PARKING BRAKE.

⚠ Apply the parking brake whenever parking machine.

⚠ During loading operations, do not apply the parking brake. Pull the retarder control lever to apply the brake.

DUST INDICATOR



This device indicates clogging of air cleaner elements. When red piston appears in the transparent part of indicator (1), the elements are clogged.

Immediately clean the elements. After cleaning, push indicator button (2) to return the red piston to the original position.

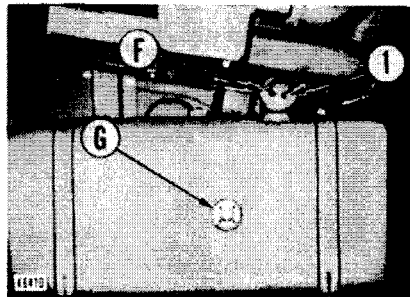
CHECK BEFORE STARTING

c. CHECK FUEL LEVEL

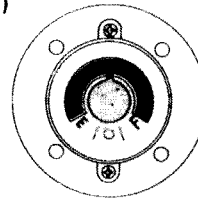
Check the fuel level with sight gauge (G). At the end of a day's job, be sure to refill with fuel from filler (F).

A clogged fuel tank cap breather (1) may lead to interruption of fuel feeding. It is recommended to clean it periodically.

- ★ When adding fuel, never let the fuel overflow. This may cause a fire.
- ★ Fuel capacity: 500ℓ



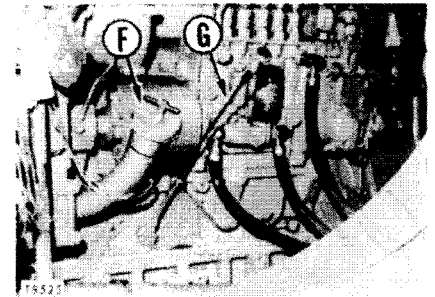
Detail (G)



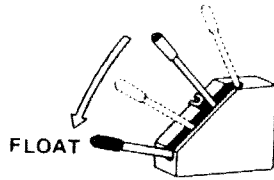
d. CHECK OIL LEVEL IN THE ENGINE OIL PAN

Use dipstick (G) to check the oil level. If necessary, add oil from oil filler (F).

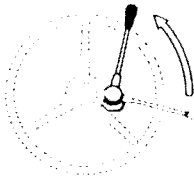
- ★ The type of lubricant used depends on the ambient temperature. Select according to the table "FUEL, COOLANT AND LUBRICANTS".



4. Dump lever (3) should be put in "FLOAT" position.

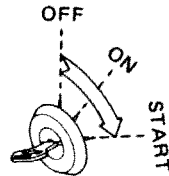


5. Retarder control lever should be in the brake release position.

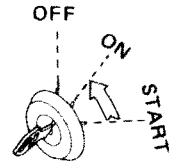


TO START THE ENGINE

1. Slightly depress the accelerator pedal.
2. Turn the starting switch ON, check that the preheating pilot lamp is OFF, then turn the starting switch key to the START position to start the engine.



3. Release the switch key, and it returns to ON automatically. Keep the key in this position.



- ★ Do not keep the starting switch key at START for more than 20 seconds.

When the engine fails to start, leave a 2-minute interval before attempting to start engine again.

- ★ To start engine in cold weather, refer to the section "COLD WEATHER OPERATION".

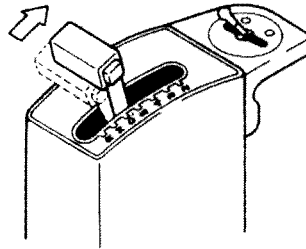
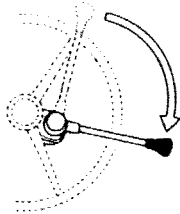
Special starting

When starting after running out of fuel, fill with fuel, then fill the fuel filter cartridge with fuel and bleed the air from the fuel system before starting.

Refer to FUEL FILTER in EVERY 500 HOURS SERVICE.

Automatic transmission

1. With the machine on flat ground, raise the air pressure to the maximum and pull retarder control lever all the way.
2. Place gear shift lever in the position D and gradually increase the engine speed. If the machine does not move while the torque converter is stalling at 1150 rpm, it indicates that the retarder brake capacity is normal.



INSTRUCTIONS FOR TOWING THE MACHINE

This machine must not be towed except in emergencies. When towing the machine, take the following precautions.

1) When the engine is in operation;

Always keep the engine running when towing the machine, so that the steering and braking can be used.

⚠ If there is a failure in the air circuit, the brakes cannot be used, so be extremely careful when towing.

2) When the engine is out of operation;

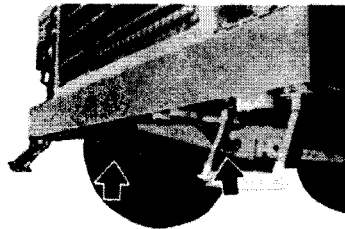
Never haul the machine over 800 m.

★ If the towing distance surpasses that limit, be sure to remove the drive shaft between the transmission and the differential case.

★ The towing speed must be within 8 km/h.

★ The hook for towing a machine is installed under the front frame.

★ When air pressure in air reservoir abnormally drops due to leakage from air circuit, parking brake and emergency brake are actuated. When towing machine, release both brakes.



T8.523

PERIODIC MAINTENANCE

Proper lubrication and maintenance assure trouble-free operation and long machine life. Time and money spent for scheduled periodic maintenance will be amply compensated by prolonged machine operation and reduced operating cost.

All hourly figures given in the following descriptions are based on service meter readings. In practice, however, it is recommended to rearrange all of them into units of days, weeks and months to make the maintenance schedule more convenient. Under rough job site or operating conditions, it is necessary to somewhat shorten the maintenance intervals stated in this manual.

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

INITIAL 250 HOURS SERVICE

Perform the following maintenance after running the machine for the first 250 hours.

- a. HYDRAULIC FILTER, REPLACE ELEMENT
- b. TRANSMISSION OIL FILTER, REPLACE ELEMENT
- c. FUEL FILTER, REPLACE CARTRIDGE
- d. TRANSMISSION CASE, CHANGE OIL
- e. DIFFERENTIAL CASE, CHANGE OIL
- f. FINAL DRIVE CASE, CHANGE OIL
- g. HYDRAULIC TANK, CHANGE OIL
- h. ENGINE VALVE CLEARANCE, CHECK

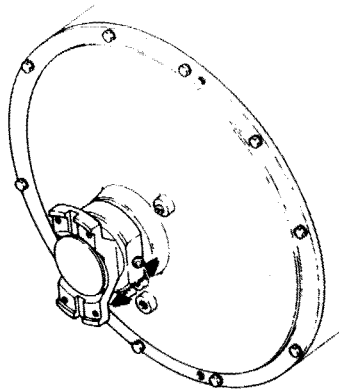
For details of method of replacing or maintaining, see the section on EVERY 500 HOURS, 1000 HOURS AND 2000 HOURS SERVICE.

EVERY 250 HOURS SERVICE

a. LUBRICATING

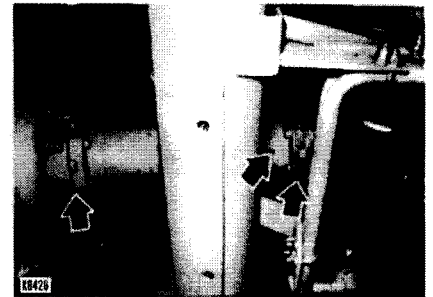
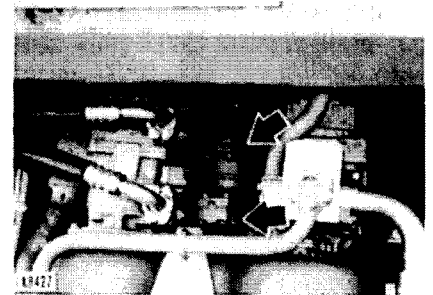
Apply grease to the grease fittings shown by arrows.

1. Output shaft (2 points)



- INITIAL 250 HOURS SERVICE
EVERY 250 HOURS SERVICE
- ★ Maintenance for every 50 hours should be carried out at the same time.

2. Drive shaft (5 points)

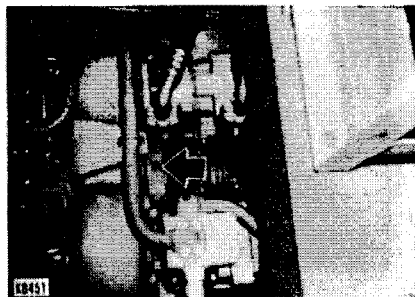


EVERY 1000 HOURS SERVICE

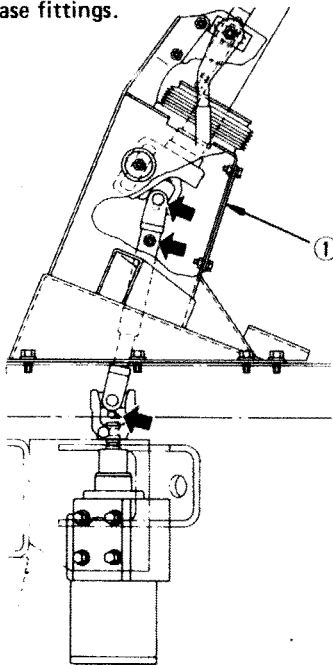
a. LUBRICATING

Apply grease to the grease fittings shown by arrows.

1. Transmission mount (1 point)

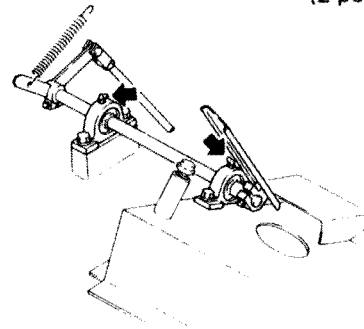


2. Steering column (3 points)
Loosen wing nut, remove cover (1) and apply grease to the three grease fittings.

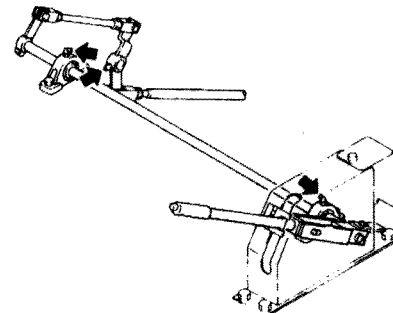


EVERY 1000 HOURS SERVICE
★ Maintenance for every 50, 250 and 500 hours should be carried out at the same time.

3. Accelerator control linkage (2 points)



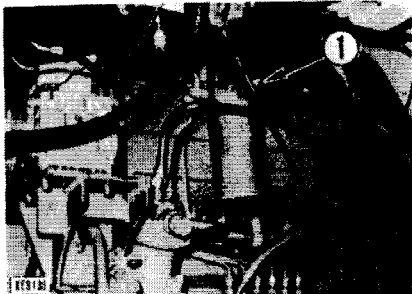
4. Dump control linkage (3 points)



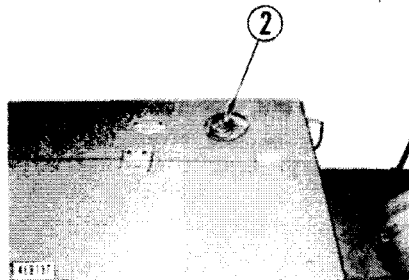
WHEN REQUIRED

1. Stop the engine, close corrosion resistor valve (1).
2. Turn radiator cap (2) slowly until it comes off.
3. Open drain valve (3) at the bottom of radiator and drain valve (4) at the side of cylinder block, and drain off the cooling water.
4. Close up drain valves (3) and (4) and pour in clean water (e.g., city water) up to the vicinity of the water filler.
5. When the water reaches the vicinity of the water filler, put the engine at low idling, open the drain valves, then pass water through the cooling system until clean water comes out from the drain valves for 10 minutes.
 - ★ When doing this, adjust the amount of water supplied and drained to keep the radiator full at all time.
6. When the water becomes completely clean, stop the engine and close drain valves (3) and (4).
7. After draining off the cooling water, wash out the cooling system using commercially available detergent. Follow the instructions on the detergent container.
8. After washing the cooling system, drain off all the water, then close up drain valves and pour in clean water (e.g., city water) slowly up to the vicinity of the water filler.

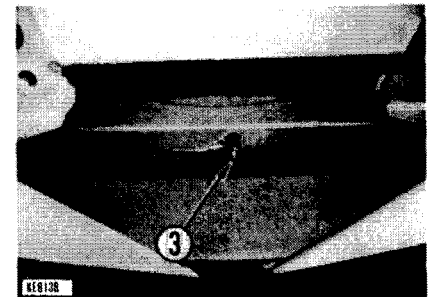
Corrosion resistor



Water filler



Drain valve (radiator)



To adjust, proceed as follows:

1. Stop the engine when the dump body has reached the desired angle.
2. Loosen lock nut (2) and adjust plate (3) until plate (3) comes into contact with bracket (1), then tighten lock nut (2).
3. After adjustment, run the engine and make sure that the dump lever returns automatically to HOLD when the dump body has reached the determined angle.

- ★ If the clearance "H" shown in the figure exceeds 26 mm when the dump body is lowered, the hoist cylinder piston rod reaches its stroke end before the positioner works.

BACK-UP ALARM VOLUME

Three degrees of back-up alarm volume can be selected according to the work area.

Changing method

Loosen screw (1), remove cover (2), and you can find variable bridge. Three screws (3) indicate H, L and M respectively.

H: Maximum, $112 \pm 4\text{dB}$

Connect the bridge (4) to L and H.

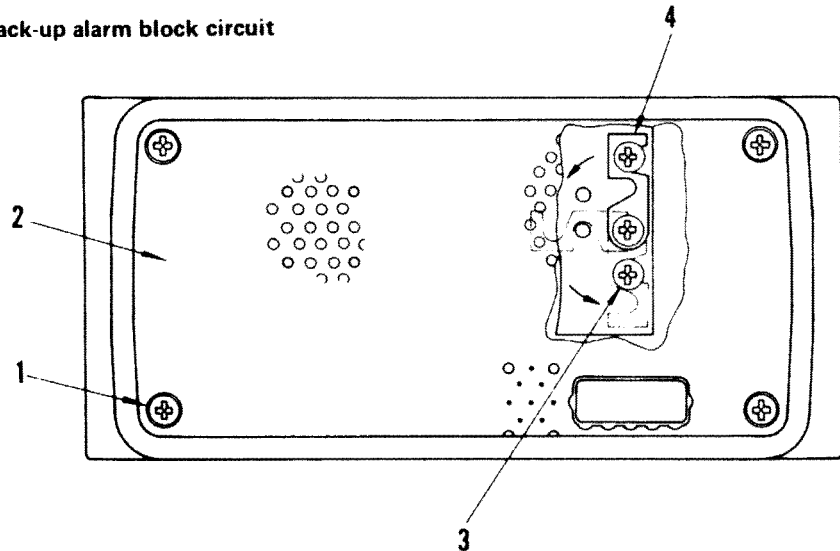
L: Minimum, $97 \pm 4\text{dB}$

Connect one end of bridge (4) to L and the other end is set free.

M: Medium, $107 \pm 4\text{dB}$

Connect the bridge (4) to L and M.

Back-up alarm block circuit

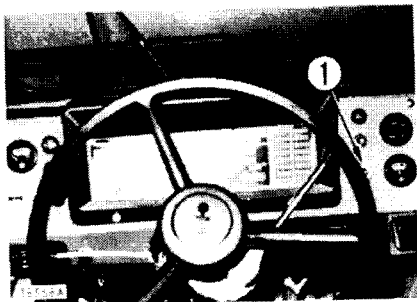


OPERATION AND MAINTENANCE (EQUIPPED WITH A ELECTRONIC INSTRUMENT PANEL)

**This section applies when equipped with A ELECTRONIC INSTRUMENT PANEL.
Only the portions which differ from previous sections are noted.**

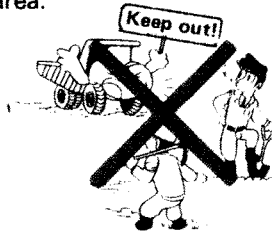
CHECK BEFORE STARTING

CHECK FUNCTION OF MONITOR

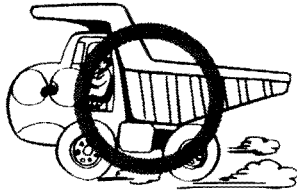


1. Turn on the key of starting switch (1) and confirm that all the lamps light for about five seconds. At the same time, confirm that the central warning lamp is flashing and that the warning buzzer is sounding.
 - ★ If any lamp fails to come on, check the lamp bulb and replace it if it is burnt out.
 - ★ When restarting the engine, wait at least 30 seconds since the engine last stopped.
2. All the lamps should go off within five seconds or so if no abnormalities are monitored.
 - ★ Only the CHECK MONITOR lamp will continue flashing if there is any abnormality.

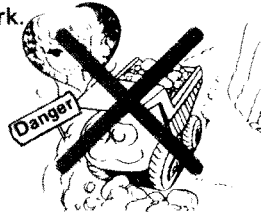
- If there is no one giving instructions during operations, there is danger of being hit by dump trucks. In such places, all persons not concerned with the operation should be kept out of the operating area.



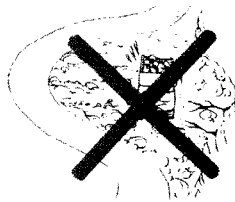
- When driving, sit in the operator's seat correctly so that the truck can be operated properly. Driving while not sitting in the operator's seat, or driving while standing is dangerous.



- Always concentrate. It is extremely dangerous to allow yourself to be distracted or to think of other things when operating a machine. Always pay attention to your driving, and to your surroundings. In dangerous places, or where there is restricted visibility, it is important to get down from the machine and confirm whether it is safe before continuing work.



- Never drive off the road, or in place which you consider dangerous or outside the range of your skill.

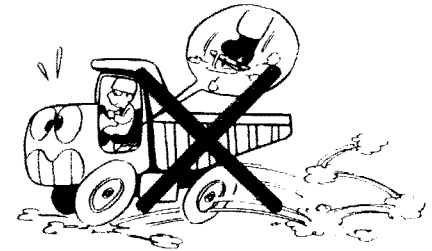


- The machine should always be operated at a speed where it can be correctly controlled. The following are dangerous:

- ★ **Speeding**
- ★ **Snaking**
- ★ **Coasting**

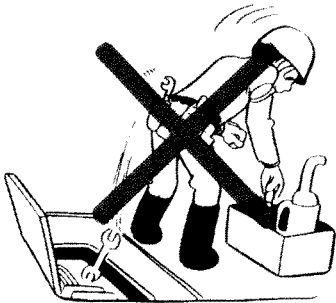


- As far as possible sudden stopping or sudden starting should be avoided except in emergencies. Be careful to avoid repeated stamping on the brakes.



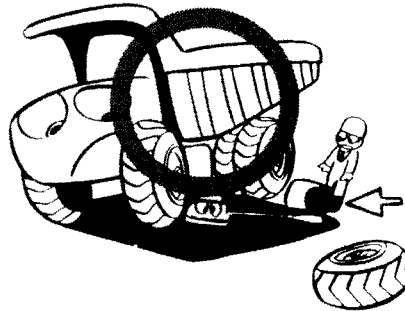
PRECAUTIONS FOR MAINTENANCE

- 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.

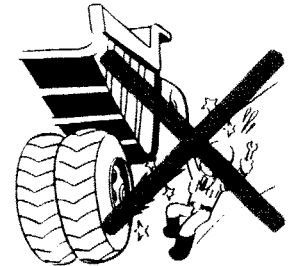


Precautions when changing tires

- 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.



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