TEN00128-04

Operation & Maintenance Manual

ARTICULATED
DUMP TRUCK

GALEO
HM400-2

SERIAL NUMBERS 2001 and up

ecot3

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.

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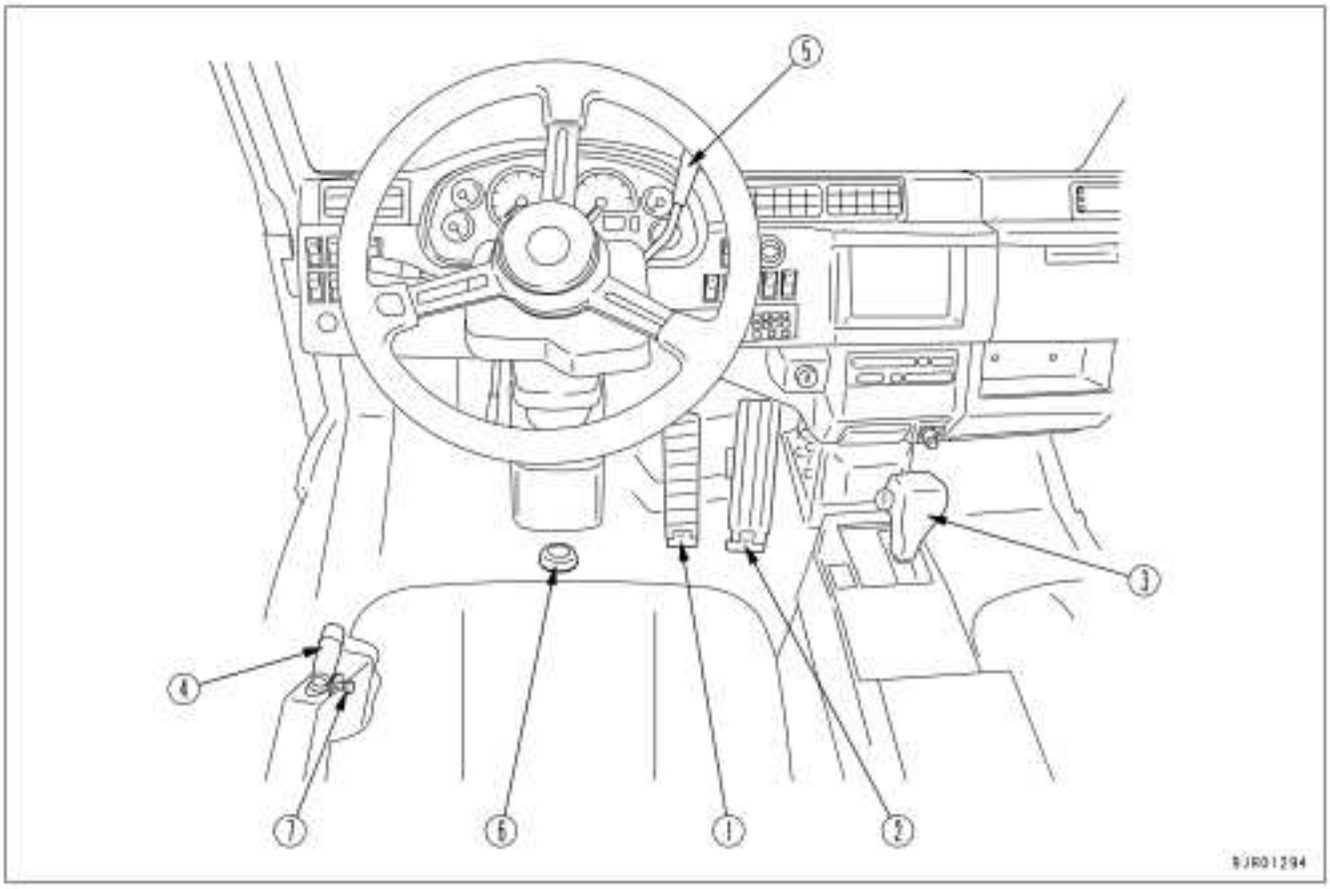
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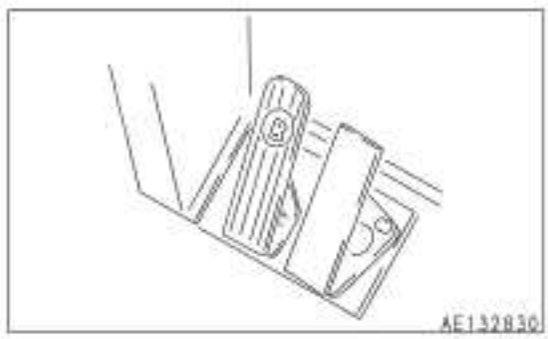
CONTROL LEVERS AND PEDALS



(1) Brake pedal
(2) Accelerator pedal
(3) Gear shift lever
(4) Dump lever
(5) Retarder control lever
(6) Left and right differential lock pedal
(7) Dump lever lock knob

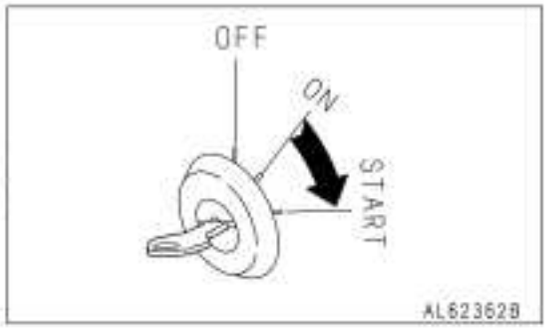
BRAKE PEDAL

This pedal (1) is used to apply the wheel brakes.



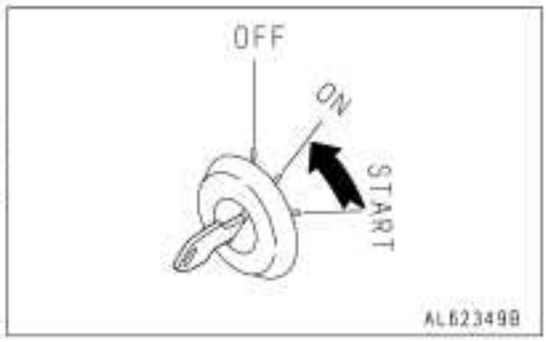
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2. After the preheater pilot lamp goes off, turn the key of the starting switch to the START position, and the engine will start.



REMARK
When starting the engine, the monitor may flash while the starting motor is turning, but if the monitor lamp goes out after the engine is started, there is no problem.

3. After the engine starts, release the key of the starting switch.



REMARK
If the engine fails to start, return the key of the starting switch to the OFF position, and then start the operation again from step 1. If the starting switch is not returned to the OFF position, the automatic preheater does not operate.

4. Just after the engine starts, do not depress the accelerator pedal but run the engine idle at low speed for at least 15 seconds.
   When the engine is started for the first time after the engine oil or engine oil filter is replaced, continue the low idle run for at least 20 seconds to circulate the engine oil in the engine.

REMARK
- Since the turbocharger rotates at very high speed, it is seized if not lubricated well. To prevent this, the turbo protect mechanism works for a certain time just after the engine starts, depending on the engine water temperature.

Engine water temperature	Turbo protect time
above 10°C (50°F)	0 sec
-10°C to 10°C (14°F to 50°F)	0 to 5 sec
below -10°C (14°F)	5 sec

- Just after the engine starts, the injection characteristics are changed for a certain time to keep the low idle speed a little high, depending on the engine water temperature. The engine acceleration characteristics are also changed so that the engine will be accelerated moderately.

Engine water temperature	Injection characteristics change time
above 20°C (68°F)	0 sec
0°C to 20°C (32°F to 68°F)	0 to 6 sec
-20°C to 0°C (-4°F to 32°F)	6 to 12 sec
-30°C to -20°C (-22°F to -4°F)	12 to 15 sec

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EVERY 500 HOURS SERVICE

Maintenance for every 50 and 250 hours service should be carried out at the same time.

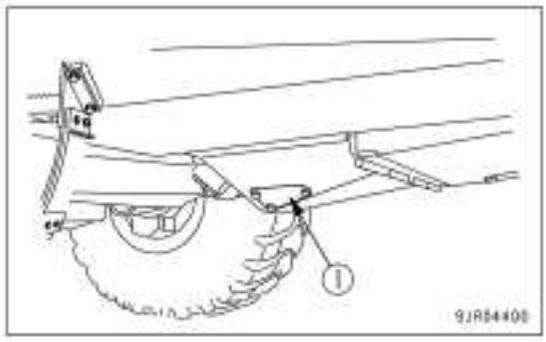
CHANGE OIL IN ENGINE OIL PAN, REPLACE ENGINE OIL FILTER CARTRIDGE

⚠ WARNING

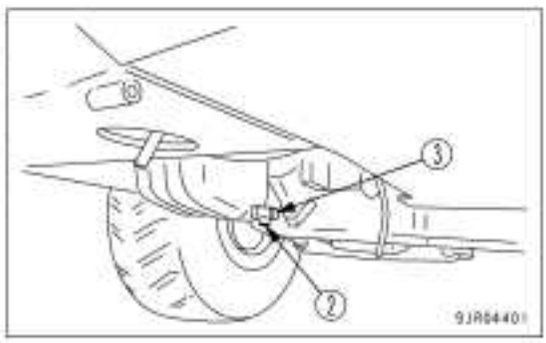
- **The parts and oil are at high temperature after the engine is stopped, and may cause burns. Wait for the temperature to go down before starting the work.**

- Refill capacity: 50 liters (13.21 US gal)
- Prepare a filter wrench

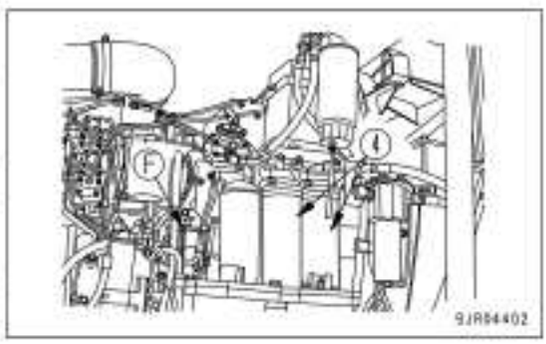
1. Remove the bolts and cover (1).
2. Place a drain oil container just under the drain valve.



3. Remove drain plug (2), then loosen drain valve (3) slowly to avoid getting oil on yourself, and drain the oil. Be careful not to loosen the drain valve too far and deform the stopper pin inside the valve.
4. Check the drained oil, and if there are excessive metal particles or foreign material, please contact your Komatsu distributor.
5. Tighten drain valve (3) and drain plug (2).
   Tightening torque
   Drain plug (2), drain plug (3): 68.6 ± 9.8 Nm
   (7 ± 1 kgm , 50.6 ± 7.2 lbft)



6. Using the filter wrench, turn filter cartridge (4) to the left to remove it.
   When doing this, to prevent getting oil on yourself, do not carry out this operation from immediately under the cartridge.
   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, fill the new filter cartridge with oil, coat the packing face and thread with oil (or coat thinly with grease), then install the filter cartridge.



8. Install the filter cartridge. When doing this, be careful not to damage the outside cylinder of the cartridge.
   When installing the filter cartridge, tighten until the packing face is in contact with the filter holder, then tighten a further 3/4 to 1 turn.
9. Pour in the specified amount of engine oil from oil filler (F).
10. Run the engine for a short time at idle, then check the oil if it is filled up to a specified level. For details, see "CHECK OIL LEVEL IN ENGINE OIL PAN, ADD OIL (PAGE 3-74)".

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