TEN00106-01

Operation & Maintenance Manual

CRAWLER
CARRIER

GALEO

CD110R-2

SERIAL NUMBERS 1501 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.

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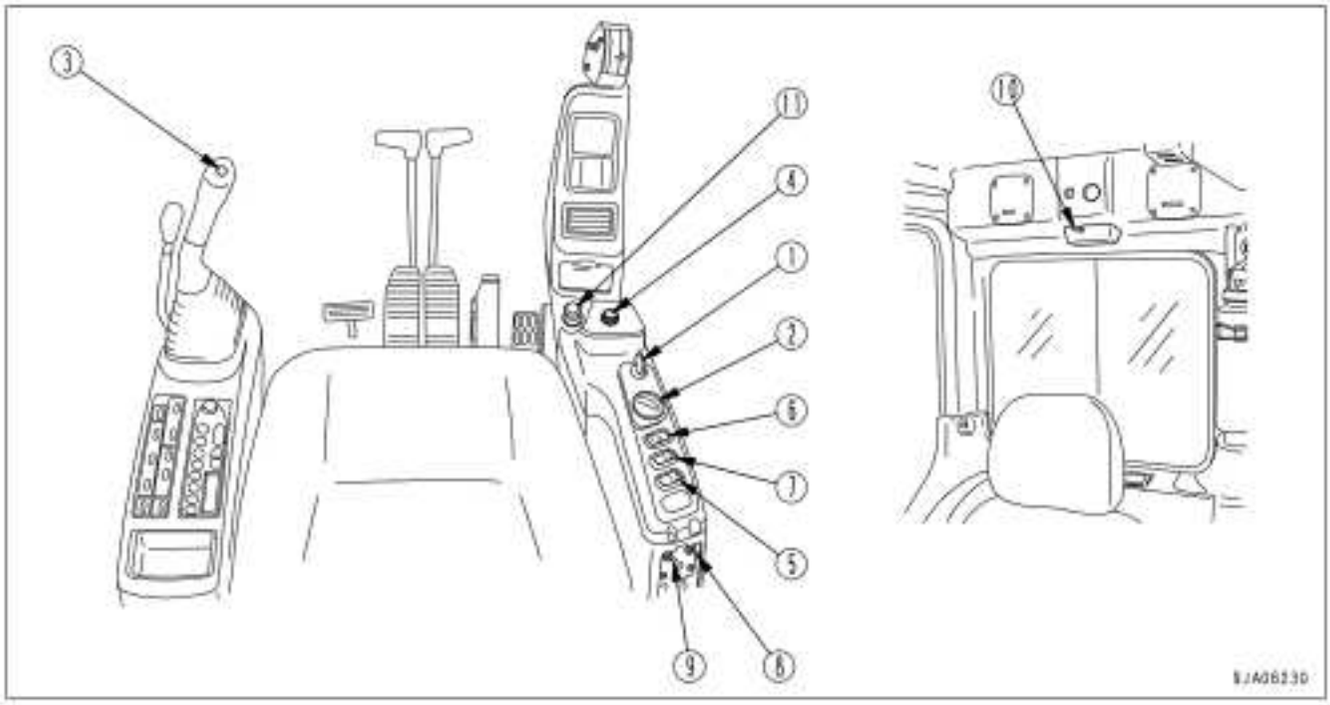
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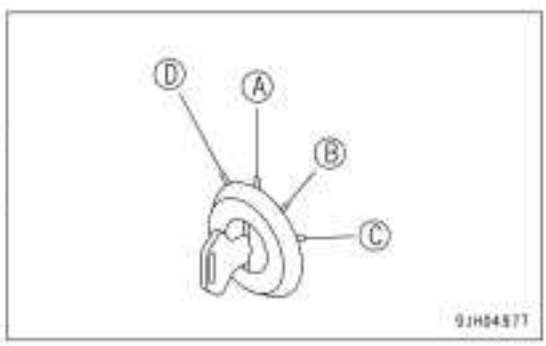
SWITCHES



(1) Starting switch
(2) Fuel control dial
(3) Horn switch
(4) Emergency brake switch
(5) Swing lock switch
(6) Lamp switch
(7) Alarm buzzer stop switch
(8) Swing holding brake cancel switch
(9) Emergency fuel solenoid drive switch
(10) Room lamp switch
(11) Cigarette lighter

STARTING SWITCH

This switch (1) is used to start the engine.



(A): OFF position
At this position, the starting switch key can be inserted and removed. When the starting switch key is turned to this position, the power to the electrical system is switched off and the engine stops.

(B): ON position
Electric current flows through the charging and lamp circuits. Keep starting switch key in the ON position while the engine is running.

(C): START position
Turn the starting switch key to this position to start the engine. Hold it in the START position when cranking the engine. Release the key immediately when the engine starts. The key will return to the ON position (B).

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BATTERY

WARNING

- **The battery generates flammable gas. Do not bring fire or sparks near the battery.**
- **Battery electrolyte is dangerous. If it gets in your eyes or on your skin, wash it off with a large amount of water and consult a doctor.**
- **Battery electrolyte dissolves paint. If it gets on the bodywork, wash it off immediately with water.**
- **If the battery electrolyte is frozen, do not charge the battery or start the engine with a different power source. There is danger that the battery may explode.**
- **Battery electrolyte is toxic. Do not let it flow into drainage ditches or spray it on to the ground surface.**

When the ambient temperature drops, the capacity of the battery will also drop. If the battery charge ratio is low, the battery electrolyte may freeze. Maintain the battery charge as close as possible to 100%. Insulate it against cold temperature to ensure the machine can be started easily the next morning.

REMARK
Measure the specific gravity and calculate the charging rate from the following conversion table.

Charging Rate (%) \ Electrolyte Temperature	20°C (68°F)	0°C (32°F)	-10°C (14°F)	-20°C (-4°F)
100	1.28	1.29	1.30	1.31
90	1.26	1.27	1.28	1.29
80	1.24	1.25	1.26	1.27
75	1.23	1.24	1.25	1.26

- As the battery capacity drastically drops in low temperatures, cover or remove the battery from the machine, store the battery in a warm place, and install it again the next morning.
- If the electrolyte level is low, add distilled water in the morning before beginning work. Do not add water after the day's work to prevent diluted electrolyte in the battery from freezing during the night.

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, observe the following precautions.

- Remove all the mud and water from the machine body. In particular, wipe the hydraulic cylinder rods clean to prevent damage to the seal caused by mud, dirt, or drops of water on the rod from getting inside the seal.
- Park the machine on hard, dry ground.
  If this is impossible, park the machine on boards.
  The boards prevent the tracks from freezing to the ground, and allow the machine to be moved the next morning.
- Open the drain valve and drain any water collected in the fuel system to prevent it from freezing.
- Fill the fuel tank to capacity. This minimizes moisture condensation in the tank when the temperature drops.

AFTER COLD WEATHER

When the 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 "RECOMMENDED FUEL, COOLANT, AND LUBRICANT (PAGE 4-9)".

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EVERY 1000 HOURS SERVICE

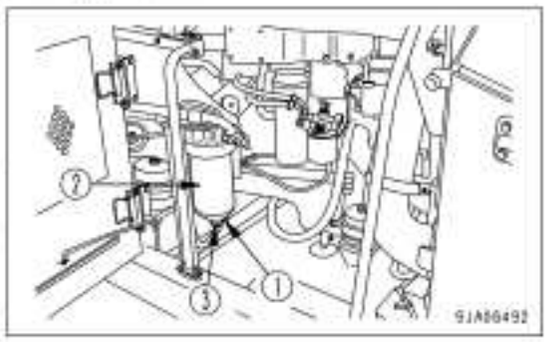
Maintenance for every 50, 100, 250 and 500 hours service should be carried out at the same time.

REPLACE HYDRAULIC LINE FILTER ELEMENT

⚠ WARNING

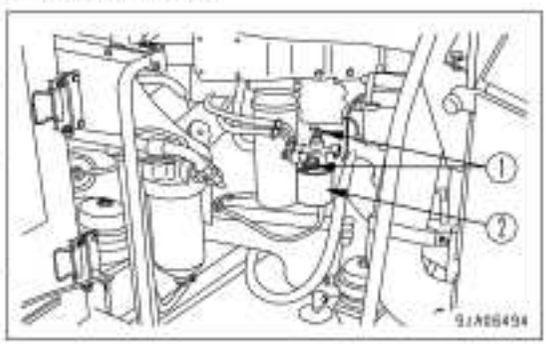
Parts and oil are at high temperature immediately after the engine is stopped and may cause serious burns. Wait for the oil temperature to go down before performing this operation.

1. Open the side cover and lock it in position securely with side cover support lever.
2. Remove drain plug (1) at the bottom of the filter case, drain the oil, then tighten the plug again.
3. Hold case (2) and loosen center bolt (3), then remove case (2).
4. Remove the element and clean the inside of the case.
5. Replace the filter gasket and O-ring with new parts. Coat the new gasket and O-ring thinly with clean oil before installing.
6. Assemble the new element, set the case in position, then install with center bolt (3).
   Tightening torque: 167 to 196 Nm (17 to 20 kgm , 123.0 to 144.7 lbft)
7. Run the engine at idling for a short time, then check that the oil is at the specified level. For details, see "CHECK OIL LEVEL IN HYDRAULIC TANK, ADD OIL (PAGE 3-49)".



REPLACE CORROSION RESISTOR CARTRIDGE

1. Open the side cover and lock it in position securely with side cover support lever.
2. Screw in valve (1) at the top of the corrosion resistor.
3. Using a filter wrench, turn cartridge (2) to the left to remove it.
4. Clean the filter holder, coat the steel surface of the new filter cartridge with clean engine oil, then install it.
5. Bring the packing surface into contact with the seal surface of the filter holder, then tighten it further approx. 2/3 turn.
6. Open valve (1).
7. Run the engine and check that there is no leakage of water from the seal surface.



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