

Operation & Maintenance Manual

WA700-1

WHEEL LOADER

SERIAL NUMBERS **WA700 - 15000** and up

This material is proprietary to Komatsu America International Company and is not to be reproduced, used, or disclosed except in accordance with written authorization from Komatsu America International Company.

It is our policy to improve our products whenever it is possible and practical to do so. We reserve the right to make changes or add improvements at any time without incurring any obligation to install such changes on products sold previously.

Due to this continuous program of research and development, periodic revisions may be made to this publication. It is recommended that customers contact their distributor for information on the latest revision.

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

6. GENERAL PRECAUTIONS

⚠ WARNING: For reasons of safety, always follow these safety precautions.

SAFETY RULES

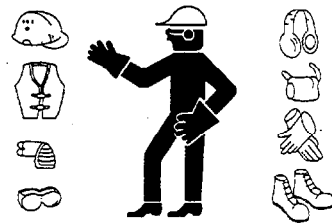
- ONLY trained and authorized personnel can operate and maintain the machine.
- Follow all safety rules, precautions and instructions when operating or performing maintenance on the machine.
- When working with another operator or a person on worksite traffic duty, be sure all personnel understand all hand signals that are to be used.

SAFETY FEATURES

- Be sure all guards and covers are in their proper position. Have guards and covers repaired if damaged.
Proper position See "12.1.1 WALK-AROUND CHECK".
- Use safety features such as the safety lock lever and seat belts properly.
- NEVER remove any safety features. ALWAYS keep them in good operating condition.
Safety lock lever → See "12.13 PARKING MACHINE".
Seat belts → See "12.1.3 ADJUSTMENT BEFORE OPERATION".
- Improper use of safety features could result in serious bodily injury or death.

CLOTHING AND PERSONAL PROTECTIVE ITEMS

- Avoid loose clothing, jewelry, and loose long hair. They can catch on controls or in moving parts and cause serious injury or death. Also, do not wear oily clothes because they are flammable.
- Wear a hard hat, safety glasses, safety shoes, mask or gloves when operating or maintaining the machine. Always wear safety goggles, hard hat and heavy gloves if your job involves scattering metal chips or minute materials - this is so particularly when driving pins with a hammer and when cleaning the air cleaner element with compressed air.
Check also that there is no one near the machine.
Cleaning of air cleaner element → See "24.2 WHEN REQUIRED" in service procedure.



METHOD OF USING BRAKES

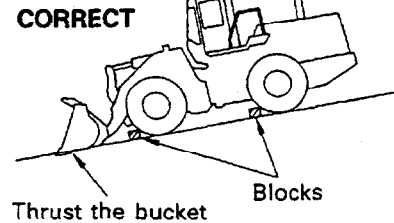
- Do not put your foot on the brake pedal unless necessary.
- Do not depress the brake pedal repeatedly unless necessary.
- When traveling downhill, use the engine as a brake, and always use the right brake pedal.

WORKING ON LOOSE GROUND

- Avoid operating your machine too close to the edge of cliffs, overhangs, and deep ditches. If these areas collapse, your machine could fall or tip over and result in serious injury or death. Remember that the soil after heavy rain or blasting is weakened in these areas.
- Earth laid on the ground and the soil near ditches are loose. They can collapse under the weight or vibration of your machine.
- Install the HEAD GUARD (FOPS) if working in areas where there is danger of falling rocks and dirt.
- When operating in places where there is danger of falling rocks or danger of the machine turning over, always install ROPS and a seat belt.

PARKING THE MACHINE

- Park on level ground whenever possible. If the machine must be stopped on a slope, block the wheels to prevent the machine from moving.



- When parking on public roads, park the machine so that the machine, flags, and fences do not obstruct traffic, and provide fences, signs, flags, or lights, and put up any other necessary signs to ensure that passing traffic can see the machine clearly.

Parking procedure → See "12.13 PARKING MACHINE".

- When leaving the machine, lower the work equipment completely to the ground, set the safety lock lever to the LOCK position, then stop the engine and use the key to lock all the equipment. Always take the key with you.

Work equipment posture → See "12.13 PARKING MACHINE".

Places to lock → See "12.17 LOCKING".

8.3 TIRES

HANDLING TIRES

If tires are not used under the specified conditions, they may overheat and burst or be cut and burst by sharp stones on rough road surfaces. This may lead to serious injury or damage.

To maintain safety, always keep to the following conditions.

- Inflate the tires to the specified pressure. Abnormal heat is generated particularly when the inflation pressure is too low.

Suitable inflation pressure → See "12.18 HANDLING THE TIRES".

- Avoid overloading.

Suitable load → Normal load for bucket: 15300 kg (33737 lb)

(When 8.5 m³ (11.1 cu.yd) standard bucket is installed.

- Use the specified tires.

The values given in this manual for the tire inflation pressure and permissible speed are general values. The actual values may differ depending on the type of tire and the condition under which they are used. For details, please contact your Komatsu distributor or tire maker.

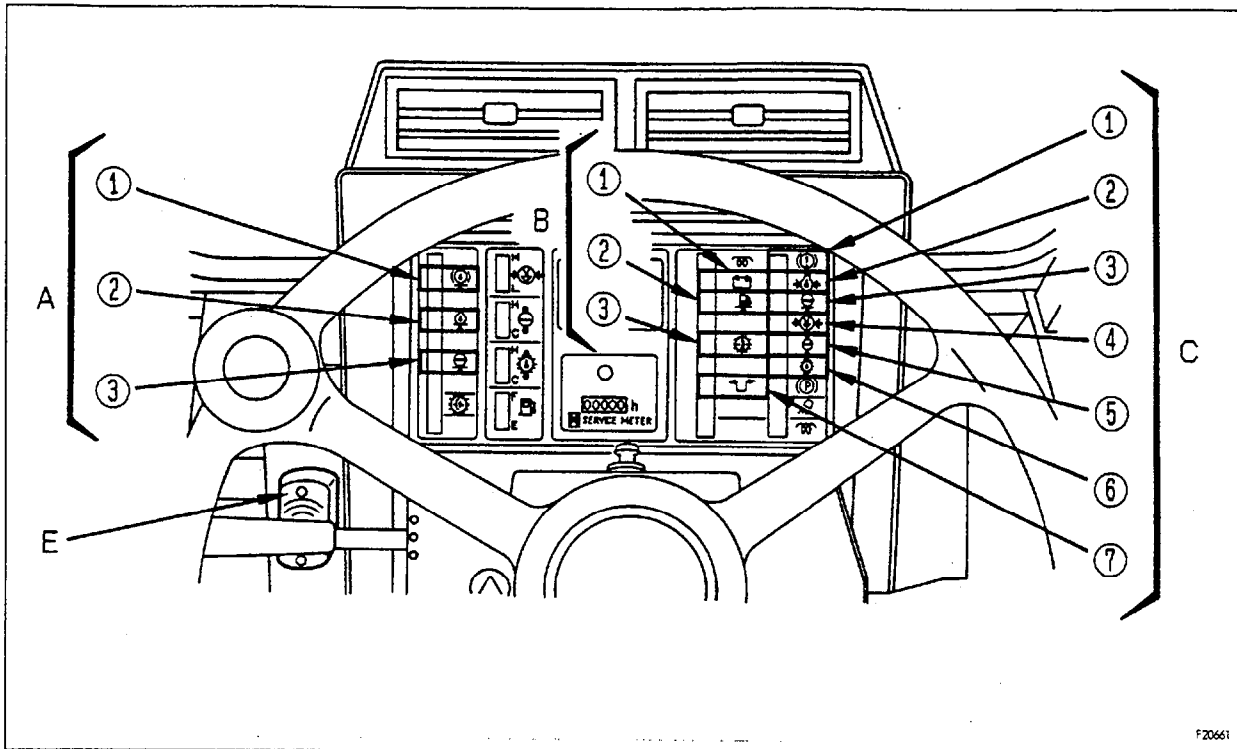
If the tire is heated when installed to the wheel, flammable gas is produced. If this catches fire, the tire may explode and cause serious injury or damage. Unlike when a tire is punctured and burst, if a tire explodes, it produces a highly destructive force, so the following operations are strictly prohibited when the tire is installed to the wheel.

- Welding of the rim
- Lighting fires or carrying out welding operations near the wheel or tire



If you do not understand the proper procedure for carrying out maintenance or replacement of the wheel or tire, and you use the wrong method, the wheel or tire may burst and cause serious injury or damage. When carrying out such maintenance, please consult your Komatsu distributor or tire maker.

11.1.1 WARNING DISPLAYS



A. CHECK ITEMS



WARNING

If these monitor lamps flash, carry out inspection and maintenance of the problem location as soon as possible.

Park the machine on level ground and check the monitor lamps.

Confirm that these monitor lamps light for about 3 seconds after turning the starting switch to ON. If any monitor lamp does not light, ask your Komatsu distributor to inspect that monitor lamp.

If any abnormality is found in the CHECK items before starting the engine, the monitor for the location of the abnormality will flash.

Check the location where the monitor is flashing and carry out checks before starting.

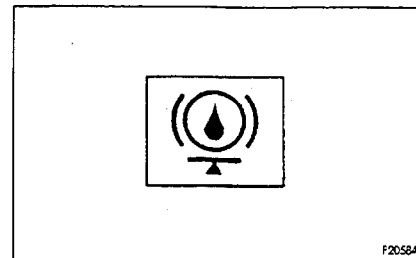
When the engine is started, these monitor lamps will go off even if there are abnormalities.

Do not carry out the checks before starting using only the monitor; always carry out also the items specified for the periodic maintenance.

1. BRAKE OIL LEVEL MONITOR

This monitor indicates a low brake oil level.

If the monitor lamp flashes, check the oil level and add brake oil as required.



3. TRANSMISSION CUT-OFF SELECTOR SWITCH

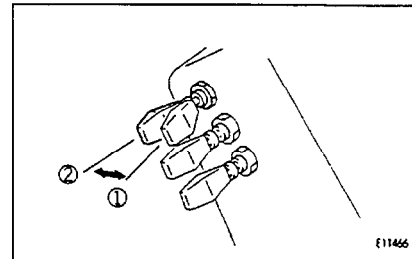
⚠ WARNING

If the machine has to be started on a slope, always turn the transmission cut-off selector switch to OFF and depress the left brake pedal. Then depress the accelerator pedal while releasing the left brake pedal to start the machine off slowly.

This switch selects the operation of the left brake pedal. Normally, put this switch in the ON position.

- ① OFF: Acts as normal brake (like right brake pedal).
- ② ON: Acts as normal brake, but also switches transmission to NEUTRAL.

If the switch is at ON, the transmission cut-off selector pilot lamp will light up.



4. FUEL CUT-OFF SWITCH

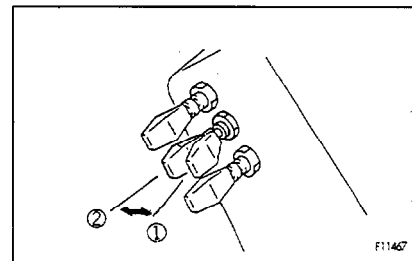
Engine fuel consumption will be cut.

When using APS (automatic priming system) in cold weather, use when starting.

- ① OFF: Fuel is not supplied to the engine.
- ② ON: Fuel is supplied to the engine.

When hand is removed from OFF position, switch returns to ON position.

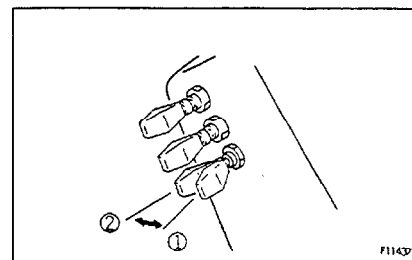
For detailed method of usage, refer to "12.2.2 STARTING IN COLD WEATHER".



5. ENGINE LOW IDLING SELECTOR SWITCH

The engine low idling speed can be switched between two levels.

- ① OFF: This sets the engine low idling speed to approx. 650 rpm. This is used for normal operations at low idling, such as when waiting for dump trucks.
- ② ON: The engine low idling speed is set to approx. 850 rpm. This is used on busy jobsites where it is necessary to reduce the cycle time.

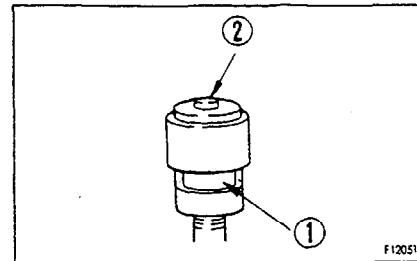


11.4 DUST INDICATOR

This device indicates clogging of the air cleaner element. When red piston ① appears in the transparent part of this indicator, the element is clogged. Immediately clean the element.

After cleaning, push indicator button ② to return the red piston to the original position.

There are two dust indicator's on the front of the engine hood behind the cab.

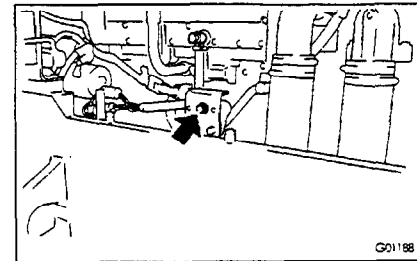


11.5 CIRCUIT BREAKER (MAIN)

This prevents damage to the electrical components and electric wiring.

When the breaker has been actuated, press the reset button to reset the system. However, if the circuit breaker is actuated again after the button is pressed, or the circuit breaker is frequently actuated, there may be a short circuit in the electrical system. In such cases, contact your Komatsu distributor for repairs.

The circuit breaker is not reset for 45 seconds after the breaker is actuated.

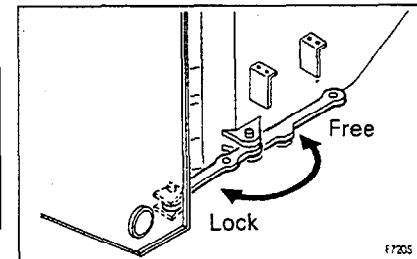


11.6 SAFETY BAR

WARNING

- Always use the safety bar for maintenance or when transporting the machine.
- Always remove the safety bar during normal travel operations.

The safety bar is used during maintenance or when transporting the machine. It locks the front frame and rear frame, and prevents the front and rear frames from bending.



**11.16.2 METHOD OF OPERATION
OPERATION OF CONTROL PANEL**

Lever switch Purpose		Fan switch	Air conditioner switch	Temperature control lever	Air intake selector lever
Cooling	Quick	HI	ON	Move fully to left	Left
	Normal	HI - LO	ON	From left side to near center	Right
Dehumidifying, heating		HI - LO	ON	From center to near right side	Right
Heating	Quick	HI	OFF	Move fully to near right side	Left
	Normal	HI - LO	OFF	From center to near right side	Right
Defrosting		HI	ON	From center to near right side (move fully to the right when carrying out quick defrosting or demisting.)	Right
Ventilation or pressurizing		HI - LO	OFF	Move fully to left	Right

If the outside air is extremely dusty, set the fan switch to the HI position. This will pressurize the cab and prevent the dust from entering.

SELECTING AIR VENT

Vent Purpose	FACE	FOOT	DEF
	Cooling	Open	Open or closed
Heating	Open or closed	Open	Open or closed
Defrosting	Closed	Open or closed	Open
Ventilation	Open	Open	Open

The effectiveness of the air conditioning system can be increased by selecting the most suitable vent.

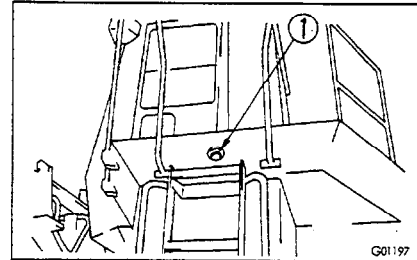
Do not turn the fan switch on when all the vents are closed.

CHECK AND REFILL OF OIL IN BRAKE OIL TANK

⚠ WARNING

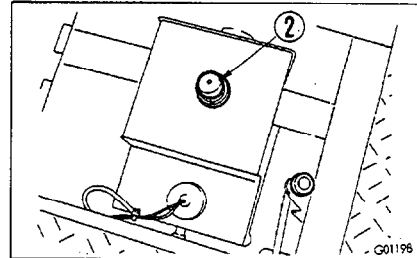
Always use engine oil to refill the brake oil tank.

1. Check that the oil level in brake oil tank at the left side of the machine is in sight gauge ①.



2. If the oil level is low, open the cover at the top of the platform, then open cap ② and add engine oil.

For details of the oil to use, see "20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".

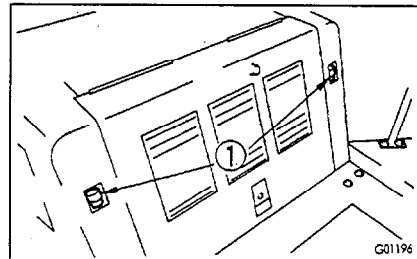


CHECK DUST INDICATOR

Check that the red piston of dust indicator ① (2points) has not reached the service level.

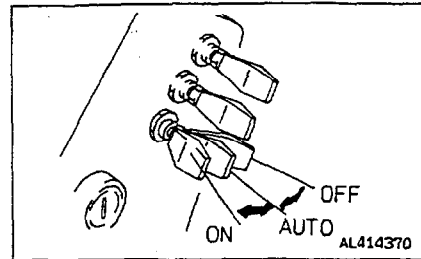
If the red piston is showing, clean or replace the element immediately.

For details of cleaning the element, see "24.2 WHEN REQUIRED, CHECK, CLEAN, OR REPLACE AIR CLEANER".

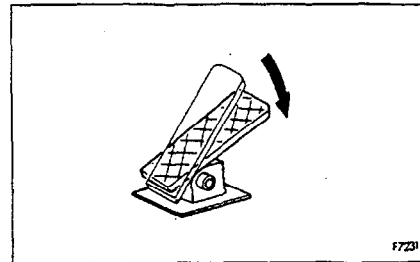


12. OPERATION

5. When preheater switch ④ is put in the AUTO position, pre-heating monitor ⑤ will light and automatic pre-heating will start.



6. Depress accelerator pedal ⑥ halfway.

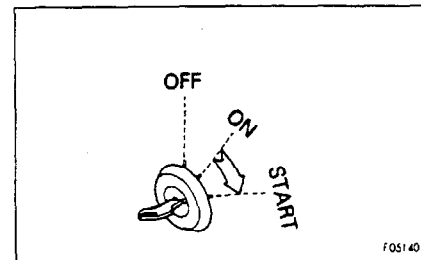


7. Pre-heating finishes in about 12 seconds. The pre-heating monitor lamp will stop illuminating so turn starting switch key ② to START position to start.

REMARK

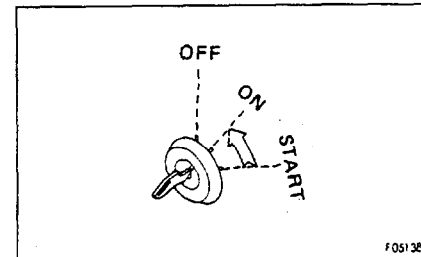
When starting, the monitor may flash when the starting motor is being cranked.

If this flashing stops after the engine is started, there is no abnormality.



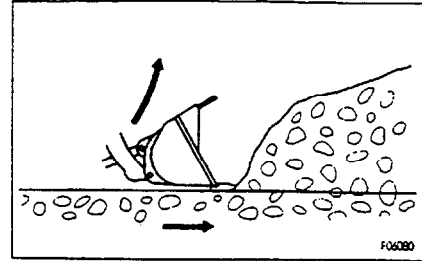
8. When the engine is started, release the key of starting switch ② and the key will return automatically to ON.

If the engine does not start through the steps specified above, turn key of the starting switch to OFF position and repeat Steps 2 to 8 at an interval of approx. 2 minutes.



12. OPERATION

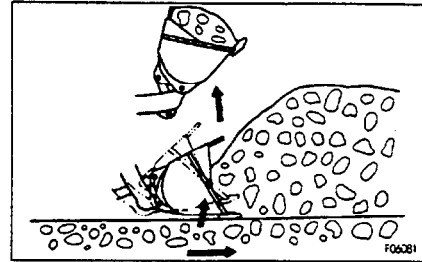
4. At the same time as thrusting the bucket into the material, raise the lift arm to prevent the bucket from going in too far. By raising the lift arm, ample traction will be produced by the front tires.



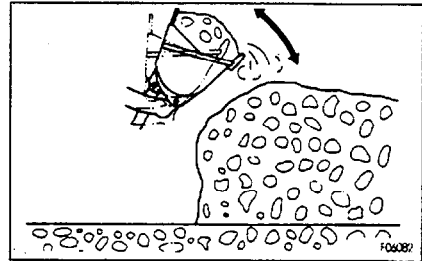
5. Check that there is enough material loaded into the bucket, then operate the bucket control lever to tilt the bucket and load the bucket fully.

REMARK

If the bucket edge is moved up and down while pushing in the bucket and digging, the front tires will come off the ground and this will cause the tires to slip.



6. If there is too much material loaded in the bucket, dump and tilt the bucket quickly to remove the excessive load. This prevents spillage of the load during hauling.



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

12.16 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.

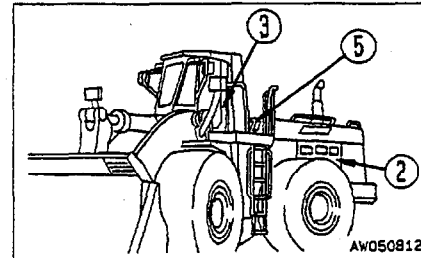
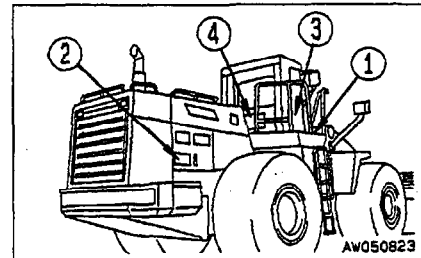
12.17 LOCKING

Always lock the following places.

- ① Hydraulic tank filler cap
- ② Engine side panel (left, right)
- ③ Cab door
- ④ Air conditioner filter cover
- ⑤ Engine hood at rear of cab

REMARK

The starting switch key is used also for locks ①, ②, ③, ④ and ⑤.



14.2 PRECAUTIONS 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, always observe the following precautions.

- Mud and water on the machine body should be completely removed. This is to prevent damage to the seal caused by water in mud or dirt getting inside the seal and freezing.
- Park the machine on hard, dry ground. If this is impossible, park the machine on wooden boards. The boards help protect the tracks from being frozen in the soil and the machine can start next morning.
- Bleed the air from the tank to prevent moisture from collecting inside the tank.
- Open the drain valve and drain any water collected in the fuel system to prevent it from freezing.
- As the battery capacity drops markedly in low temperatures, cover the battery or remove it from the machine, keep it in a warm place, and install it again the next morning.

14.3 AFTER COLD WEATHER

When season changes and the weather becomes warmer, do as follows.

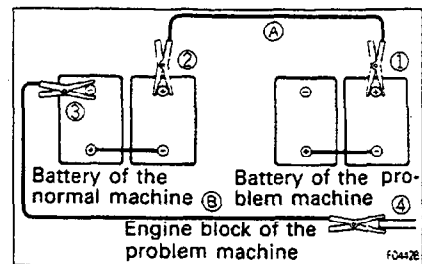
- Replace the fuel and oil for all parts with oil of the viscosity specified.
For details, see "20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".
- If for any reason permanent antifreeze cannot be used, and an ethyl glycol base antifreeze (winter, one season type) is used instead, or if no antifreeze is used, drain the cooling system completely, then clean out the inside of the cooling system thoroughly, and fill with fresh water.
- As the APS (Automatic Priming System) becomes useless (at 15°C or above), be sure to close the fuel valve for the APS.

CONNECTING THE BOOSTER CABLES

Keep the starting switch at the OFF position.

Connect the booster cable as follows, in the order of the numbers marked in the diagram.

1. Make sure that the starting switches of the normal machine and problem machine are both at the OFF position.
2. Connect one clip of booster cable (A) to the positive (+) terminal of the problem machine.
3. Connect the other clip of booster cable (A) to the positive (+) terminal of the normal machine.
4. Connect one clip of booster cable (B) to the negative (-) terminal of the normal machine.
5. Connect the other clip of booster cable (B) to the engine block of the problem machine.

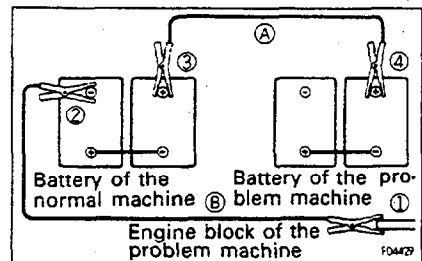
**STARTING THE ENGINE**

1. Make sure the clips are firmly connected to the battery terminals.
2. Turn the starting switch of the problem machine to the START position and start the engine. If the engine doesn't start at first, wait for at least 2 minutes before trying again.

DISCONNECTING THE BOOSTER CABLES

After the engine has started, disconnect the booster cables in the reverse of the order in which they were connected.

1. Remove one clip of booster cable (B) from the engine block of the problem machine.
2. Remove the other clip of booster cable (B) from the negative (-) terminal of the normal machine.
3. Remove one clip of booster cable (A) from the positive (+) terminal of the normal machine.
4. Remove the other clip of booster cable (A) from the positive (+) terminal of the problem machine.



17. GUIDES TO MAINTENANCE

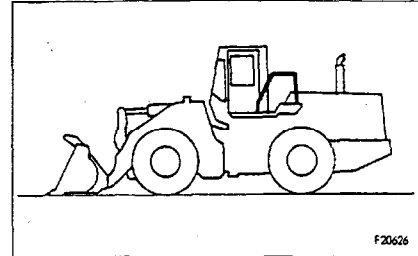
Do not carry out any inspection and maintenance operation that is not given in this manual.

Perform maintenance work on hard, flat ground.

Set to the inspection and maintenance posture.

Always carry out operations with the machine in the following posture unless otherwise specified.

- Lower the work equipment to the ground and set in the posture shown in the diagram on the right.
- Set all control levers to the neutral or HOLD position.
- Set the safety lever to the LOCK position.
- Press the parking brake switch to apply the parking brake.
- Put blocks in front and behind the tires.
- Lock the front and rear frames with the safety bar.



Check service meter:

Check the service meter reading every day to see if the time has come for any necessary maintenance to be carried out.

Komatsu genuine replacement parts:

Use Komatsu genuine parts specified in the Parts Book as replacement parts.

Komatsu genuine oils:

Use Komatsu genuine oils and grease. Choose oils and grease with proper viscosities specified for ambient temperature.

Always use clean washer fluid:

Use automobile window washer fluid and be careful not to let any dirt get into it.

Always use clean oil and grease:

Use clean oil and grease. Also, keep containers of the oil and grease clean. Keep foreign materials away from oil and grease.

Keeping the machine clean:

Always keep the machine clean. This makes it easier to find parts causing problems. In particular, keep grease fittings, breathers and oil level gauges clean and avoid foreign materials from getting in them. After disconnecting the connector, cover it with a vinyl bag to prevent oil or dust from sticking to its contact section.

Be careful of hot water and oil:

Draining hot oils and coolants and removing their filters immediately after the engine stops are hazardous. Allow the engine to cool.

If the oil has to be drained when it is cold, warm up the oil to a suitable temperature (approx. 20 – 40°C) before draining it.

20. USE OF FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE

No.	Supplier	Engine Oil [CD or CE] SAE 10W, 30, 40 10W30, 15W40 (The 15W40 oil marked * is CE.)	Gear Oil [GL-4 or GL-5] SAE 80, 90, 140	Grease [Lithium-Base] NLGI No. 2	Anti-freeze Coolant [Ethylene Glycol Base] Permanent Type
1	KOMATSU	EO10-CD EO30-CD EO10-30CD EO15-40CD	GO90 GO140	G2-LI G2-LI-S	AF-ACL AF-PTL AF-PT (Winter, one season type)
2	AGIP	Diesel sigma S Super dieselmulti- grade *Sigma turbo	Rotra MP	GR MU/EP	-
3	AMOCO	*Amoco 300	Multi-purpose gear oil	RYKON premium grease	-
4	ARCO	*Arcofleet S3 plus	Arco HD gear oil	Litholine HEP 2 Arco EP moly D	-
5	BP	Vanellus C3	Gear oil EP Hypogear EP	Energrease LS-EP2	Antifreeze
6	CALTEX	*RPM delo 400 RPM delo 450	Universal thuban Universal thuban EP	Marfak all purpose 2 Ultra-duty grease 2	AF engine coolant
7	CASTROL	*Turbomax *RX super CRD	EP EPX Hypoy Hypoy B Hypoy C	MS3 Spheerol EPL2	Anti-freeze
8	CHEVRON	*Delo 400	Universal gear	Ultra-duty grease 2	-
9	CONOCO	*Fleet motor oil	Universal gear lubricant	Super-sta grease	-
10	ELF	Multiperformance 3C Performance 3C	-	Tranself EP Tranself EP type 2	Glacelf
11	EXXON (ESSO)	Essolube D3 *Essolube XD-3 *Essolube XD-3 Extra *Esso heavy duty Exxon heavy duty	Gear oil GP Gear oil GX	Beacon EP2	All season coolant
12	GULF	Super duty motor oil *Super duty plus	Multi-purpose gear lubricant	Gulfcrown EP2 Gulfcrown EP special	Antifreeze and coolant
13	MOBIL	Delvac 1300 *Delvac super 10W-30, 15W-40	Mobilube GX Mobilube HD	Mobilux EP2 Mobilgrease 77 Mobilgrease special	-

23. MAINTENANCE SCHEDULE CHART

SERVICE ITEM	PAGE
EVERY 2000 HOURS SERVICE (continued)	
Change axle oil ★	3-72
Replace air conditioner filter	3-73
Clean PPC circuit strainer	3-73
Clean engine breather element	3-74
Check alternator, starting motor	3-74
Check engine valve clearance, adjust	3-74
Check brake disc wear	3-74
Clean and check turbocharger	3-74
Check play of turbocharger rotor	3-74
Check accumulator	3-75
Internal part of air dryer	3-75
EVERY 4000 HOURS SERVICE	
Check water pump	3-76
Check engine vibration damper	3-76
Check fan pulley and tension pulley	3-76
Check air compressor, adjust	3-76
Replace injection pump screen filter	3-77
Clean injection pump oil inlet port strainer	3-77

- ★ The interval of 2000 hours for changing the axle oil is for standard operations. If the brake is used frequently or the brakes make a sound, change the oil after a shorter interval.

24.2.5 CLEAN AXLE CASE BREATHER

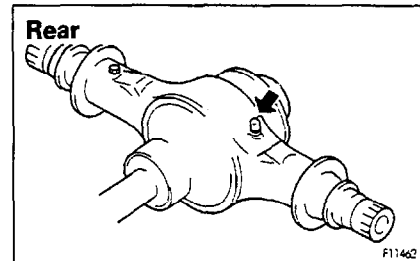
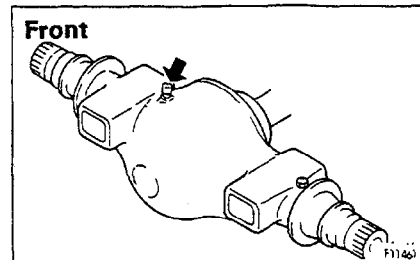
⚠ WARNING

When cleaning, apply the parking brake, and lock the front and rear frames with the safety bar and pin.

Remove all mud and dirt from around the breather with a brush. Then, remove breather, immerse in cleaning fluid and clean.

When cleaning the breather, clean the breathers at two places (front and rear) in the same way.

Do not let dirt get into the port while breather is removed.



24.2.6 CLEAN CONDENSER OF AIR CONDITIONER

⚠ WARNING

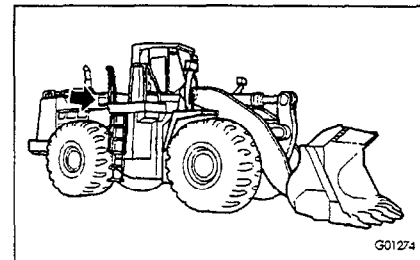
Do not wash the condenser with a steam cleaner. Otherwise, the condenser will get hot and may break down.

If there is mud or dust on the air conditioner condenser, clean it with water.

Check the fins for clogging or damage.

If the water pressure is too high, the fins may get deformed. When washing with a high pressure washing machine, apply the water from a reasonable distance.

Use water to wash off any mud stuck to the condenser. If necessary, use a soft brush. Do not use a hard brush, as this will damage the fins.



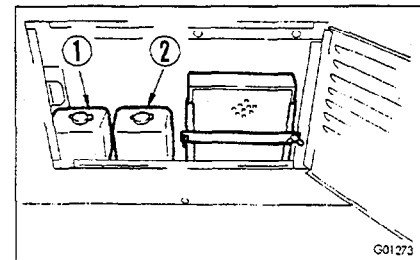
24.2.7 CHECK WINDOW WASHING FLUID LEVEL, ADD FLUID

Do this when there is air in the window washing fluid.

Check the washing fluid levels in washer tanks ① and ②. When the fluid has run short, add automotive window washing fluid.

①: Front window washing fluid tank

②: Rear window washing fluid tank

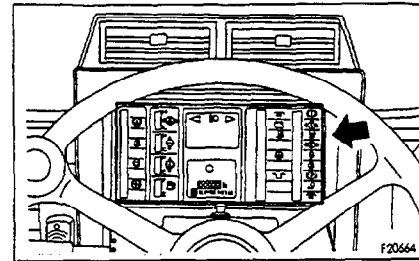


To prevent the nozzles from clogging, be careful not to let dust get into the fluid.

24.3 CHECK BEFORE STARTING

24.3.1 CHECK MONITOR PANEL

1. Turn the starting switch to ON.
2. Check that all the monitor lamps, the gauges and the warning lamp light up for about 3 seconds and the alarm buzzer sounds for about 1 second.



If any monitor lamp does not light up, ask your Komatsu distributor to inspect that monitor lamp.

Do not carry out the checks before starting using only the monitor; always carry out also the items specified for the periodic maintenance.

24.3.2 CHECK COOLANT LEVEL, ADD WATER

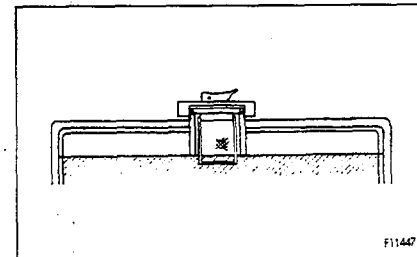
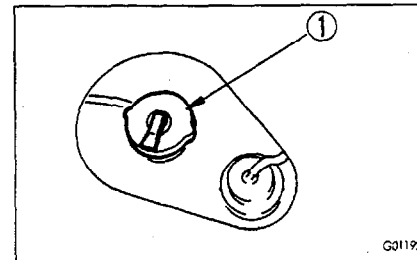
WARNING

Do not remove the cap while cooling water is hot. Hot water may spout out.
When removing the radiator cap, lift the lever to relieve the internal pressure.

1. Remove radiator cap ① at the rear of the machine and check that the coolant is above the hatched portion marked in the diagram on the right. If the coolant level is low, add more water.
2. After adding water, tighten the cap securely.

If the volume of coolant added is more than usual, check for possible water leakage.

Confirm that there is no oil in the coolant.



24.5.3 CLEAN AIR CONDITIONER AIR FILTER ELEMENT

⚠ WARNING

When using compressed air, wear safety glasses and other things required to maintain safety.

If the air conditioner has been used, the air filter should be cleaned.

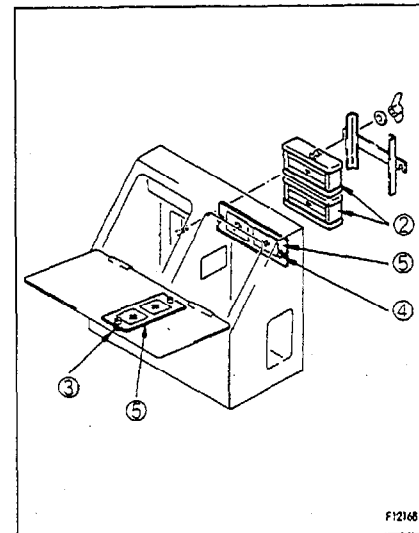
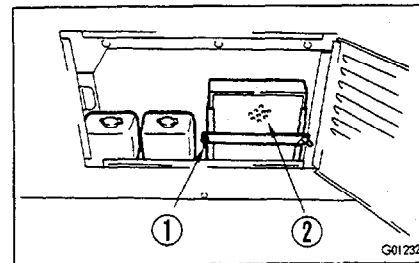
Stop the air conditioner before cleaning the element.

1. Open the cover at the rear of the cab.

2. Loosen screw ① of holder holding the filter element, pull out element ② and clean it.

Direct dry compressed air (less than 700 kPa (7 kg/cm², 100 psi) to element from inside along its folds, then direct it from outside along its folds and again from inside, and check element.

3. Align the direction of the arrows and assemble the element.
4. Move the operator's seat forward, then push the over down to the front.
5. Pull the cover at the rear of the operator's seat toward you and open the cover.
6. Remove screw ③ and bolt ④ holding the filter element, then take out element ⑤ and clean it.
7. After cleaning the element, assemble it.



24.8 EVERY 1000 HOURS SERVICE

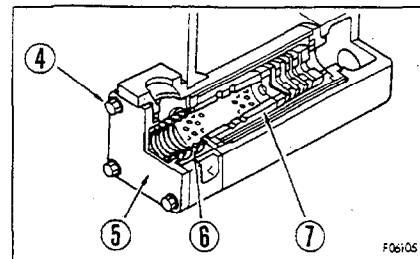
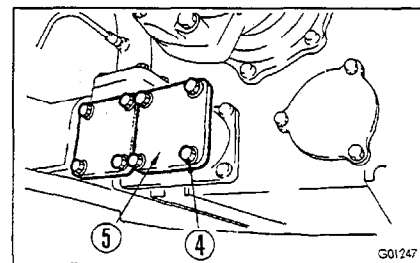
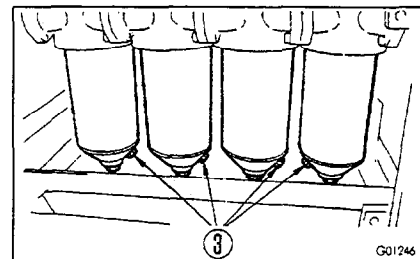
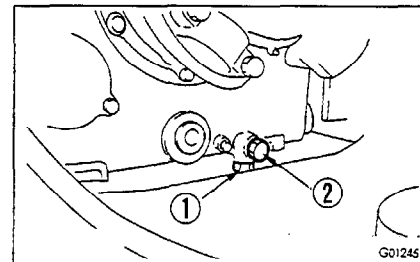
Maintenance for every 50, 100, 250 and 500 hours should be carried out at the same time.

24.8.1 CHANGE OIL IN TRANSMISSION CASE, CLEAN STRAINER

WARNING

- Apply the parking brake, and lock the front and rear frames with the safety bar and pin.
- Set the work equipment in a stable condition, then stop the engine and apply the locks securely to the work equipment control levers.
- The oil is at high temperature immediately after the machine has been operated. Wait for the oil to cool down before carrying out maintenance.

- Container to catch drained oil: Min. 105 ℓ capacity
 - Refill capacity: 105 ℓ (27.7 US gal, 23.1 UK gal)
1. Set a container to catch the oil under drain plugs ① and ②, then remove drain plug ① and loosen plug ② to drain the oil. To prevent the oil from pouring out suddenly, loosen drain plug ② and remove it gradually.
 2. After draining the oil, install drain plugs ① and ②.
 3. Set a container to catch the oil under the transmission filter.
 4. Remove transmission filter drain plugs ③ (4 pieces), drain the oil, then tighten the plug again.
 5. Remove bolt ④, then remove cover ⑤ and take out strainer ⑦ together with spring ⑥.
 6. Remove any dirt stuck to strainer ⑦, then wash it in clean diesel oil or flushing oil. If strainer ⑦ is damaged, replace it with a new part.
 7. Install spring ⑥ and strainer ⑦ to cover ⑤. Replace the O-ring on the cover with a new part, then install the cover.



24.9.4 CHANGE AXLE OIL

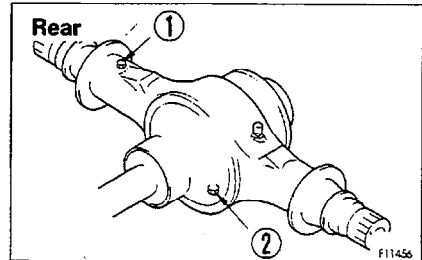
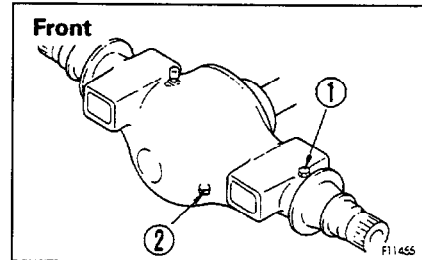
⚠ WARNING

- Apply the parking brake, and lock the front and rear frames with the safety bar and pin.
- Set the work equipment in a stable condition, then stop the engine and apply the locks securely to the work equipment control levers.
- The oil is at high temperature after the machine has been operated. Always wait for the temperature to go down before starting this operation.

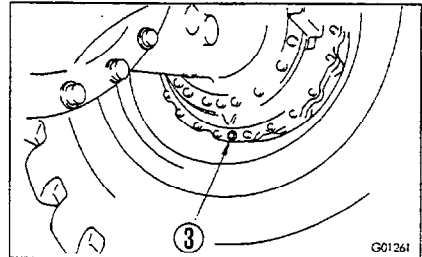
Prepare the following.

- Container to catch drained oil: min. 490 ℓ capacity
- Refill, capacity (front and rear, each):
245 ℓ (64.7 US gal, 53.9 UK gal)

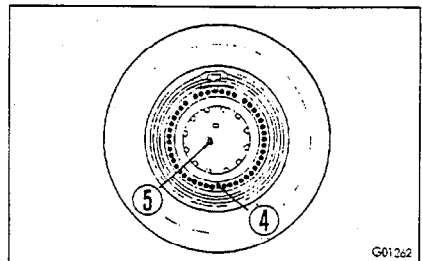
1. Remove front and rear oil filler plugs ①, then remove drain plugs ② to drain the oil.



2. Remove drain plug ③ to drain the oil.



3. Stop the machine so that drain plug ④ of the final drive is at the bottom. Remove oil filler plug ⑤ and drain plug ④, and fit the tube of attached tool in hole of plug ④ and drain the oil.



4. After draining the oil, clean drain plugs ②, ③ and ④, then install them.

5. Add oil to the specified level through the oil filler ports ① and ⑤ of the axle housing and left and right final drives.

For details of the oil to use, see "20. USE OF FUEL AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE".

6. After adding oil, check that the oil is at the specified level. For details, see "24.2 WHEN REQUIRED".

REMARK

For operations where the brake is used frequently, change the axle oil at shorter intervals.

MEMO

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