

Operation & Maintenance Manual

VEAM230101

WA250-5H

WHEEL LOADER

SERIAL NUMBERS H50279 AND UP

▲ DANGER

Incorrect operation and maintenance of this machine may be hazardous and cause injuries. The operator and maintenance personnel must read this manual before commencing operation or maintenance. Keep this manual within reach at all times and ensure that operating personnel read it at regular intervals.

NOTE

Komatsu has had the operating and maintenance instructions translated into all the languages of the European Union. Should you require a copy in another language please inquire at your local dealer's.

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KOMATSU

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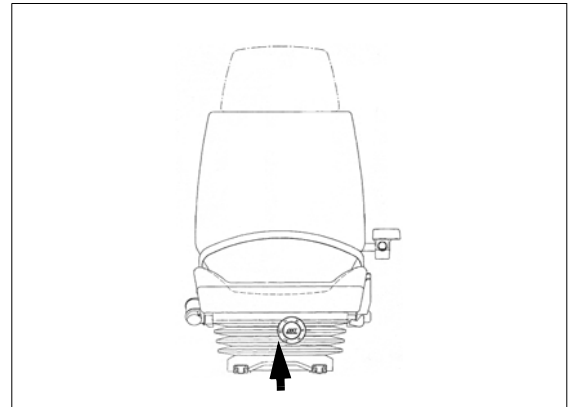


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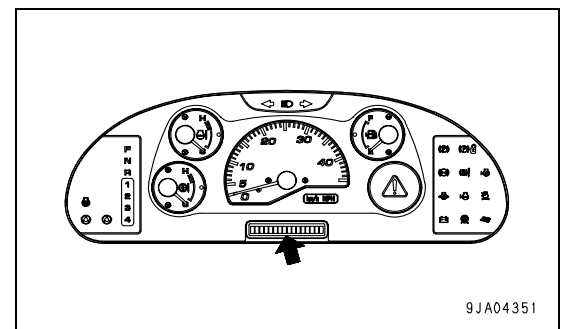
Seat operator serial no. plate

This plate is located in front of seat, covered by the bellows.



Position of service meter

It is at the center bottom of the machine monitor.



9JA04351

Table to enter serial No. and distributor

Machine serial No.	
Engine serial No.	
Distributor name	
Address	
Service Personnel	
Phone/Fax	

Manufacturer-supplied CE-conforming equipment, according to document 421-93-H1900

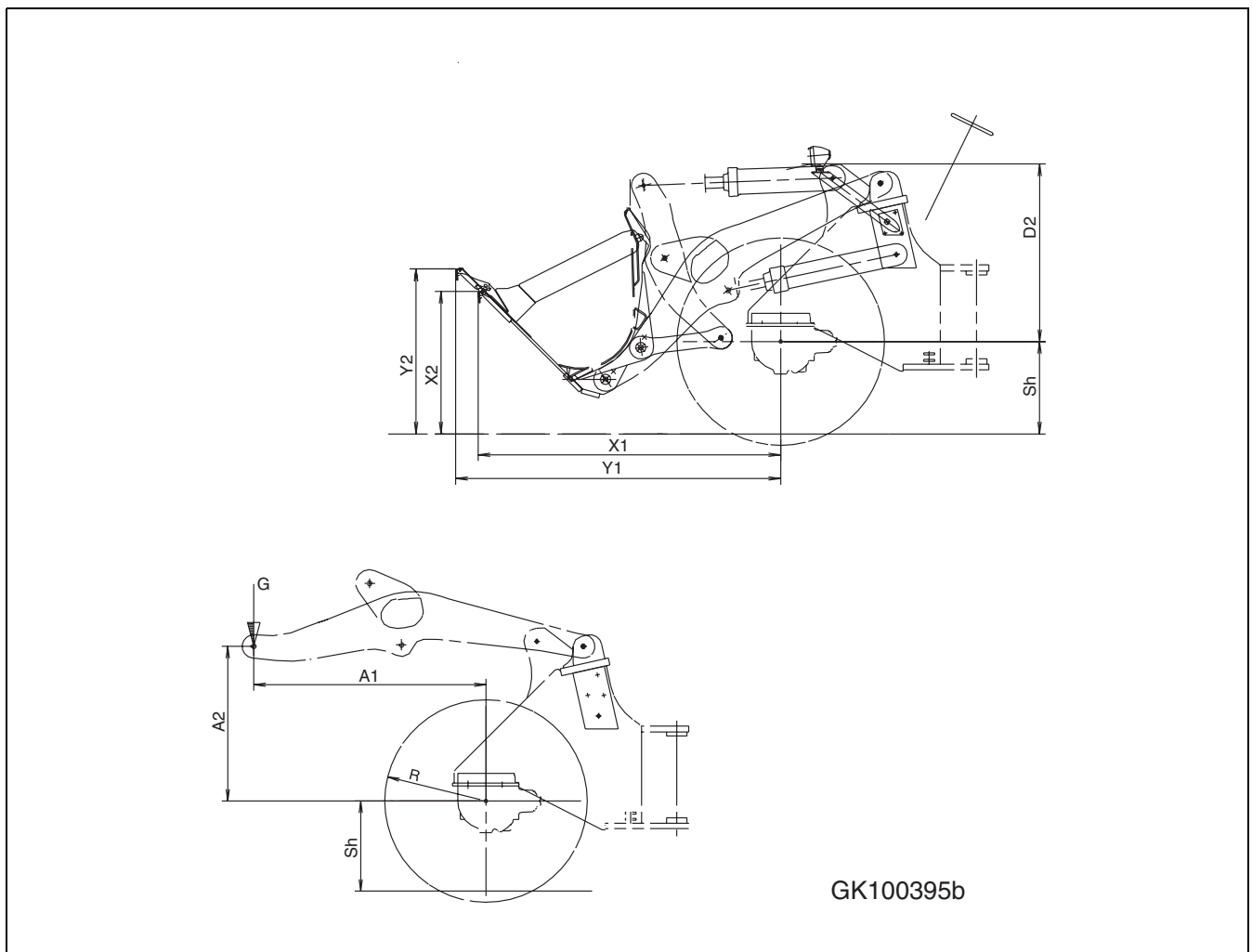
The responsibility for observing valid regulations in the case of wheel loaders with "interchangeable equipment" (e.g. bucket or fork-lift) which was not supplied from works lies with the customer which was subsequently fitted to the machine.

The directives for CE conformity and road-traffic registration are deemed to have been fulfilled when the manufacturer of the equipment confirms fulfilment of the form 421-93-H1900 alongside.

The certification must be sent to the customer and the wheel loader manufacturer. The CE conformity declaration for a specific wheel loader is only legally valid once this has taken place. The dimensions X1, X2, Y1 and Y2 must be provided by the customer for approval for use on public roads. (valid in Germany)

The dimension Sh (smallest tyre radius) must be added to the dimension D2.

The figure G (in kg) represents the maximum load (equipment and operating load) which may act upon this point.



General precautions

Safety rules

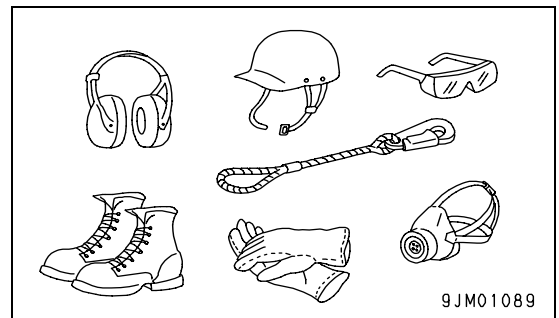
- Only trained and authorized personnel can operate and maintain the machine.
- Follow all safety rules, precautions and instructions when operating or performing maintenance on the machine.
- If you are under the influence of alcohol or medication, your ability to safely operate or repair your machine may be severely impaired putting yourself and everyone else on your jobsite in danger.
- When working with another operator or with a person on worksite traffic duty, be sure that all personnel understand all hand signals that are to be used.

If abnormalities are found

If you find any abnormality in the machine during operation or maintenance (noise, vibration, smell, incorrect gauges, smoke, oil leakage, etc., or any abnormal display on the warning devices or monitor), report to the person in charge and have the necessary action taken. Do not operate the machine until the abnormality has been corrected.

Clothing and personal protective items

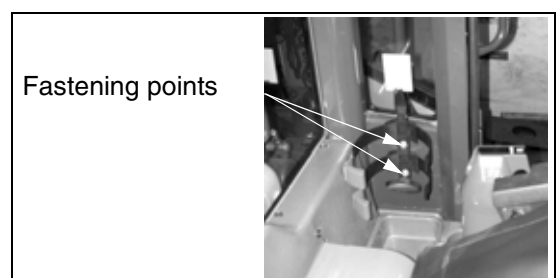
- Do not wear loose clothing and accessories. There is a hazard that they may catch on control levers or other protruding parts.
- If you have long hair and it hangs out from your hard hat, there is a hazard that it may get caught up in the machine, so tie your hair up and be careful not to let it get caught.
- Always wear a hard hat and safety shoes. If the nature of the work requires it, wear safety glasses, mask, gloves, ear plugs, and safety belt when operating or maintaining the machine.
- Check that all protective equipment functions properly before using it.



Fire extinguisher and first aid kit

Always follow the precautions below to prepare for action if any injury or fire should occur:

- The fire extinguisher can be fastened to the inside cabin wall on the left.
- If, in the course of certain operations, there is danger of fire, fire extinguishers must be at hand. Familiarise with the use of the fire extinguishers.
- Inform yourself on measures to be taken in the event of a fire.
- The first-aid kit can be positioned on the right of the cabin's interior.
- Make sure that you know all telephone numbers of the persons that you need to contact in an emergency.

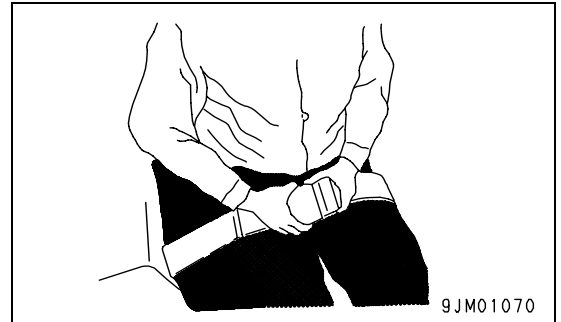


Operation

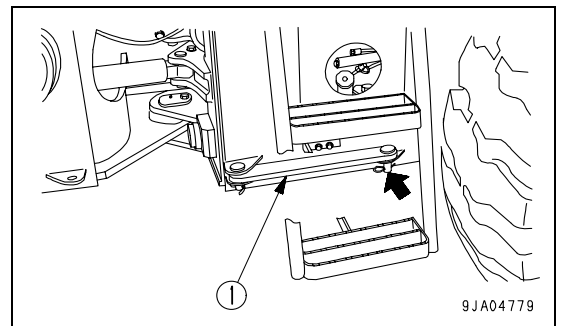
Checks before operation

When carrying out the checks, move the machine to a wide area where there are no obstructions, and operate slowly. Do not allow anyone near the machine.

- Always fasten your seat belt.
- Check the operation of travel, steering and brake systems, and work equipment control system.
- Check for any abnormality in the sound of the machine, vibration, heat, smell, or gauges; check also that there is no leakage of oil or fuel.
- If any abnormality is found, carry out repairs immediately.



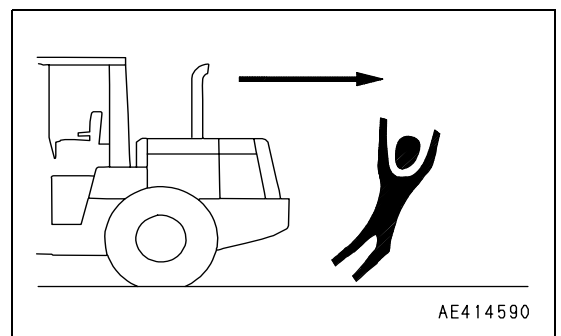
- Before driving the machine or starting operations, check that safety bar (1) is securely fixed at the FREE position.



Precautions when traveling in forward or reverse

- Before travelling, check again that there is no one in the surrounding area, and that there are no obstacles.
 - Before travelling, sound the horn to warn people in the area.
 - Always operate the machine only when seated.
 - Do not allow anyone apart from the operator to ride on the machine.
 - Check that the back-up alarm (alarm buzzer when machine travels in reverse) works properly.
 - Always lock the door and windows of the operator's compartment in position (open or closed).
- On jobsites where there is a hazard of flying objects or of objects entering the operator's compartment, check that the door and windows are securely closed.
- If there is an area to the rear of the machine which cannot be seen, position a signal person. Take special care not to hit other machines or people when turning or swinging the machine.

Always be sure to carry out the above precautions even when the machine is equipped with mirrors.



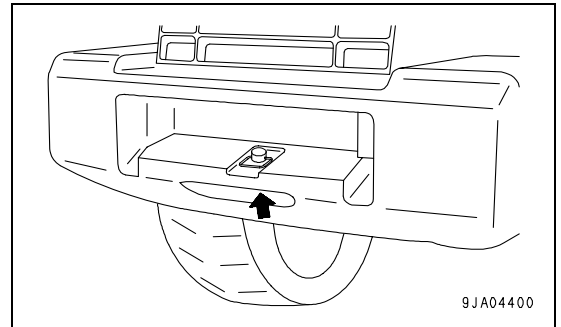
Towing

When towing

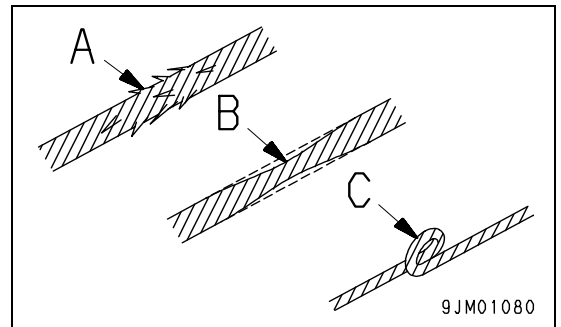
Serious injury or death could result if a disabled machine is towed incorrectly or if there is a mistake in the selection or inspection of the wire rope.

For towing, see "Towing the machine on page 3-98".

- Always wear leather gloves when handling wire rope.
- During the towing operation, never stand between the towing machine and the machine being towed.
- Never tow a machine on a slope.



- Never use a wire rope which has cut strands (A), reduced diameter (B), or kinks (C). There is danger that the rope may break during the towing operation.



OPERATION



WARNING

Please read and make sure that you understand the safety volume before reading this section.

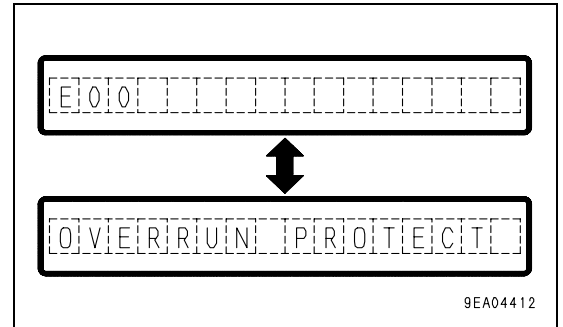
OPERATION

Explanation of components Machine monitor

E00: If travel speed overrun is displayed, ease the accelerator pedal back to reduce speed.

REMARK

“E00” is displayed on the character display, and then “OVERRUN PREVENTION” and “E00” are displayed in turn for 3 seconds each.



Failure code display

If an action code is displayed on the character display, check the failure code according to the failure code display method given below.

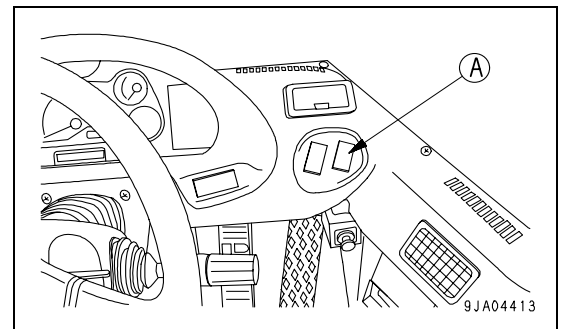
When contacting your Komatsu distributor to request repairs, please inform your distributor of the failure code.

Method of displaying failure code

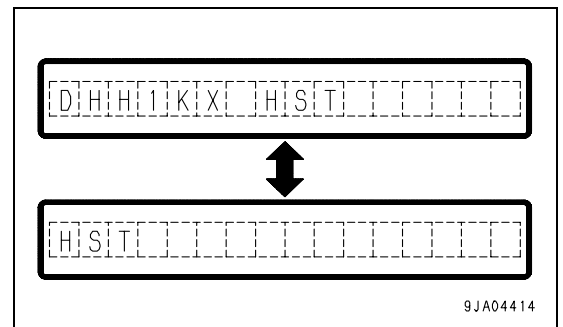
1. If an action code is displayed on the character display of display portion (4), press the top (>) of monitor panel mode selector switch 2 (A).

The action code will change to the failure code.

- The failure code is displayed with the first 6 digits on the left side of the character display.
- The code displayed after the space on the right side of the failure code indicates the controller that detected the failure code.
- The failure code and the component causing the failure are displayed on the character display in turn for 3 seconds each.



Top right code	Controller detecting failure code
MON	Machine monitor
HST	HST controller



2. Press the top (>) of monitor panel mode selector switch 2 (A) again.

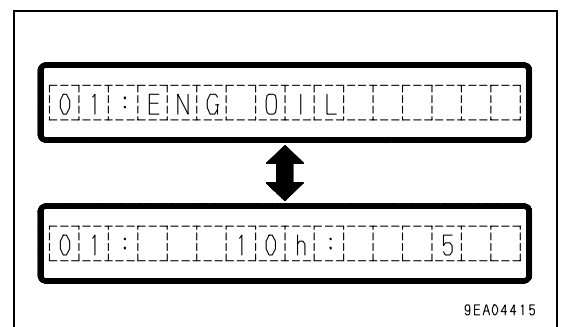
If the condition is normal, the service meter is displayed for several seconds, then the display returns to the action code.

If more than one failure has occurred at the same time, the next failure code is displayed.

Filter, oil replacement time display

After completion of the system check and when the starting switch is in the ON position, if any filter or oil item is approaching the replacement time, this display (5) shows the item for approx. 30 seconds. When this happens, the maintenance caution lamp also flashes or lights up.

After replacing the filter or changing the oil, reset the time for replacement. For details, see “Reset method for filter, oil replacement time on page 3-26”.



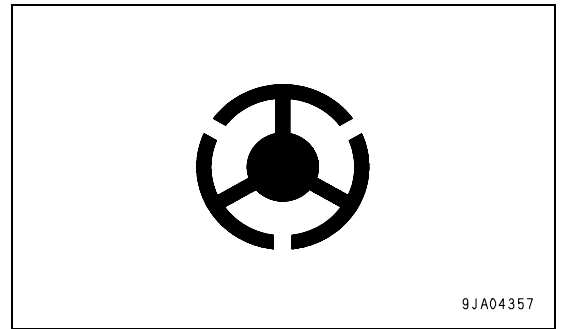
Emergency steering pilot lamp

(Green)

If this lamp (3) lights up when the engine is running or when the machine is operating, it indicates that the condition is normal.

If it does not light up, an abnormality has occurred in the emergency steering circuit.

Move the machine immediately to a safe place, stop the engine, and check the condition.



Directional lever position pilot lamp

This lamp (4) indicates the position of the directional lever.

F lights up: FORWARD

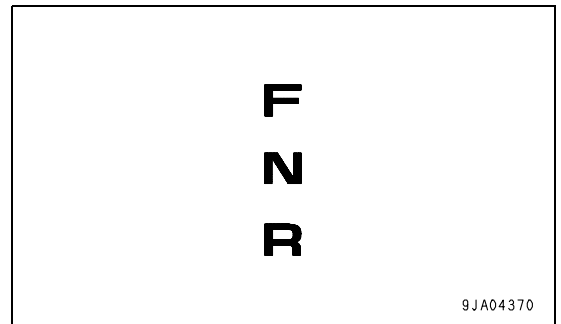
N lights up: NEUTRAL

R lights up: REVERSE

REMARK

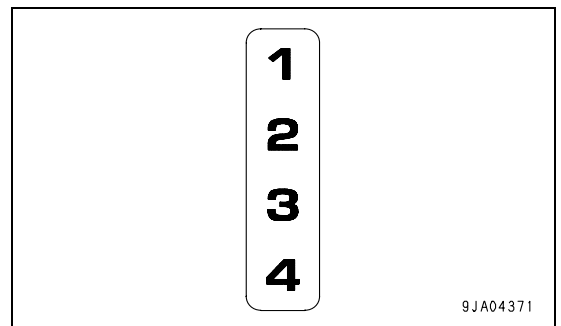
In the following conditions, it indicates the position of the directional selector switch.

- Directional selector actuation switch: ON position
- Directional lever: Neutral position



Pilot lamp for speed range selector switch position

This lamp (5) indicates the position of the speed range selector switch.

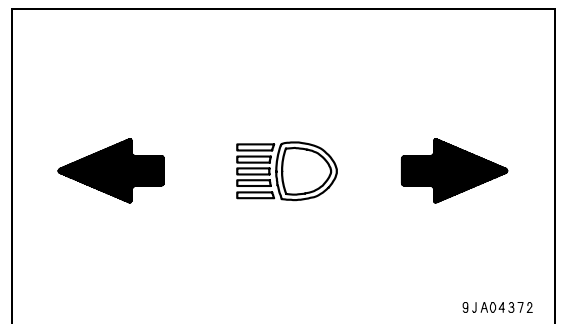


Turn signal pilot lamp

When the turn signal lamp flashes, this lamp (6) also flashes.

REMARK

If there is a disconnection in the turn signal lamp, the flashing interval becomes shorter.



E.C.S.S. switch (option)

WARNING

- If the machine is traveling or the work equipment is raised, the moment the E.C.S.S. switch is turned ON, the work equipment will move.
- If the E.C.S.S. system is switched on, the work equipment may move.
- Never turn the E.C.S.S. switch ON during inspection or maintenance. The work equipment will move and this will create a dangerous situation.

NOTICE

- Always stop the machine and lower the work equipment to the ground before operating the E.C.S.S. switch.
- When carrying out inspection and maintenance, first lower the work equipment to the ground, then turn the E.C.S.S. switch OFF before starting the inspection and maintenance operation.
- When carrying out leveling work, turn the E.C.S.S. switch OFF.

The E.C.S.S. is a device that uses the hydraulic spring effect of an accumulator to absorb the vibration of the chassis during travel and allows the machine to travel smoothly and at high speed.

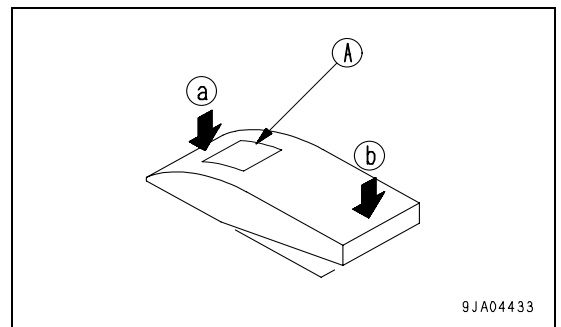
This switch (6) is used to turn the E.C.S.S. ON and OFF.

Position (a): ON

The pilot lamp (A) lights up and the E.C.S.S. is actuated.

Position (b): OFF

The E.C.S.S. is not actuated.



REMARK

The E.C.S.S. is automatically actuated when the travel speed becomes more than 6 km/h (3.7 MPH); when the travel speed goes below 5 km/h (3.1 MPH) it is automatically disengaged (when 20.5-25 tires are used).

Lamp switch

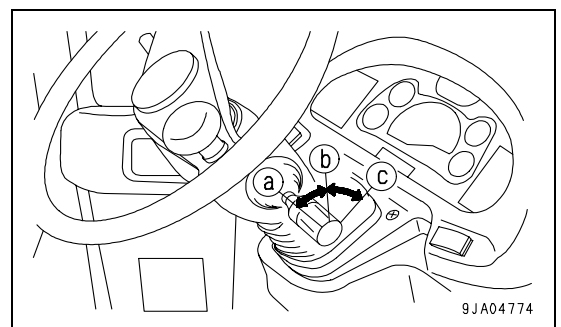
This switch (7) is used to light up the front lamps, side clearance lamps, tail lamps, and instrument panel.

Position (a): OFF

Lamps go out.

Position (b): Side clearance lamps, tail lamps, and instrument panel light up.

Position (c): Head lamps light up in addition to lamps at (b) position.



REMARK

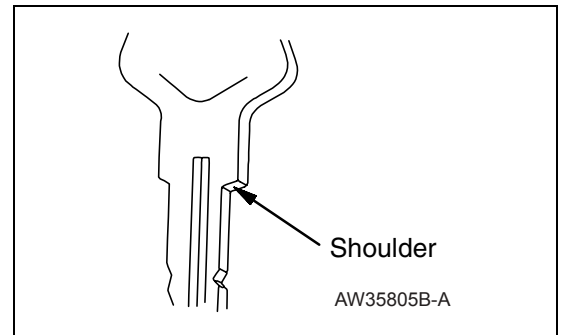
The lamp switch can be operated regardless of the position of the lever.

Cap and cover with lock

Use the starting key to open and close the locks on the caps and covers.

For details of the locations of the caps and covers with locks, see "Locking on page 3-86".

Insert the key as far as it will go, then turn it. If the key is turned before it is inserted fully, it may break.

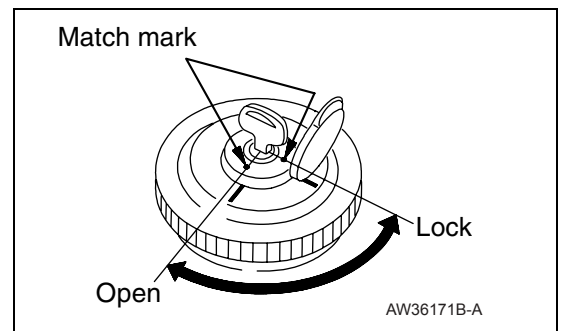


Method of opening and closing cap with lock

(For the fuel tank filler port)

To open the cap

1. Insert the key into the key slot.
2. Turn the key clockwise, align the key slot with the match mark on the cap, then open the cap.



To lock the cap

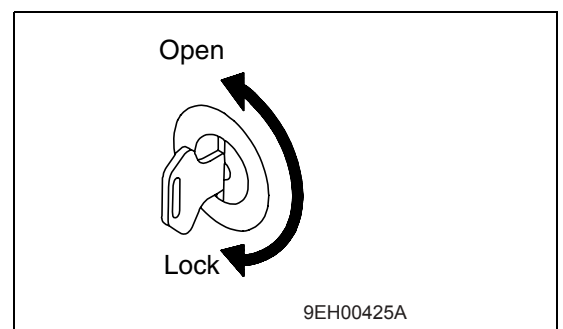
1. Turn the cap until tight, then insert the key into the key slot.
2. Turn the key counterclockwise and take the key out.

Method of opening and closing cover with lock

(Engine side cover)

To open the cover

1. Insert the key into the key slot.
2. Turn the key counterclockwise and open the cover by pulling the cover grip.



To lock the cover

1. Close the cover and insert the key into the key slot.
2. Turn the key clockwise and take the key out.

Cool box

When the cooling is being used, this can be used for keeping drinks and other things cool.

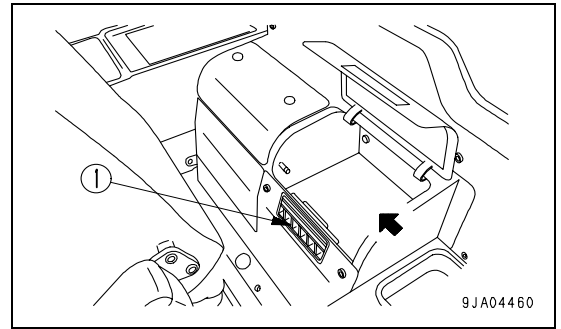
When the heating is being used, it can be used to keep things warm.

When using the box, open the vent grill (1).

When not using the box, close the grill (1).

Do not use the cool box for things which smell or leak water or break easily.

Do not use it as a holder for tools or other small objects.



Precautions when using

Precautions when using the cooling

- If you smoke when using the air conditioner, your eyes may start to itch or burn, therefore ventilate the cab every so often to remove the smoke.
- When using the air conditioner for a long period of time, carry out ventilation process at least once every hour. When using the air conditioner, it is recommended for health reasons, that it should only feel slightly cooler (5 or 6°C lower than the outside temperature) when you enter the cab. Therefore adjust the temperature to a suitable level.

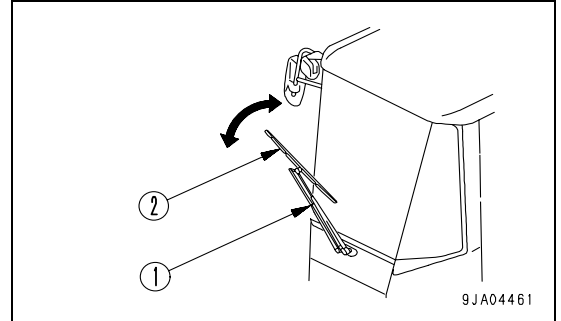
Handling cab wiper

Preventing damage to wiper arm bracket

NOTICE

When angling the wiper arm (1) to the front, check that the wiper blade is hanging free.

When angling the wiper arm (1) to the front, such as when wiping the glass clean, if the wiper arm (1) is angled with the wiper blade (2) locked to the arm (the bottom of the blade is caught on the arm), abnormal force is brought to bear on the mounting bracket and the bracket may break.



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Safety belt

⚠ WARNING

- **Danger of injury! A damaged safety belt, a safety belt that has been stretched in an accident, or a safety belt the belt fixings or fastening screws of which have not been mounted correctly will not protect you sufficiently in case of accident!**
- **Replace the safety belt, if it is damaged, or if the machine has been involved in an accident. Check that the belt fixings and fastening screws are in perfect condition, before you put on the safety belt.**
- **If you have not put on the safety belt and are involved in an accident, this may lead to severe injuries!**
- **Put on the safety belt, before you start work and do not take it off during work. Put on the safety belt in such a way that it is not twisted and fits tightly.**

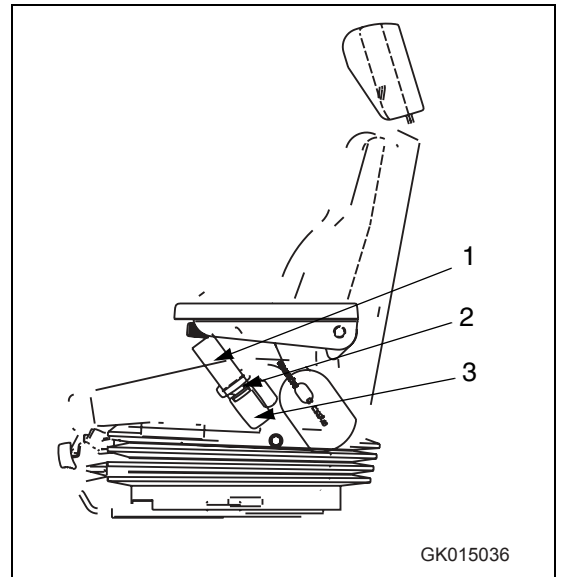
The machine is provided with a lap belt which automatically retracts. When pulled slowly, automatic belts ensure full freedom of action, but block immediately, if you suddenly brake or accelerate, or if you drive downhill or take corners.

Putting on the safety belt

1. Sit down on the driver's seat.
2. Slowly and continuously pull out the belt (1).
3. Insert the lock tongue (2) into the lock socket (3) until the lock engages.
4. Then, pull the belt to check whether or not the lock tongue is fully engaged.
The belt cannot be pulled out unless it is completely wound up.

Taking off the safety belt

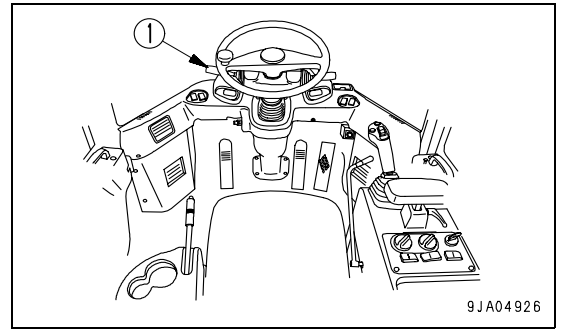
Press the orange button to release the lock of the safety belt and allow the belt to wind up.



Changing direction

⚠ WARNING

- When changing direction between FORWARD and REVERSE, check that the new direction of travel is safe. There is a blind spot behind the machine, so be particularly careful when changing direction to travel in reverse.
- Do not switch between FORWARD and REVERSE when traveling at high speed.
- When switching between FORWARD and REVERSE, depress the brake to reduce the travel speed sufficiently, then change the direction of travel. (Max.speed for changing direction: 13 km/h (8.1 MPH))



There is no need to stop the machine even when switching between FORWARD and REVERSE.

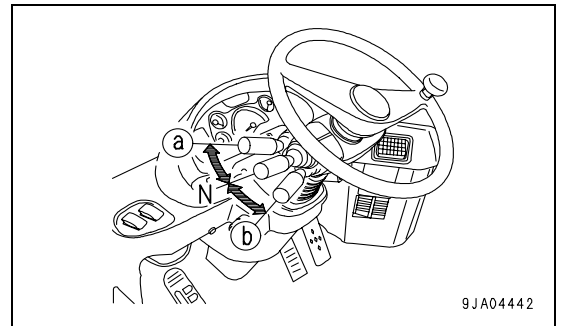
Place directional lever (1) in the desired position.

Position (a): FORWARD

Position N: NEUTRAL

Position (b): REVERSE

- Check that the backup alarm sounds when the directional lever is set to REVERSE. If the backup alarm does not sound, please contact your Komatsu distributor for repairs.

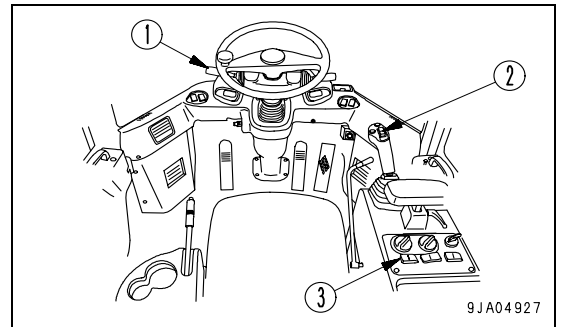


Using switch to change between forward and reverse

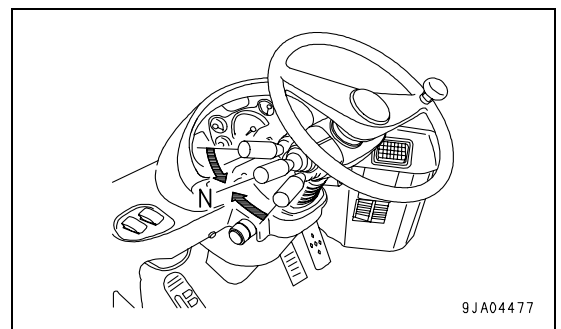
⚠ WARNING

When the directional selector switch actuation switch (3) is at the ON position, if the directional lever (1) is operated to FORWARD or REVERSE, the machine will travel in forward or reverse according to the operation of the directional lever, regardless of the position of the directional selector switch (2).

Priority is given to the operation of the directional lever, so be careful when operating.



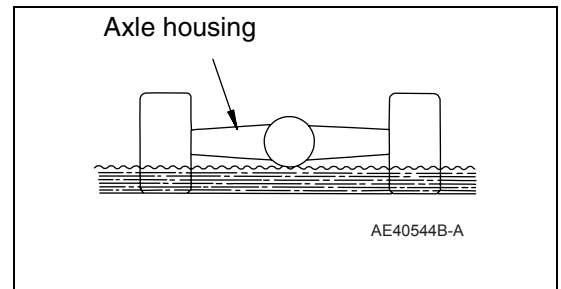
1. Place the directional lever (1) at the N position.



Precautions for operation

Permissible water depth

When working in water or on swampy ground, do not let the water come above the bottom of the axle housing.
After finishing the operation, wash and check the lubricating points.



If wheel brake does not work

If the machine is not stopped by depressing the brake pedal, use the parking brake to stop the machine.

NOTICE

If the parking brake has been used as an emergency brake, contact your Komatsu distributor to have the parking brake checked for any abnormality.

Precautions when driving up or down slopes

Lower the center of gravity when turning

When turning on slopes, lower the work equipment to lower the center of gravity before turning. It is dangerous to turn the machine suddenly on slopes.

Breaking on downhill slope

If the foot brake is used frequently when traveling downhill, the brake will overheat and may be damaged. Use the accelerator pedal to make full use of the braking force of the engine when traveling downhill.

Use the right brake pedal for braking.

If the brakes are used excessively, the axle oil temperature caution lamp may light up and the alarm buzzer may sound intermittently. For details of the necessary action to take, see "AXLE OIL TEMPERATURE CAUTION LAMP on page 3-15" in "Explanation of components".

If engine stops

If the engine stops on a slope, apply the parking brake immediately, and lower the work equipment to the ground and stop the machine. Then put the directional lever in neutral position, and start the engine again.

Precautions when driving machine

When the machine travels at high speed for a long distance, the tires become extremely hot. This causes early wear of the tires, so it should be avoided as much as possible. If the machine must be driven for a long distance, take the following precautions.

- Follow the regulations related to this machine, and drive carefully.
- Before driving the machine, carry out the checks before starting.
- The most suitable tire pressure, travel speed, or tire type differ according to the condition of the travel surface. Contact your Komatsu distributor or tire dealer for information.
- The following is a guide to suitable tire pressures and speeds when traveling on a paved surface with standard tires. (20.5-25-12PR)
Tire pressure: 0.27 MPa (2.8 kgf/cm², 39.8 PSI)
Speed: 14 km/h (8.7 MPH)
- Check the tire pressure before starting, when the tire is cool.
- After traveling for 1 hour, stop for 30 minutes. Check the tires and other parts for damage; also check the oil and coolant levels.
- Always travel with the bucket empty.
- Never put "calcium chloride" or "dry ballast" in the tires when traveling.

Lifting machine



WARNING

- When lifting the machine, if the wire rope is not fitted correctly the machine may fall and cause serious injury or even death. Raise the machine 100 to 200 mm (3.9 to 7.9 in) from the ground, check that the machine is horizontal and that there is no slack in the wire rope, then continue to lift the machine.
- Before lifting the machine, always stop the engine and lock the brakes. Lock front frame and rear frame with safety bar.
- Lifting operations using a crane must be carried out by a qualified operator.
- Never raise the machine with any worker on it.
- Always make sure that the wire rope used for lifting the machine is of ample strength for the weight of the machine.
- Never try to lift the machine at any position or in any posture other than the posture specified.
- Never go under the machine when it is raised.



CAUTION

When the machine is raised, check that there is no oil leakage from the hydraulic circuits.
When carrying out the lifting operation, please contact your Komatsu distributor.

NOTICE

The lifting procedure applies to machines with standard specifications.

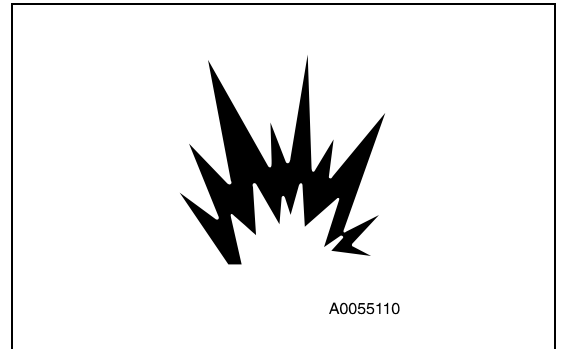
The method of lifting differs according to the attachments and options actually installed. In such cases, please contact your Komatsu distributor for information.

For details of the weight, see "Weight table on page 3-92".

Precautions for charging battery

When charging the battery, if the battery is not handled correctly, there is danger that the battery may explode. Always follow the instructions in "Battery on page 3-95" and the instruction manual accompanying the charger, and do as follows.

- Do not use or charge the battery if the battery electrolyte level is below the LOWER LEVEL line. This may cause an explosion. Always check the battery electrolyte level periodically and add distilled water to bring the electrolyte level to the UPPER LEVEL line.
- Set the voltage of the charger to match the voltage of the battery to be charged. If the voltage is not selected correctly, the charger may overheat and cause an explosion.
- Connect the positive (+) charger clip of the charger to the positive (+) terminal of the battery, then connect the negative (-) charger clip of the charger to the negative (-) terminal of the battery. Be sure to fix the clips securely.
- Set the charging current to 1/10 of the value of the rated battery capacity; when carrying out rapid charging, set it to less than the rated battery capacity.
If the charger current is too high, the electrolyte will leak or dry up, and this may cause the battery to catch fire and explode.
- If the battery electrolyte is frozen, do not charge the battery or start the engine with a different power source. There is a hazard that this will ignite the battery electrolyte and cause the battery to explode.



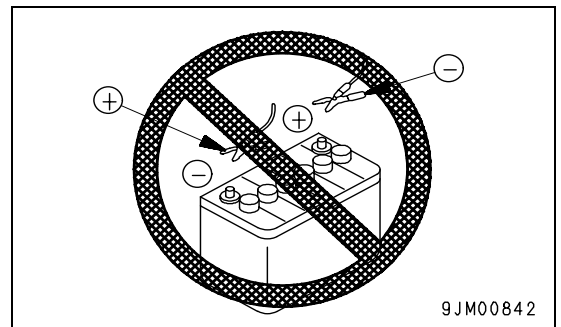
Starting engine with booster cable

When starting the engine with a booster cable, do as follows:

Precautions when connecting and disconnecting booster cable

⚠ WARNING

- When connecting the cables, never contact the positive (+) and negative (-) terminals.
- When starting the engine with a booster cable, always wear safety glasses and rubber gloves.
- Be careful not to let the normal machine and problem machine contact each other. This prevents sparks from generating near the battery which could ignite the hydrogen gas given off by the battery.
- Make sure that there is no mistake in the booster cable connections. The final connection is to the engine block of the problem machine, but sparks will be generated when this is done, so connect to a place as far as possible from the battery.
- When disconnecting the booster cable, take care not to bring the clips in contact with each other or with the machine body.



NOTICE

- The size of the booster cable and clip should be suitable for the battery size.
- The battery of the normal machine must be the same capacity as that of the engine to be started.
- Check the cables and clips for damage or corrosion.
- Make sure that the cables and clips are firmly connected.
- Check that the safety lock levers and parking brake levers of both machines are in the LOCK position.
- Check that each lever is in the NEUTRAL position.

Locking inspection covers

Lock inspection cover in position securely with the lock bar. If inspection or maintenance is carried out with the inspection cover not locked in position, there is a hazard that it may be suddenly blown shut by the wind and cause injury to the worker.

Bleeding air from hydraulic circuit

If the hydraulic oil equipments have been repaired or replaced and if the hydraulic hoses, pipes, etc. have been disconnected, it is necessary to bleed air in the circuit. See "Change oil in hydraulic tank, replace hydraulic filter element on page 4-51".

Precautions when installing hydraulic hoses

- When removing parts at locations where there are O-rings or gasket seals, clean the mounting surface, and replace with new parts.
When doing this, be careful not to forget to assemble the O-rings and gaskets.
- When installing the hoses, do not twist them or bend them into loops with a small radius.
This will cause damage to the hose and markedly reduce its service life.

Checks after inspection and maintenance

If you forget carrying out the checks after inspection and maintenance, unexpected problems may occur, and this may lead to serious injury or property damage. Always do as follows.

- Checks after operation (with engine stopped)
 - Have any inspection and maintenance points been forgotten?
 - Have all inspection and maintenance items been carried out correctly?
 - Have any tools or parts been dropped inside the machine? It is particularly dangerous if parts are dropped inside the machine and get caught in the lever linkage mechanism.
 - Is there any leakage of water or oil? Have all the bolts been tightened?
- Check when the engine is running
 - See "Two workers for maintenance when engine is running on page 2-30" in the section on safety for checking when the engine is running. Pay attention to safety.
 - Check if the inspected and maintenance area is operating normally.
 - Increase the engine speed to check for fuel and oil leakage.

Periodic replacement of safety critical parts

Safety critical parts

For using the machine safely for an extended period of time, you must periodically replace the safety critical and fire prevention-related parts listed in the table of important parts.

Material quality of these parts can change as time passes and they are likely to wear out or deteriorate. However, it is difficult to determine the extent of wear or deterioration at the time of periodic maintenance. Hence, it is required to replace them with new ones regardless of their condition after a certain period of usage. This is important to ensure that these parts maintain their full performance at all times.

Furthermore, should anything abnormal be found on any of these parts, replace it with a new one even if the periodic replacement time for the part has not yet arrived.

If any of the hose clamps show deterioration like deformation or cracking, replace the clamps at the same time as the hoses.

Also carry out the following checks with hydraulic hoses which need not be replaced periodically. Tighten a loosened clamp or replace a defective hose, as required.

When replacing the hoses, always replace the O-rings, gaskets, and other such parts at the same time.

Ask your Komatsu distributor to replace the critical parts.

Mixing rate of water and antifreeze

Min. atmospheric temperature	°C	-10	-15	-20	-25	-30
	°F	14	5	-4	-13	-22
Amount of anti-freeze	Liter	5.70	6.84	7.79	8.74	9.50
	US gal	1.51	1.81	2.06	2.31	2.51
Amount of water	Liter	13.30	12.16	11.21	10.26	9.50
	US gal	3.51	3.21	2.96	2.71	2.51

WARNING

Antifreeze is flammable, so keep it away from flame.

Antifreeze is toxic. When removing the drain plug, be careful not to get water containing antifreeze on you. If it gets in your eyes, flush your eyes with large amount of fresh water and see a doctor at once.

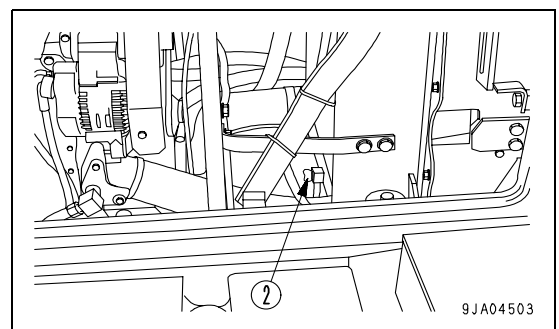
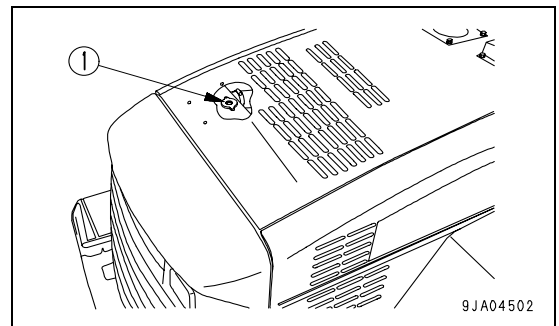
Use city water for the cooling water.

If river water, well water or other such water supply must be used, contact your Komatsu distributor.

We recommend use of an antifreeze density gauge to control the mixing proportions.

- Prepare the following:
 - Container to mix the coolant: Min 19 liters (5.02 US gal) capacity
- Prepare a water inlet hose.

1. Stop the engine.
2. To loosen and remove the radiator cap, use a suitable climbing aid (for example a ladder) to climb up the back of the machine.
3. Check that the cooling water temperature has gone down enough to make it possible to touch the radiator cap surface by hand, then turn radiator cap (1) slowly until it contacts the stopper to release the pressure.
4. Following this, push radiator cap (1), turn it until it contacts the stopper, then remove it.
5. Set a container in position to catch drained antifreeze mixture, then open valve (2) under the radiator to drain cooling water.
6. After draining the water, close drain valve (2) and fill with tap water.
7. When the radiator is full, start the engine, and run it at low idling.
 - Keep the engine running at low idling for 10 minutes until the water temperature reaches more than 90°C (194°F).
8. Stop the engine, open drain valve (2), drain the water, then tighten them again.
9. After draining the water, clean the cooling system with cleaning agent.
 - For the cleaning method, see the instructions for the cleaning agent.
10. Decide the proportions of antifreeze and water according to the table for the mixing rate of water and antifreeze.

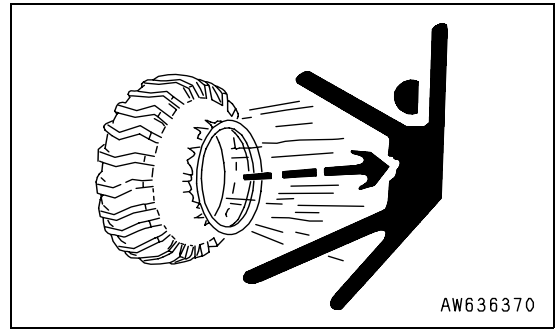


Selection and inspection of tires

⚠ WARNING

If a tire or a rim is handled wrongly, the tire may burst or may be damaged and the rim may be broken and scattered, and that can cause serious injury or death.

- Since maintenance, disassembly, repair and assembly of the tires and rims require special equipment and skill, be sure to ask a tire repair shop to carry out the work.
- Do not heat or weld the rim to which the tire is installed. Do not make a fire near the tire.



Selection of tires

⚠ WARNING

Select the tires according to the conditions of use and the weight of the attachments on the machine. Use only specified tires and inflate them to the specified pressure.

Select the tires according to the conditions of use and the weight of the attachments of the machine. Use the following table.

Consult your Komatsu distributor when using optional tires.

Tire size		Maximum load [kg (lb)]	Tire size
Standard	Front and Rear	6,775 (14,939)	20.5-25-12PR

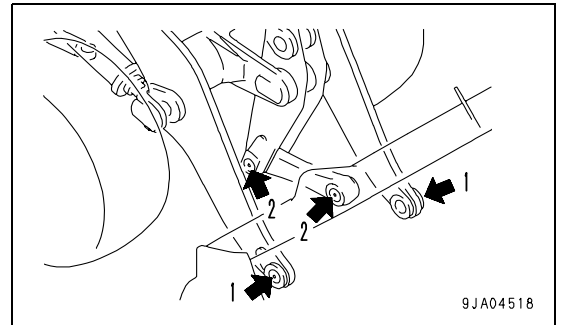
Lubricating

1. Using a grease pump, pump in grease through the grease fittings marked by the arrows.
2. After greasing, wipe off any old grease that was pushed out.

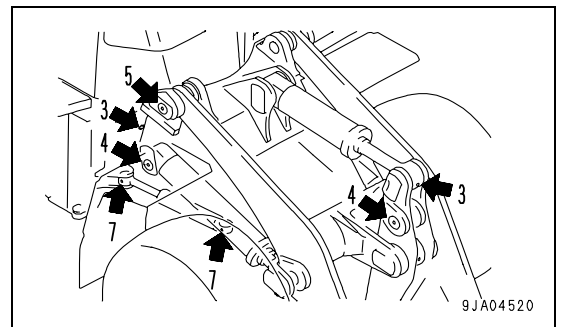
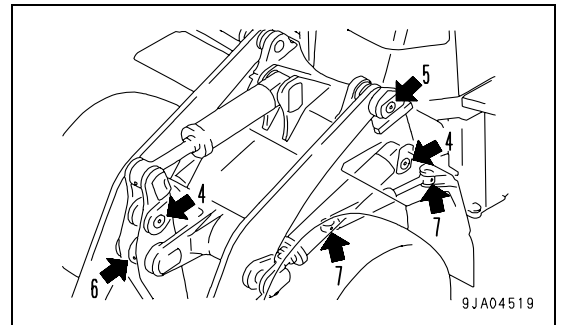
NOTICE

On jobsites where there is a lot of heavy-duty work, or on jobsites where operations are carried out continuously for more than eight hours, reduce the greasing interval and carry out greasing more frequently.

- (1) Bucket pin (2 places)
- (2) Bucket link pin (2 places)



- (3) Dump cylinder pin (2 places)
- (4) Lift cylinder pin (4 places)
- (5) Lift arm pivot pin (2 places)
- (6) Tilt lever pin (1 place)
- (7) Steering cylinder pin (4 places)

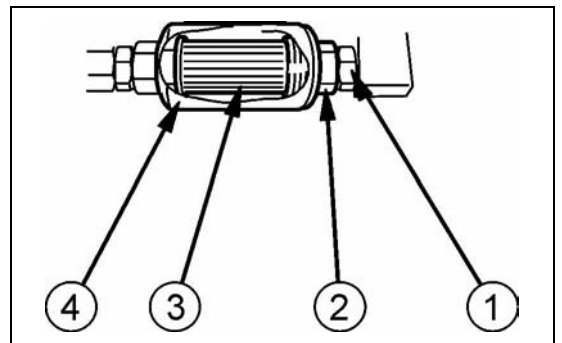
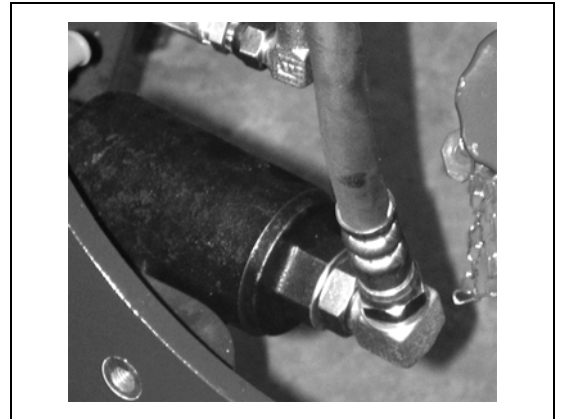


Cleaning the strainer of the brake filter

WARNING

- After the motor is switched off, the parts and oil is very hot and can cause serious burns. Let it cool down before you start working.
- Press the brake pedal approx. 15 times to reduce the pressure in the brake accumulators.

1. Press the brake pedal approx. 15 times to reduce the pressure in the brake accumulators.
2. Open the hydraulic tank slowly to reduce the inner pressure.
3. On the left side of the rear frame, unscrew the cover that is located under the cab.
4. Place a container under the brake filter.
5. Unscrew the hydraulic hose (1) and the flange (2).
6. Take the strainer (3) out of the housing (4) and clean it with clean diesel fuel.
7. Insert the strainer (3) into the housing (4). Make sure that the side with the O-ring faces forward.
8. Screw the flange (2) back on and tighten it.
9. Screw the hydraulic hose back on (1) and tighten it.
10. Wipe away any hydraulic oil that might have leaked out.
11. Start the motor and let it run until the brake accumulator is full. Switch off the motor.
12. Check the level of the hydraulic oil. Refill if required.
13. Bleed the hydraulic system and close the hydraulic tank.
14. Screw the cover back on.



ATTACHMENTS, OPTIONS



WARNING

Please read and make sure that you understand the safety volume before reading this section.

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