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YOUR MACHINE SERIAL NUMBERS AND DISTRIBUTOR

Machine serial No.	
Engine serial No.	
Distributor name	
Address

Service Personal
Phone/Fax

(5) Precautions for operating pattern
Standard machine(09822-03000)

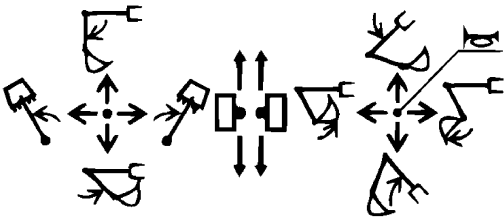
Machine equipped with operating pattern selector
valve(22M-98-11160)




WARNING

In order to prevent an accident resulting in injury or death caused by error-operation, confirm the machine motion and indicated operating pattern, when operating machines. Pay attention to the circumference and operate slowly when confirming the machine motion.

ISO pattern



09822-03000



WARNING

This machine is equipped with a control pattern selector valve. To prevent personal injury caused by mistaken operation, always check that the movement of the machine matches the pattern shown on the control pattern card before starting operations.

- When checking the movement of the machine, check that the surrounding area is safe and operate the machine slowly.
- If the movement does not match the control pattern card, replace the card with the card showing the correct control pattern.

Always do as follows when changing the control pattern.

- Lower the work equipment to the ground, stop the engine, and set the safety lock lever to the LOCK position. Then change the control pattern.

22M-98-11160

Attachment Installation

- When installing optional parts or attachments, there may be problems with safety or legal restrictions, Therefore contact your Komatsu distributor for advice.
- Any injuries, accidents, or product failures resulting from the use of unauthorized attachments or parts will not be the responsibility of Komatsu.
- When installing and using optional attachments, read the instruction manual for the attachment, and the general information related to attachments in this manual.

Attachment Combinations

Depending on the type or combination of work equipment, there is a hazard that the work equipment may hit the cab or other parts of the machine. Before using unfamiliar work equipment, check if there is any hazard of interference, and operate with caution.

Cab Window Glasses

If the cab glass on the work equipment side is broken, there is a hazard that the work equipment may contact the operator's body directly. Stop operation immediately and replace the glass.

Unauthorized Modifications

Any modification made without authorization from Komatsu can create hazards. Before making a modification, consult your Komatsu distributor.

- Komatsu will not be responsible for any injuries, accidents, or product failures resulting from modifications made without authorization from Komatsu.

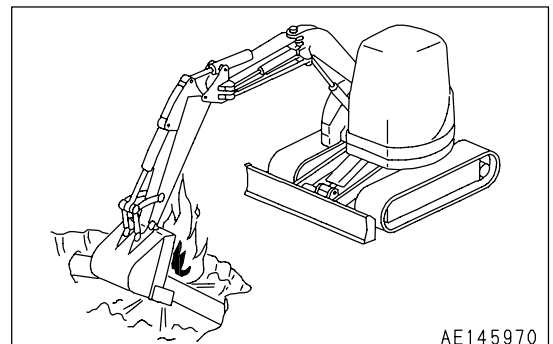
Safety at Jobsite

Before starting operations, thoroughly check the area for any unusual conditions that could be dangerous.

- When carrying out operations near combustible materials such as thatched roofs, dry leaves or dry grass, there is a hazard of fire, so be careful when operating.
- Check the terrain and condition of the ground at the worksite, and determine the safest method of operation. Do not carry out operations at places where there is a hazard of landslides or falling rocks.
- If water lines, gas lines, or high-voltage electrical lines may be buried under the worksite, contact each utility and identify their locations. Be careful not to sever or damage any of these lines.
- Take action to prevent unauthorized people from approaching the jobsite.

When working on public roads, position flagmen and erect barriers to ensure the safety of passing traffic and pedestrians.

- When traveling or operating in shallow water or on soft ground, check the shape and condition of the bedrock, and the depth and speed of flow of the water before starting operations.

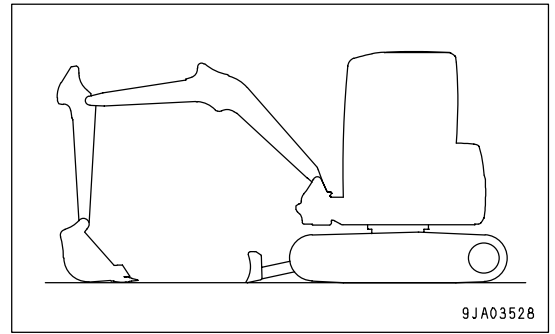


Working on Loose Ground

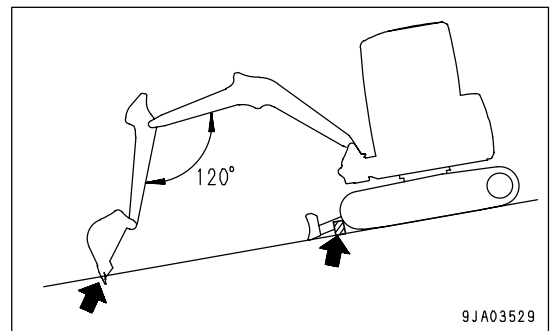
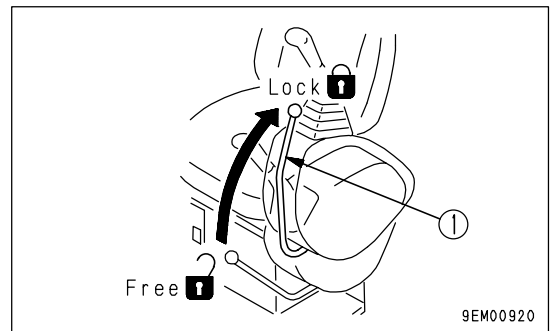
- Avoid traveling or operating your machine too close to the edge of cliffs, overhangs, and deep ditches. The ground may be weak in such areas. If the ground should collapse under the weight or vibration of the machine, there is a hazard that the machine may fall or tip over. Remember that the soil after heavy rain or blasting or after earthquakes is weak in these areas.
- When working on embankments or near excavated ditches, there is a hazard that the weight and vibration of the machine will cause the soil to collapse. Before starting operations, take steps to ensure that the ground is safe and to prevent the machine from rolling over or falling.

Parking Machine

- Park the machine on firm, level ground.
- Select a place where there is no hazard of falling rocks or landslides, or of flooding if the land is low.
- Lower the work equipment completely to the ground.



- When leaving the machine, set safety lock lever (1) to the LOCK position, then stop the engine.
- Always close the operator's cab door, and use the key to lock all the equipment in order to prevent any unauthorized person from moving the machine. Always remove the key, take it with you, and leave it in the specified place.
- If it is necessary to park the machine on a slope, always do as follows.
 - Set the bucket on the downhill side, then dig it into the ground.
 - Put blocks under the tracks to prevent the machine from moving.



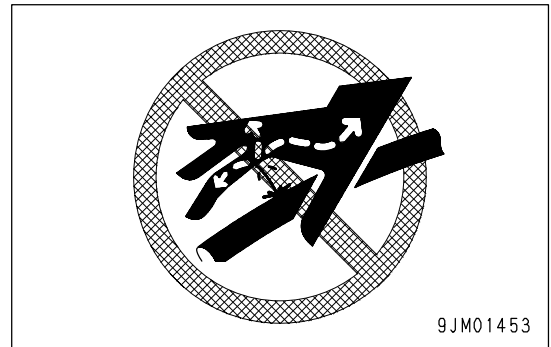
Safety Rules for High-pressure Oil

The hydraulic system is always under internal pressure. When inspecting or replacing piping or hoses, always check that the pressure in the hydraulic circuit has been released. If the circuit is still under pressure, it will lead to serious injury or property damage, so always do as follows.

- Always release the pressure before starting any inspection or replacement operation.
- If there is any leakage from the piping or hoses, the surrounding area will be wet, so check for cracks in the piping and hoses and for swelling in the hoses.

When carry out inspection, wear safety glasses and leather gloves.

- There is a hazard that high-pressure oil leaking from small holes may penetrate your skin or cause blindness if it contacts your eyes directly. If you are hit by a jet of high-pressure oil and suffer injury to your skin or eyes, wash the place with clean water, and consult a doctor immediately for medical attention.



Safety Handling High-pressure Hoses

- If oil or fuel leaks from high-pressure hoses, it may cause fire or defective operation, which may lead to serious injury or property damage. If any loose bolts are found, stop work and tighten to the specified torque. If any damaged hoses are found, stop operations immediately and contact your Komatsu distributor.

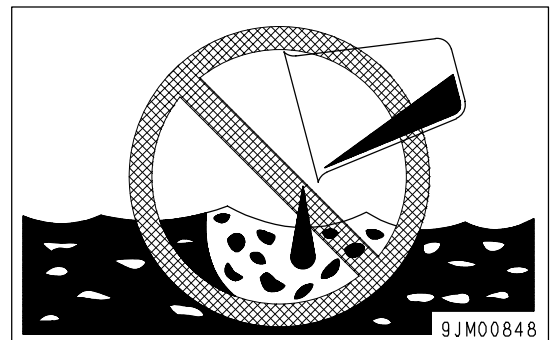
Replace the hose if any of the following problems are found.

- Damaged or leaking hydraulic fitting.
- Frayed or cut covering or exposed reinforcement layer of wire.
- Covering swollen in places.
- Twisted or crushed movable portion.
- Foreign material embedded in covering.

Waste Materials

To prevent pollution, pay careful attention to the method of disposing of waste materials.

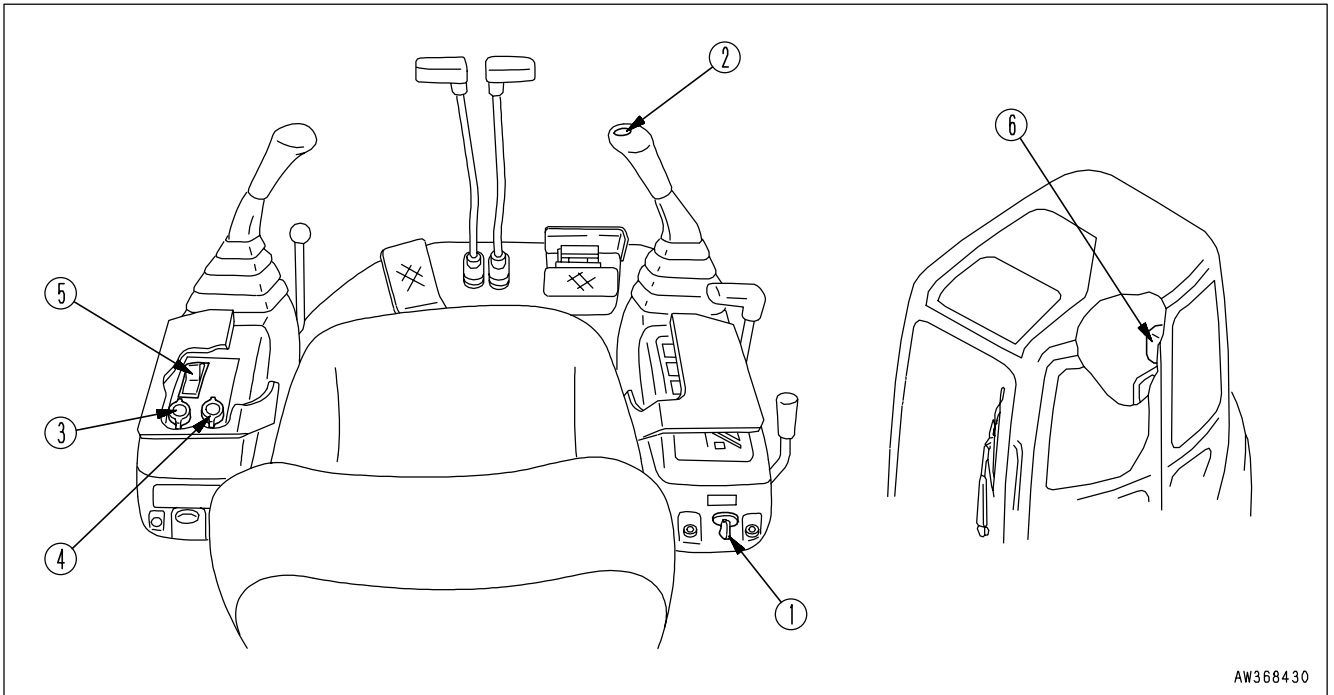
- Always put oil drained from your machine in containers. Never drain oil directly onto the ground or dump into the sewage system, rivers, the sea, or lakes.
- Obey appropriate laws and regulations when disposing of harmful objects such as oil, fuel, coolant, solvent, filters, and batteries.



Air Conditioner Maintenance

If air conditioner refrigerant gets into your eyes, it may cause blindness; if it touches your skin, it may cause frostbite. Never touch refrigerant.

SWITCHES



- (1) Starting switch
- (2) Horn switch
- (3) Lamp switch
- (4) Cab heater switch (machine equipped with cab)
- (5) Windshield wiper switch (machine equipped with cab)
- (6) Room lamp switch (machine equipped with cab)

Starting Switch

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

OFF position

The key can be inserted or withdrawn. The switches for the electric system except the cab lamp, are all turned off and the engine is stopped.

ON position

Electric current flows in the charging and lamp circuits. Keep the starting switch key at the ON position while the engine is running.

START position

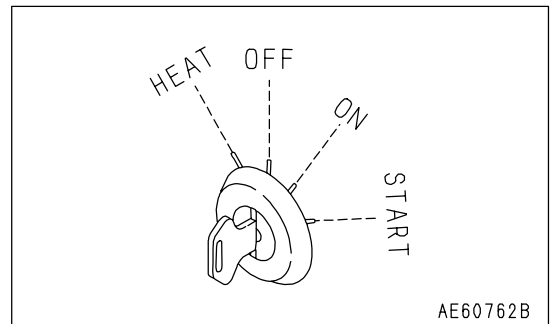
This is the engine-start position. Keep the key at this position during cranking. Immediately after starting the engine, release the key. It will automatically return to the ON position.

HEAT (preheat) position

When starting the engine in cold weather, turn the key to this position. When the key is set to the HEAT position, the preheating monitor lights up. Keep the key at this position until the preheating monitor goes out.

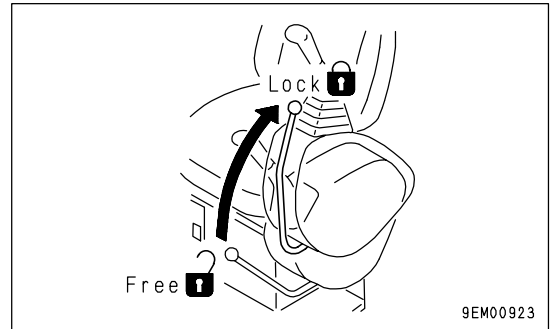
When the preheating monitor goes out, release the key.

When the key is released, it will return to the OFF position, so turn it immediately to START and start the engine.

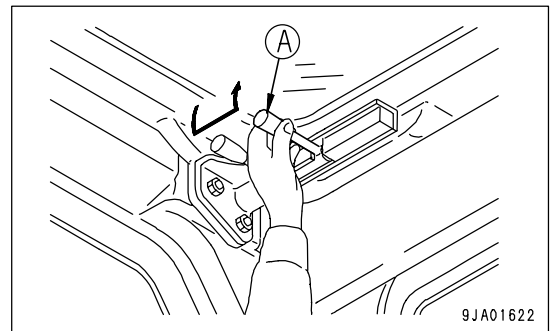


Closing

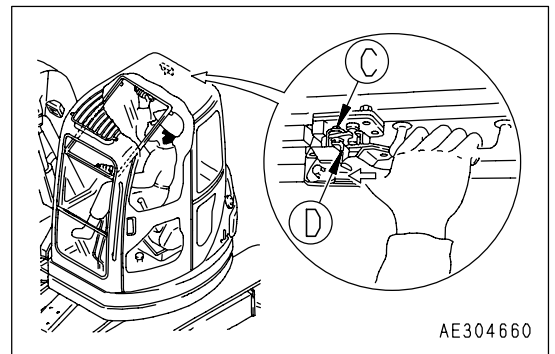
1. Stop the machine on level ground, lower the work equipment completely to the ground, then stop the engine.
2. Set the safety lock lever securely to the LOCK position.



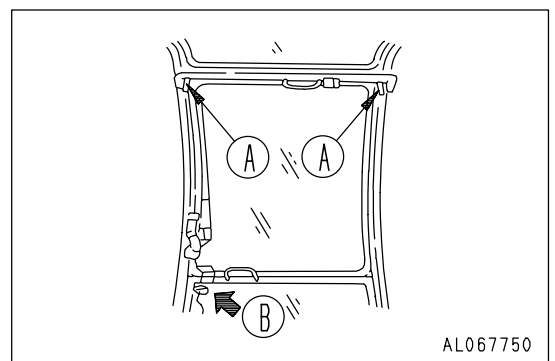
3. Release the lock pin (A).



4. Hold the grip at the bottom of the front window with your left hand and the grip at the top with your right hand, release the lock of catch (C) with your right thumb, then pull the top grip to the front and lower the front window slowly. When releasing the lock of catch (C), move release lever (D) in the direction of the arrow to release the lock.



5. When the bottom of the window reaches the top of the bottom window, push the top of the window to the front, and insert left and right lock pins (A) securely in the holes to apply the lock.
6. Connect the wiper motor wiring to socket (B).



MACHINE OPERATIONS AND CONTROLS

BEFORE STARTING ENGINE

Walk-Around Checks

Before starting the engine, look around the machine and under the machine to check for loose nuts or bolts, or leakage of oil, fuel, or coolant, and check the condition of the work equipment and hydraulic system. Check also for loose wiring, play, and accumulation of dust at places which reach high temperatures.



WARNING

Remove any flammable materials from around the battery or engine muffler or other high temperature engine parts. Leakage of fuel or oil will cause the machine to catch fire. Check carefully, and be sure to repair any abnormalities, or please contact your Komatsu distributor.

If the machine is at an angle, make it horizontal before checking.

Always check the items in this section before starting the engine each day.

1. Check for damage, wear, play in work equipment, cylinders, linkage, hoses
Check that there are no cracks, excessive wear, or play in the work equipment, cylinders, linkage, or hoses. If any abnormality is found, repair it.
2. Remove dirt and dust from around engine, battery, and radiator
Check that there is no dirt or dust accumulated around the engine or radiator. Check also that there is no flammable material (dry leaves, twigs, etc.) accumulated around the engine muffler or high temperature parts of the engine, or around the battery. Remove all dirt, dust, and flammable materials.
3. Check for leakage of water or oil around engine
Check that there is no leakage of oil from the engine or leakage of water from the cooling system. If any abnormality is found, repair it.
4. Check for oil leakage from hydraulic equipment, hydraulic tank, hoses, joints
Check that there is no oil leakage. If any abnormality is found, repair the place where the oil is leaking.
5. Check the undercarriage (track, sprocket, idler, guard) for damage, wear, loose bolts, or leakage of oil from rollers.
If any abnormality is found, repair it.
6. Check for abnormality in handrails, steps, loose bolts.
If any abnormality is found, repair it. Tighten any loose bolts.
7. Check for abnormality in gauges, monitor, loose bolts.
Check that there is no abnormality in the gauges and monitor in the operator's cab. If any abnormality is found, replace the parts. Clean off any dirt on the surface.
8. Check for damage or displaced window
Check that there is no damage or displacement of the window. If any damage is found, replace with a new part. If the window comes out of position or breaks during operations, do not continue operations. Stop immediately and repair the window.

Seat Belt

(Machine equipped with cab)



WARNING

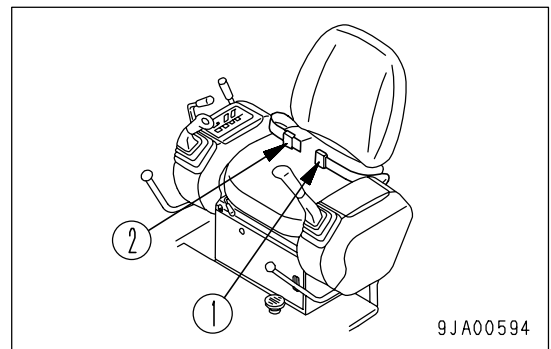
- Before fastening the seat belt, check that there is no abnormality in the securing brackets or belt. If there is any wear or damage, replace.
- Even if there appears to be no abnormality in the seat belt, replace the seat belt once every 3 years. The date of manufacture is woven on the reverse side of the belt.
- Adjust and fasten the seat belt before operating the machine.
- Always use the seat belt when operating the machine.
- Do not use the seat belt with either half of the belt twisted.

Check that the bolts of the clamp securing the belt to the chassis are not loose. Tighten them if they are loose. The tightening torque for the mounting bolt is $24.5 \pm 4.9\text{N}\cdot\text{m}$ ($2.5 \pm 0.5\text{kgf}\cdot\text{m}$, $18.1 \pm 3.6\text{lbft}$).

If the belt surface is scratched or frayed or if the fittings are broken or deformed, replace the seat belt unit.

Fastening and Removing

1. Adjust the seat so that the operator still feels that there is sufficient knee room when fully depressing the pedal while seated, with the operator's back against the backrest.
2. After adjusting the seat position, sit in the seat. Grip buckle (1) and tongue (2) in each hand and insert tongue (2) into buckle (1). Confirm by pulling the belt that the tongue is securely locked to the buckle.
3. When removing the belt, raise the tip of buckle (1) lever to release it.

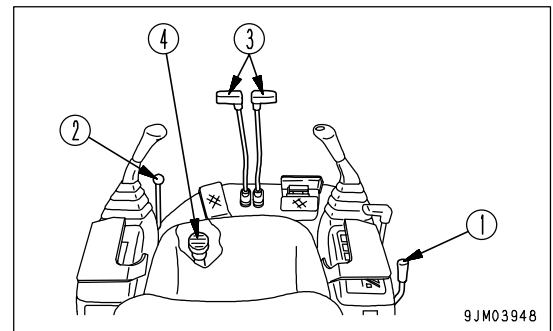


Fasten belt along your body without kinking it. Adjust the lengths of the belt on the tongue sides.

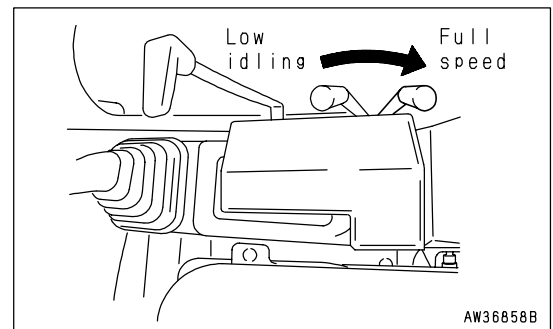
MACHINE OPERATION

**WARNING**

- Before operating the travel levers, check the direction of the track frame. If the sprocket is at the front, the operation of the travel levers is reversed.
- When moving off, check that the area around the machine is safe, and sound the horn before moving.
- Clear all personnel from the machine and the area.
- Clear all obstracles from the path of the machine.
- Check that the travel alarm works properly.

**Preparations For Moving The Machine Off**

1. Pull fuel control lever (1) towards the high idling position to increase the engine speed.



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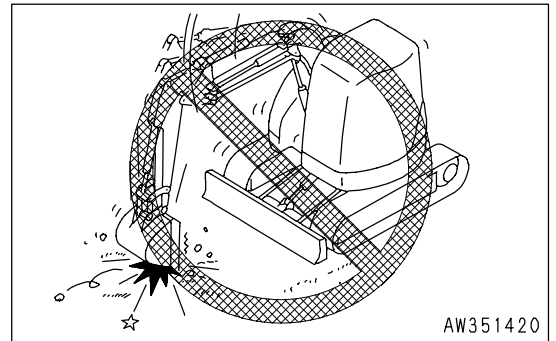


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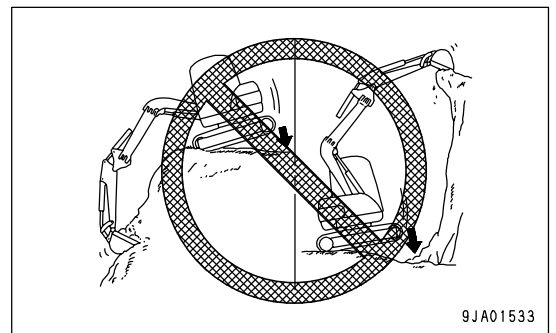
Operations Using Bucket Dropping Force

Do not use the dropping force of the machine for digging, or use the dropping force of the bucket as a pickaxe, breaker, or pile driver. This will markedly reduce the life of the machine.



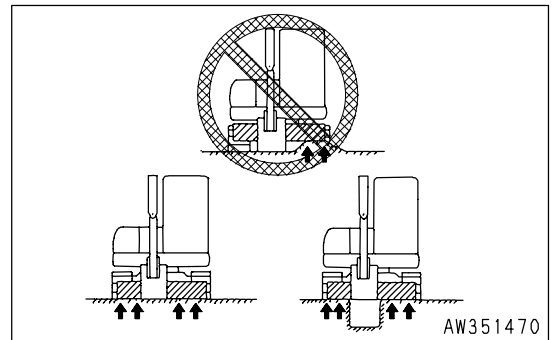
Operations Using Machine Dropping Force

Do not use the dropping force of the machine for digging.

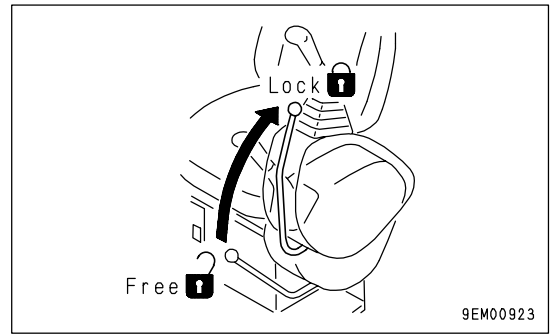


Support Blade on Both Sides

When using the blade as an outrigger, never support the machine with only one end of the blade.

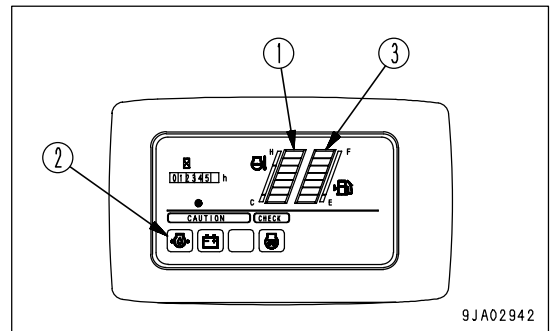


5. Set safety lock lever (2) in the LOCK position.



MACHINE INSPECTION AFTER DAILY WORK

Check the engine water temperature (1), engine oil pressure (2), and fuel level (3) on the machine monitor.



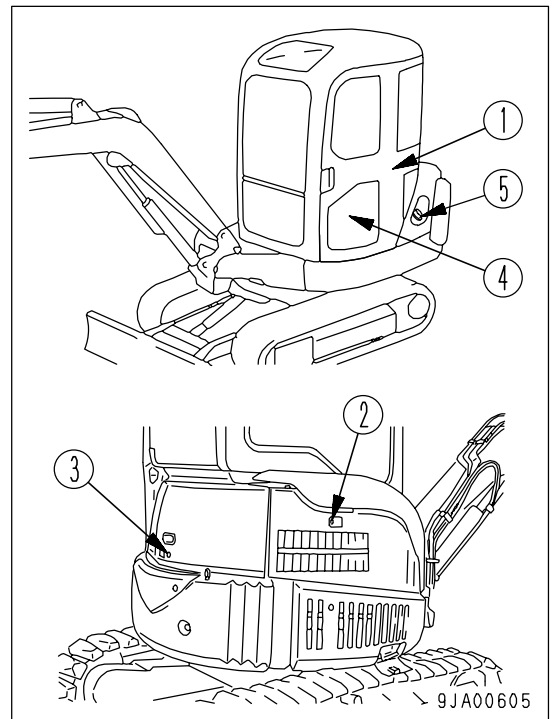
LOCKING

Always lock the following places.

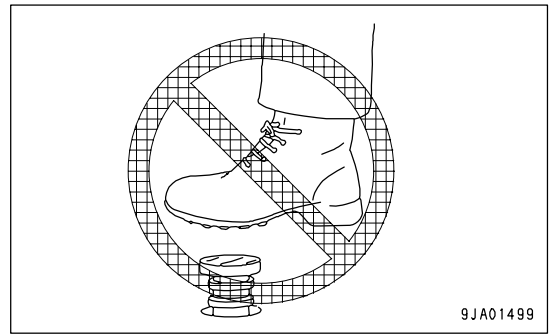
- (1) Door of operator’s cab (machine equipped with cab)
Always remember to close the window.
- (2) Mud cover
- (3) Engine hood
- (4) Tool box cover (machine equipped with canopy)
- (5) Fuel tank filler port

REMARK

Use the starting switch key to open and close all these places.



9. Do not the operate the accelerator pedal.

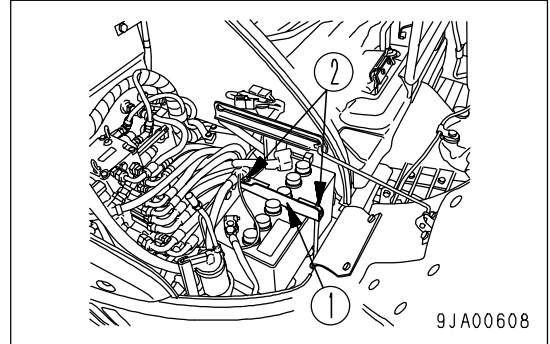


Battery Removal And Installation

NOTICE

After securing the battery, check that it does not move. If it moves, tighten it again securely.

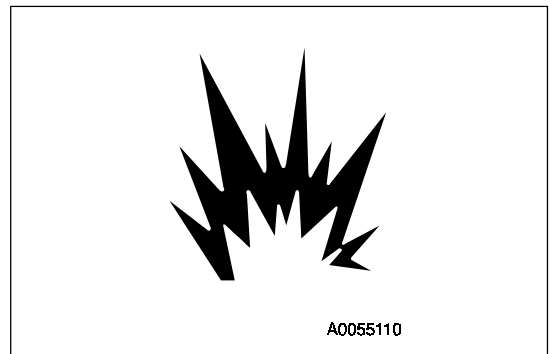
- Before removing the battery, remove the ground cable (normally connected to the negative(-) terminal).
If any tool touches between the positive terminal and the chassis, there is a hazard of sparks being generated.
- When installing the battery, connected the ground cable last.
- When replacing the battery, fix the battery securely with battery clamp (1).
Tightening torque for mounting nut (2)
Nut and clamp: 2.0 N·m (0.2 kg·m, 1.5 lbft)
Double nut: 27 to 34 N·m (2.8 to 3.5 kg·m, 19.9 to 25.1)



Battery Charges

When charging the battery, if the battery is not handled correctly, there is a hazard that the battery may explode. Always follow the instructions of "DISCHARGED BATTERY (PAGE 3-88)" and the instruction manual accompanying the charger, and do as follows.

- 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.
- 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.



Dusty Jobsite

When working at dusty worksites, do as follows:

- Inspect the dust indicator frequently to see if the air cleaner is dirty or clogged.
- Clean the radiator core frequently to avoid clogging.
- Clean and replace the fuel filter frequently.
- Clean electrical components, especially the starting motor and alternator, to avoid accumulation of dust.
- When inspecting or changing the oil, move the machine to a place that is free of dust to prevent dirt from getting into the oil.

Avoid Mixing Lubricants

Never mix different kinds of oil. If a different type of oil has to be added, drain the old oil and replace all the oil with the new type of oil.

Cover on Right Side of the Machine

If the cover on the right side of the machine is fully opened and the boom is swung to the right, there is danger that the boom may hit the cover and break it.

If the boom must be swung to the right with the cover open, set the cover so that it is half-open.

Locking the Inspection Covers

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

Hydraulic System - Air Bleeding

When hydraulic equipment has been repaired or replaced, or the hydraulic piping has been removed and installed again, the air must be bled from the circuit. For details, see "Hydraulic System - Bleed Air (PAGE 4-39)".

Hydraulic Hose Installation

- 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 Works

If you forget to carry 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 machine and get caught in the lever linkage mechanism.
 - Is there any leakage of water or oil? Have all the bolts been tightened?
- Checks when operating engine
 - For details of the checks when operating the engine, see "Two Workers for Maintenance when Engine is Running (PAGE 2-34)" and pay careful attention to safety.
 - Are the inspection and maintenance items working properly?
 - Is there any leakage of oil when the engine speed is raised and load is applied to the oil pressure?

SAFETY CRITICAL PARTS

To ensure safety at all times when operating or driving the machine, the user of the machine must always carry out periodic maintenance. In addition, to further improve safety, the parts in the safety-critical parts list on the next page must also be replaced at the specified interval. These parts are particularly closely connected to safety and fire prevention, so please contact your Komatsu distributor to have them replaced.

With these parts, the material changes as time passes, or they easily wear out or deteriorate. However, it is difficult to judge the condition of the parts simply by periodic maintenance, so they should always be replaced after a fixed time has passed, regardless of their condition. This is necessary to ensure that they always maintain their function completely.

However, if these parts show any abnormality before the replacement interval has passed, they should be repaired or replaced immediately.

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

In addition, carry out the checks for the hydraulic hoses other than periodic replacement parts. If any abnormality is found, tighten the clamps or replace the parts.

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.

When carrying out the following periodic inspections, also check the hydraulic hoses and the fuel hose.

SAFETY CRITICAL PARTS LIST

No.	Safety critical parts for periodic replacement	Q'ty	Replacement interval
1	Fuel hose (fuel tank - feed pump pre-filter)	1	Every 2 years or 4000 hours, whichever comes sooner
2	Fuel hose (feed pump pre-filter - feed pump)	1	
3	Fuel hose (feed pump - fuel filter)	1	
4	Fuel hose (fuel filter - injection pump)	1	
5	Fuel hose (fuel filter - fuel tank)	1	
6	Spill hose (fuel filter - injection pump)	1	
7	Spill hose (between nozzles)	2	
8	Spill hose (nozzle - injection pump)	1	
9	Spill cap	1	
10	Hydraulic hose (main pump suction)	2	
11	Hydraulic hose (main pump delivery)	4	
12	Hydraulic hose (boom cylinder)	4	
13	Hydraulic hose (arm cylinder)	4	
14	Hydraulic hose (bucket cylinder)	4	
15	Hydraulic hose (swing cylinder)	2	
16	Seat belt (if equipped)	1	

Track Shoe Bolts - Check/Tighten

(Machine equipped with road liner, Steel shoe)

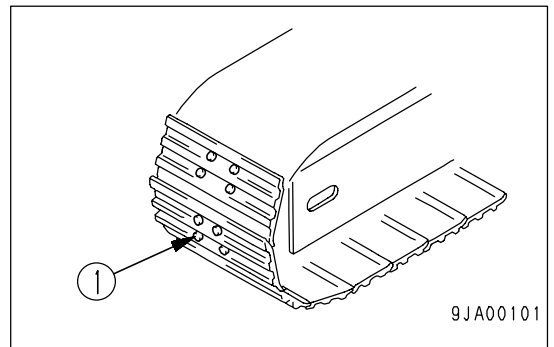
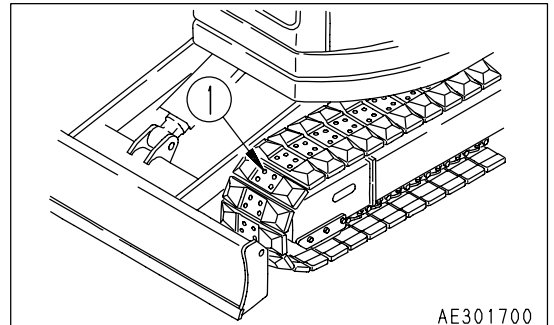
If the machine is used with track shoe bolts (1) loose, they will break, so tighten any loose bolts immediately

Method for further tightening of road liner

After tightening to a tightening torque of $137 \pm 19.6 \text{ N}\cdot\text{m}$ ($14 \pm 2 \text{ kgf}\cdot\text{m}$, $101.3 \pm 14.5 \text{ lbft}$), check that the nut and shoe are in tight contact with the link mating surface.

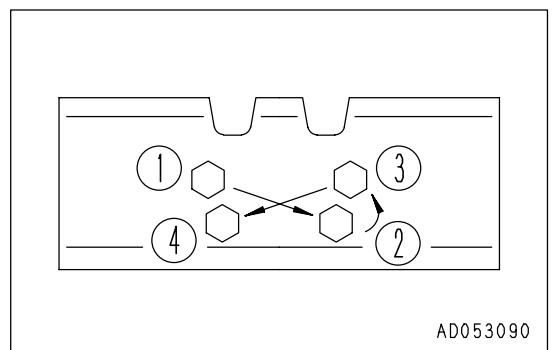
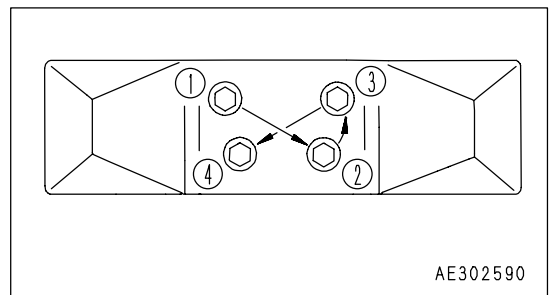
Method for further tightening of steel shoe

1. First tighten to a tightening torque of $137 \pm 19.6 \text{ N}\cdot\text{m}$ ($14 \pm 2 \text{ kgf}\cdot\text{m}$, $101.3 \pm 14.5 \text{ lbft}$) then check that the nut and shoe are in close contact with the link contact surface.
2. After checking, tighten a further $90^\circ \pm 10^\circ$.



Order for tightening

Tighten the bolts in the order shown in the diagram on the right. After tightening, check that the nut and shoe are in close contact with the link mating surface.



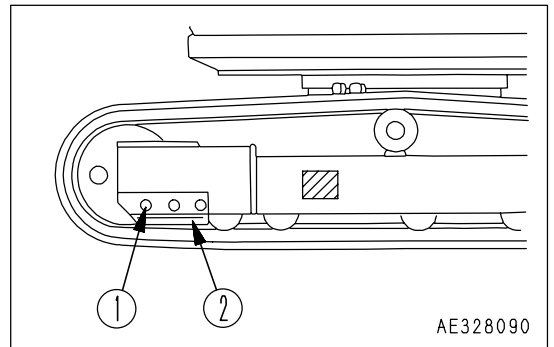
Road Liners or Steel Shoes to Rubber Shoes - Change

 **WARNING**

When changing from the steel shoe or road liner to the rubber shoe, or when changing from the rubber shoe to the steel shoe or road liner, it is necessary to remove and adjust the idler cushion, so contact your Komatsu distributor to have the change carried out.

Changing from Road Liners or Steel Shoes to Rubber Shoes

1. Remove idler guard mounting bolts (1), then remove idler guard (2).
2. Remove the steel shoe or road liner and install the rubber shoe.



Changing from Rubber Shoes to Road Liners or Steel Shoes

1. Remove the rubber shoe and install the steel shoe or road liner.
2. Install idler guard (2) with idler guard mounting bolts (1).

Hydraulic Oil Filter Element - Replace

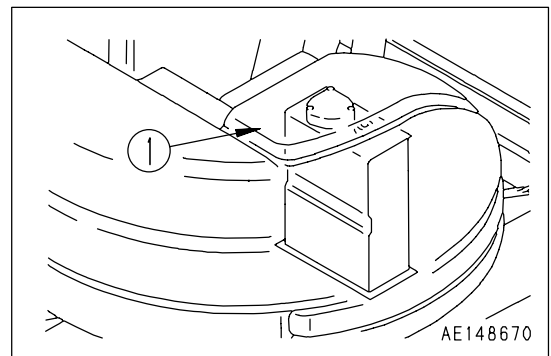
! WARNING

- 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.
- When removing the oil filler cap, turn it slowly to release the internal pressure, then remove it.

NOTICE

If the machine is equipped with a hydraulic breaker, the hydraulic oil will deteriorate much faster than during normal bucket operations. For details, see "MAINTENANCE INTERVAL FOR HYDRAULIC BREAKER (PAGE 4-15)" when carrying out maintenance.

1. Open cover (1) at right side of the machine.



2. Remove the cap from oil filler (F), and release the internal pressure.

3. Loosen 3 bolts, then remove cover (2). When doing this, may fly out under the force of spring (3), so hold the cover down when removing the bolts.

4. After removing spring (3) and valve (4), take out element (5).

5. Clean the removed parts in diesel oil.

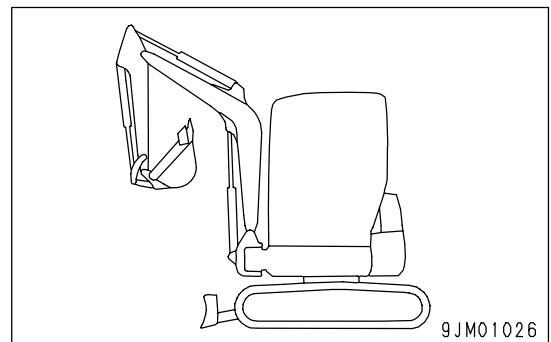
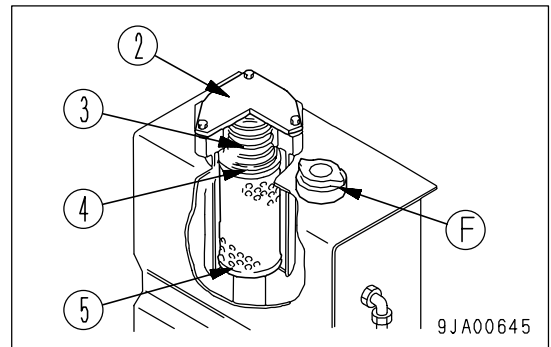
6. Install the new element in the place where old element (5) was installed.

Check the O-ring fitted to cover (2), and if it is scratched or damaged, replace it with a new O-ring.

7. Set valve (4) and spring (3) on top of the element.

8. Set cover (2) in position, push it down by hand, and install the cover (2) with the mounting bolts.

9. Extend the boom, arm, and bucket cylinder fully as shown in the diagram on the right, remove the oil filler cap, then install the cap and pressurize the inside of the tank.



10. Close cover (1) at right side of the machine.

EVERY 1000 HOURS MAINTENANCE

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

Final Drive Case Oil - Change

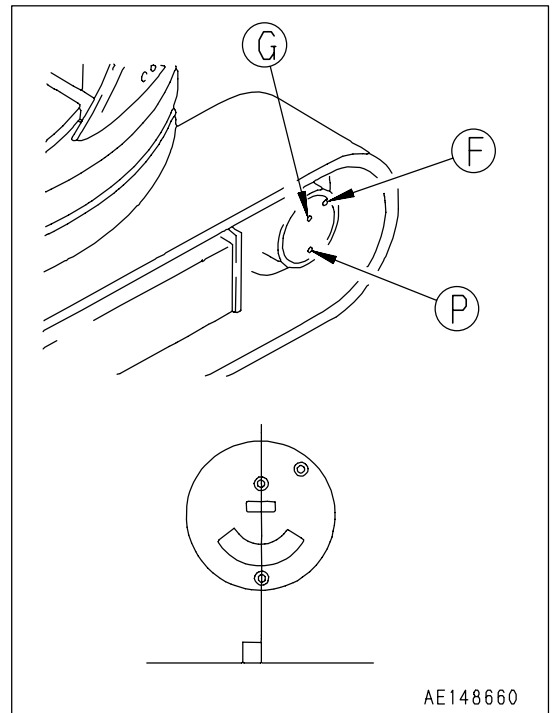


WARNING

- The oil is at high temperature immediately after the machine has been operated. Wait for the oil to cool down before starting the operation.
- If there is still pressure remaining inside the case, the oil or plug may fly out.
Loosen the plug slowly to release the pressure.

- Refill capacity
PC40MRx: each 0.8 liter (0.21 US gal)
PC45MRx: each 1.0 liter (0.26 US gal)
- Prepare a hexagon wrench

1. Set so that plug (G) is at the top, with plug (G) and plug (P) perpendicular to the ground.
2. Set the container to catch oil under plug (P).
3. Remove plugs (P), (G) and (F) with hexagonal wrench to drain the oil.
4. Tighten plug (P).
5. Add oil through the hole of plug (F) up to the refill level.
6. After the oil flows out of the hole plug (G), install plugs (G) and (F).



Engine Valve Clearance - Check/Adjust

As special tool is required for removing and adjusting the parts, you shall request Komatsu distributor for service.

ATTACHMENT INSTALLATION

 **WARNING**

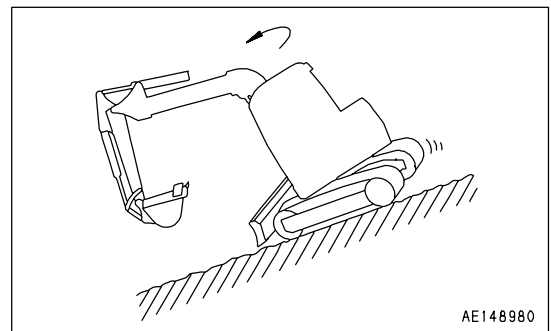
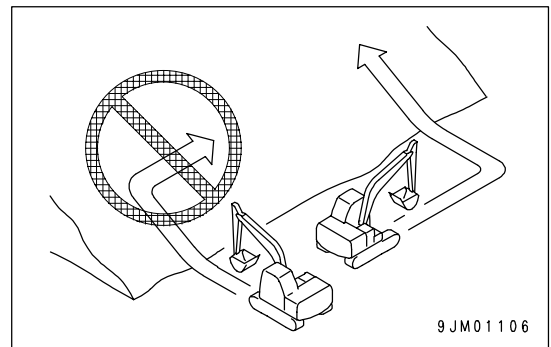
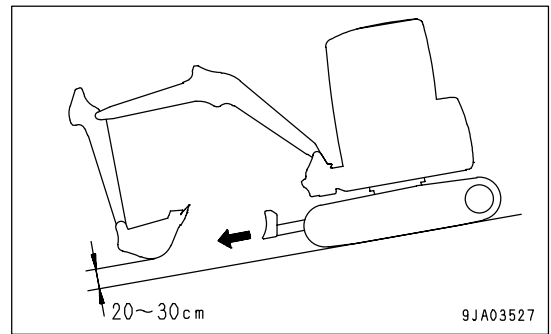
Long work equipment or heavy work equipment cause the machine to have poor stability, so there is danger of the machine losing its balance and tipping over when traveling down steep hills or when swinging on slopes. Never do any of the following. They are extremely dangerous.

- Traveling downhill with the work equipment raised
- Traveling across slopes
- Swinging upper structure on slopes
- If heavy-load work equipment is installed, there will be excessive overrun when swinging (the distance from operating to stop the swing to the point where the swing stops completely), so there is danger of mistaking the distance and hitting other objects.

Allow a margin to the stopping point when operating.

In addition, the hydraulic drift (the gradual downward movement caused by the weight of the work equipment when the work equipment is stopped in a raised condition) will also increase.

- If the correct procedure is not used when installing the boom and arm, it may lead to serious damage. Please consult your Komatsu distributor.
- When long work equipment is installed, the working range will suddenly become larger, so there is danger of mistaking the distance and hitting other objects. Allow an ample margin between the work equipment and surrounding obstacles when operating.



CHANGING MACHINE CONTROL PATTERN (IF PATTERN CHANGE VALVE EQUIPPED)

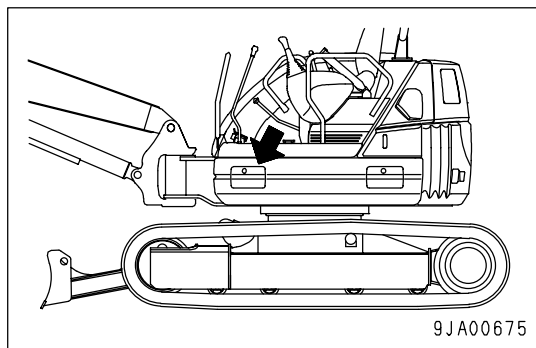


WARNING

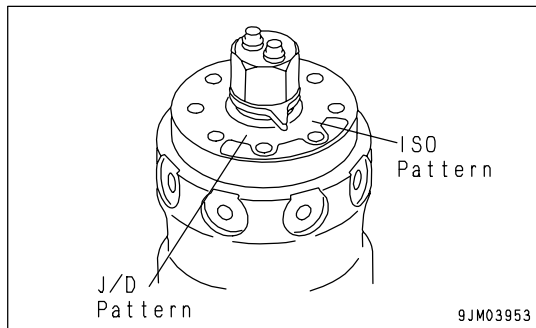
- When changing the operating pattern of the machine, set the machine in the parking posture, stop the engine, check that the safety lock lever is at the LOCK position, then change the operating pattern.
- To prevent personal injury caused by mistaken operation, test operate the machine and check that the display on the operating pattern card is the same as the movement of the machine.
If it is not the same, replace the operating pattern card immediately with the card that matches the operating pattern.
- When checking the movement of the machine, check carefully that the surrounding area is safe, and operate slowly.

CONTROL PATTERN CHANGE PROCEDURE

1. After setting the machine in the parking posture, set the safety lock lever to the LOCK position, then stop the engine.
2. Open the inspection cover on the left side of the machine. The selector valve is inside.



3. Change the pattern according to the operating plate stuck to the selector valve.
4. Change to an operating pattern card (insert it in the holder) that matches the selected operating pattern.
5. Start the engine, set the safety lock lever to the FREE position, operate the work equipment levers slowly, and check that the operating pattern has changed.



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