Operation & Maintenance Manual

EENAM03930

PC1250-11E0
PC1250SP-11E0

HYDRAULIC EXCAVATOR

SERIAL NUMBER

PC1250-11E0 - 50035 and up

PC1250SP-11E0- 50035 and up

WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept inside the cab for reference and periodically reviewed by all personel who will come into contact with the machine.

ORIGINAL INSTRUCTIONS

KOMATSU

- an overriding interest of Komatsu, Komatsu Europe or any third party in keeping your personal data identifiable
- a legal or regulatory obligation or a judicial or administrative order that prevents us from de-identifying them

8. Which rights do you have with regard to the processing of your personal data?

You have the right to request access to all personal data processed in MMS insofar it pertains to you. You can exercise this right first and foremost via most MMS directly. We reserve the right to refuse multiple requests for access that are clearly submitted for causing nuisance or harm to Komatsu, Komatsu Europe or other parties.

You have the right to ask that any personal data pertaining to you which are inaccurate, are corrected free of charge. Some personal data you can correct yourself if you have access to the MMS web portal. If a request for correction is submitted, such request must be accompanied of proof of the flawed nature of the data for which correction is asked.

You have the right to request that personal data pertaining to you will be deleted if they are no longer required in light of the purposes outlined above. However, you need to keep in mind that a request for deletion will be evaluated by us against:

- overriding interests of Komatsu, Komatsu Europe or any other third party
- legal or regulatory obligations or administrative or judicial orders which may contradict such deletion

Instead of deletion you can also ask that we limit the processing of your personal data if and when (a) you contest the accuracy of that data, (b) the processing is illegitimate or (c) the data are no longer needed for the purposes which are outlined above, but you need them to defend yourself in judicial proceedings.

You have the right to oppose the processing of personal data for the purposes (a) to (l) in section 4, but you are required to explain your particular circumstances on which your request for opposition is based.

As explained earlier, if you wish to submit a request to exercise one or more of the rights listed in this section, you must first and foremost contact your employer. Each request addressed to us can be sent via e-mail to PrivacyOffice@komatsu.eu for all data subject right matters.

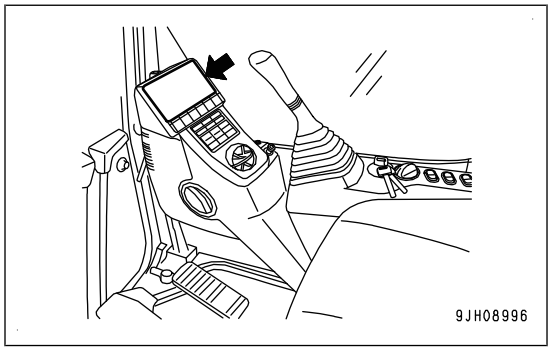
An e-mail requesting to exercise a right will not be construed as consent with the processing of your personal data beyond what is required for handling your request. Such request should clearly state and specify which right you wish to exercise and the reasons for it, if such is required. It should also be dated and signed, and accompanied by a digitally scanned copy of your valid identity card proving your identity.

Without prejudice to the allocation of responsibilities as outlined in section 1, we will promptly inform you of having received this request. If the request proves valid, we will notify you as soon as reasonably possible and at the latest thirty (30) days after having received the request.

If you have any complaint regarding the processing of your personal data by Komatsu or Komatsu Europe via MMS, you may always contact us via the e-mail address mentioned in the first paragraph of this clause. If you remain unsatisfied with our response, you may file a complaint with the competent data protection authority.

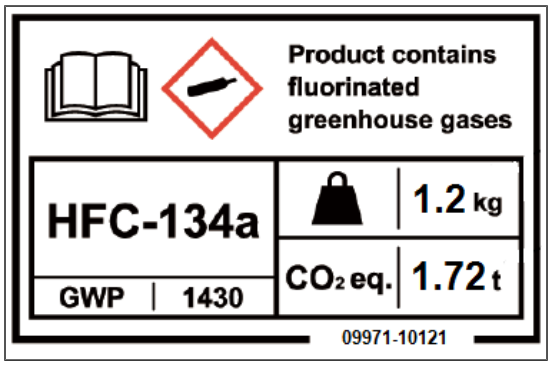
SERVICE METER LOCATION

This is displayed on the machine monitor.



FLUORINATED GREENHOUSE GASES

Product contains fluorinated greenhouse gases.



YOUR MACHINE SERIAL NUMBERS AND DISTRIBUTOR

Machine serial No.	
Engine serial No.	
Product identification number (PIN)	
Manufacturers name: Address:	KOMATSU LTD. 2-3-6 Akasaka Minato-ku, Tokyo 107-8414 Japan
Authorised representative: Address:	KOMATSU EUROPE INT. Mechelsesteenweg 586 B-1800 Vilvoorde Belgium
Distributor name	
Address	
Phone	
Service personnel	

Caution for work equipment

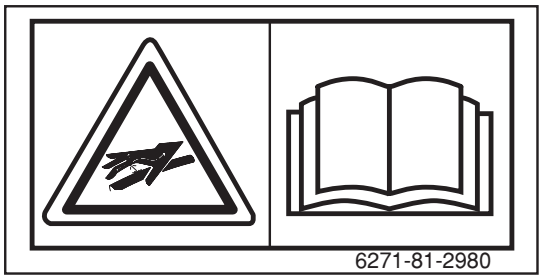
“09134-A1681”

- Sign indicates a hazard of being hit by the working device of the machine.
- Keep away from machine during operation.

Caution for high-pressure fuel

“6271–81–2980”

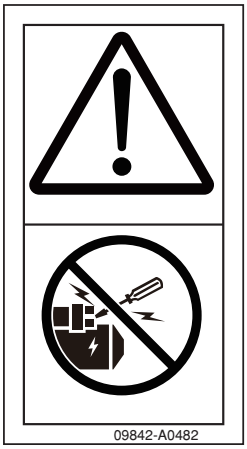
- When the engine is running, high-pressure fuel is generated in the engine fuel piping. Do not remove or loosen fuel system piping when engine is running.
- When carrying out inspection or maintenance, stop the engine and wait at least 30 seconds to allow internal pressure to go down.
- DO NOT RISK SEVERE INJURY OR DEATH.



Prohibition of start by short-circuiting

“09842-A0482”

- Start the engine only after sitting down in the operator's seat.
- Do not attempt to start the engine by short-circuiting the engine starting circuit. Such an act may cause a serious bodily injury or fire.

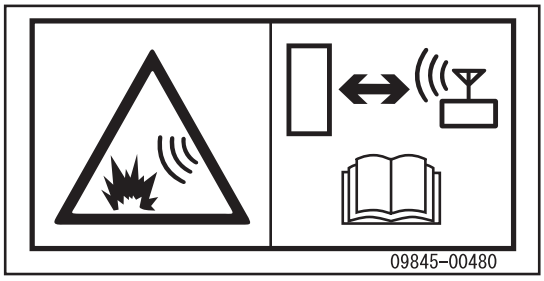


Caution for blast site

“09845-00480”

(only machine with KOMTRAX Plus)

- Sign indicates an explosion hazard caused by active radio transmitter at a blast site.
- Keep machine at a safe distance from a blast site and detonator.



UNAUTHORIZED MODIFICATION

- Komatsu will not be responsible for any personal injuries, product failures, physical loss or damage, or influence on the environment resulting from modifications made without authorization from Komatsu.
- Any modification made without authorization from Komatsu can create hazards. Before making a modification, consult your Komatsu distributor.

PRECAUTIONS RELATED TO ATTACHMENTS AND OPTIONS

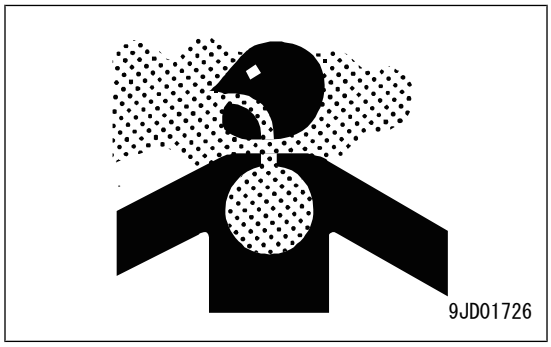
- Any personal injuries, product failures, physical loss or damage, or influence on the environment resulting from the use of unauthorized attachments or parts will not be the responsibility of Komatsu.
- When installing optional parts or attachments, contact your Komatsu distributor for advice to any potential problems or safety and legal requirements.
- The machine weight will not exceed ROPS certified value as long as the optional attachments written in the attachment combination table of this manual are installed. When installing optional parts or attachments which are not written in this manual, the machine weight must not exceed ROPS certified value. Always contact your Komatsu distributor before installing.
- Installing some work equipment combinations may cause interference and damage with the cab or other parts of the machine during operation and could cause serious personal injury or death. Before using unfamiliar work equipment, always check for potential interference while operating the machine. Always ensure the operator's safety when working with unfamiliar work equipment.
- When installing and using optional attachments, always read the instruction manual for the attachment, and the general information related to attachments in this manual.

PRECAUTIONS RELATED TO CAB GLASS

- If the cab glass is broken during operations, stop operations and repair the cab glass immediately.
- If the cab glass on the work equipment side is broken, there is a hazard that the operator may be directly hit or caught in the work equipment. If the glass is broken, stop operation immediately and replace the glass.
- The ceiling window is made of plastic, so if it is scratched, the visibility will become poor and there is danger that it may break. If the ceiling window is scratched, replace it with the new one as soon as possible. If the ceiling window is scratched and is not replaced, there is a danger that any rocks falling on it will cause it to break, leading to injury to the operator.

PRECAUTIONS WHEN RUNNING ENGINE INSIDE BUILDING

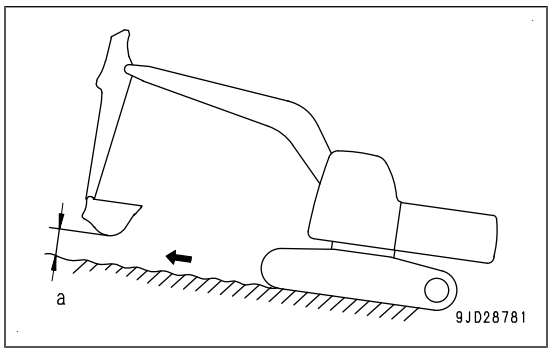
The engine exhaust gas contains substances that may damage your health or even cause death. Start or operate the engine in a place where there is good ventilation. If the engine or machine must be operated inside a building or underground, where the ventilation is poor, take steps to ensure that the engine exhaust gas is removed and that ample fresh air is brought in.

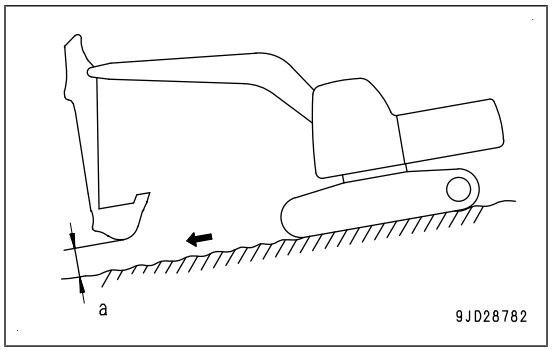


PRECAUTIONS WHEN TRAVELING ON SLOPES

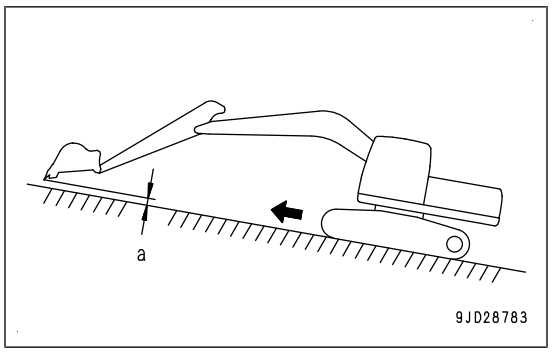
To prevent the machine from tipping over or slipping to the side, always observe the following.

- Keep the work equipment at height (a) of approximately 20 to 30 cm above the ground. In case of emergency, lower the work equipment to the ground immediately to help stopping the machine.
- When driving the machine up slopes, set the operator's cab facing uphill, when driving downhill , set the operator's cab facing downhill. Always be sure of the safety of the ground under the front of the machine when driving.

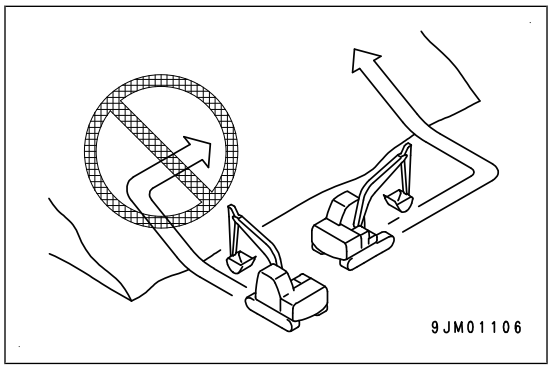




- When driving the machine t up a steep slope, extend the work equipment to the front to improve the balance, keep the work equipment at height (a) of approximately 20 to 30 cm above the ground, and drive it at low speed.



- When driving the machine downhill, lower the engine speed, keep the travel lever close to NEUTRAL position, and drive it at low speed.
- Always drive the machine straight up or down a slope. Driving the machine at an angle or across the slope is extremely dangerous.
- Do not turn on slopes or drive across slopes. Always go down to a flat place to change the position of the machine, then drive it on to the slope again.

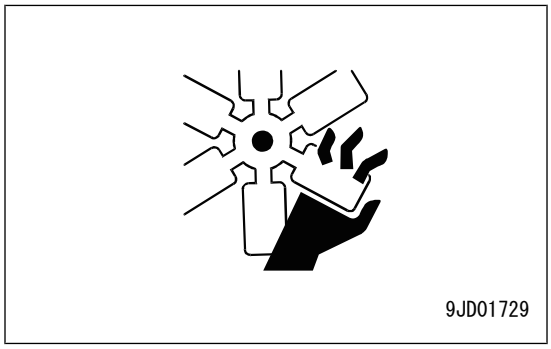


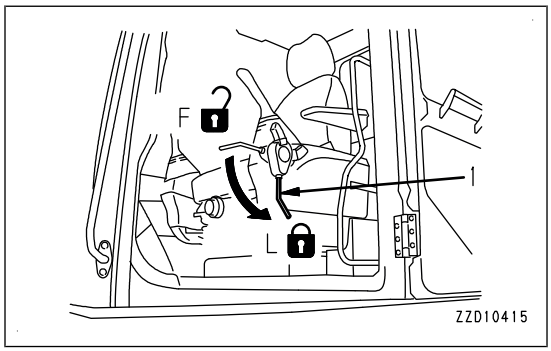
- Do not drive the machine on a slope covered with the steel plates. Even with slight slopes there is a hazard that the machine may slip.
- Drive the machine at low speed on the grass or fallen leaves. Even with slight slopes, there is a hazard that the machine may slip.

TWO WORKERS FOR MAINTENANCE WHEN ENGINE IS RUNNING

To prevent accident, do not perform maintenance with the engine running. When it is necessary to perform the maintenance with the engine running, always observe the following.

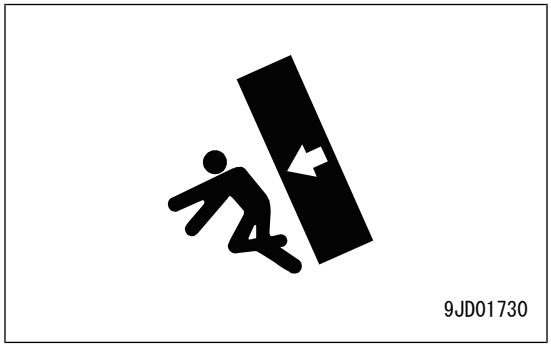
- One worker must always sit on the operator's seat and be ready to stop the engine at any time. All workers must maintain contact with the other workers.
- Rotating parts such as the fan, fan belt are dangerous that they may easily catch a body part or an object someone wears. Be careful not to come close to the rotating part.
- Never drop or insert tools or other objects into the fan, fan belt, or other rotating parts. They may contact the rotating parts and break, and be scattered. It is dangerous.
- If the automatic active regeneration of KDPF starts during maintenance work, surroundings of KDPF become high temperature. When performing the maintenance work, perform the regeneration disable of KDPF.
- Release the remaining pressure in the hydraulic system, and place lock lever (1) to LOCK position (L).
- Do not touch the control levers or pedals. When it is necessary to operate the control levers or pedals, always give a signal to your fellow workers to evacuate them to a safe place.





PRECAUTIONS WHEN INSTALLING, REMOVING, OR STORING ATTACHMENTS

- Appoint a leader before starting removal or installation operations for attachments.
- Place attachments that have been removed from the machine in a stable condition so that they do not fall. And take steps to prevent unauthorized persons from entering the storage area.



PRECAUTIONS FOR WORKING AT HIGH PLACES

When working at high places, use a step ladder or other stand to ensure that the work can be performed safely.

There is a danger falling from high place that can lead to serious personal injury or death.

OPERATION

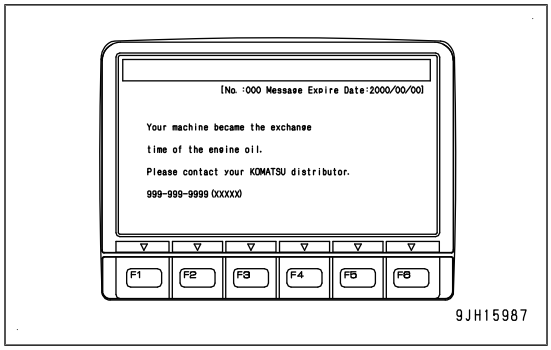
⚠ WARNING

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

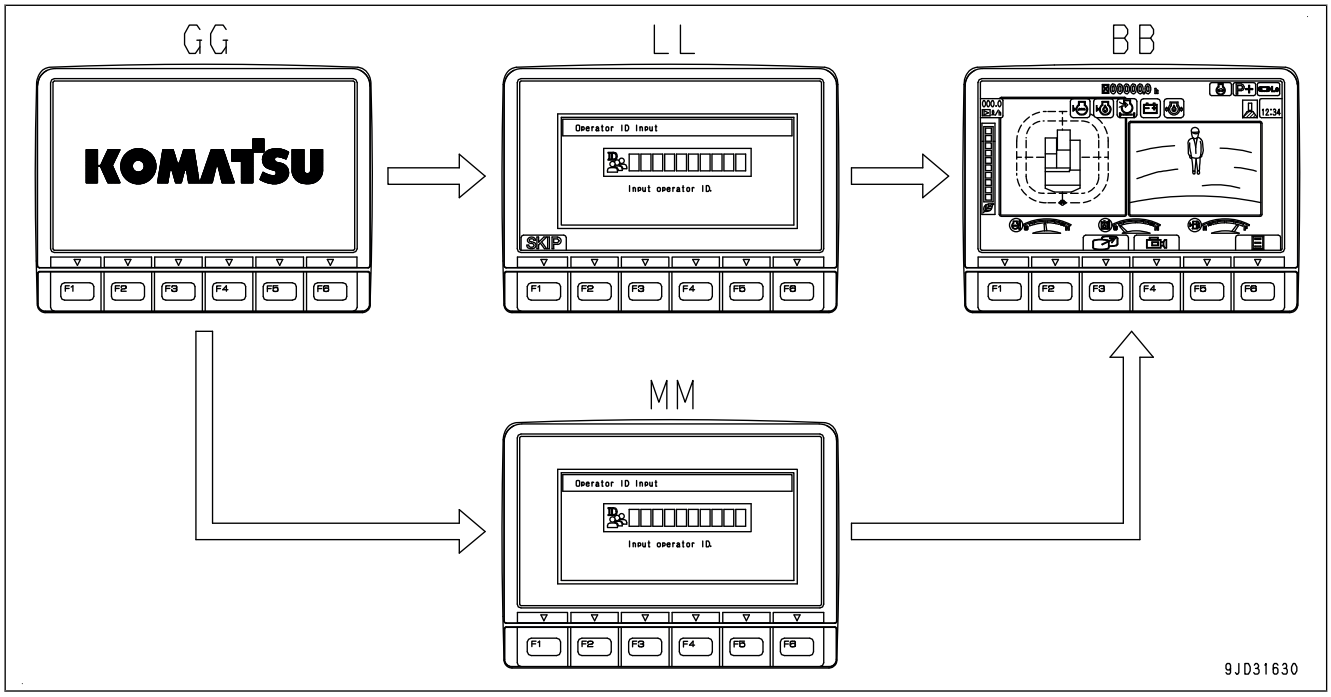
End screen when any message has been received

If there is any message from your Komatsu distributor, it is displayed on the end screen.

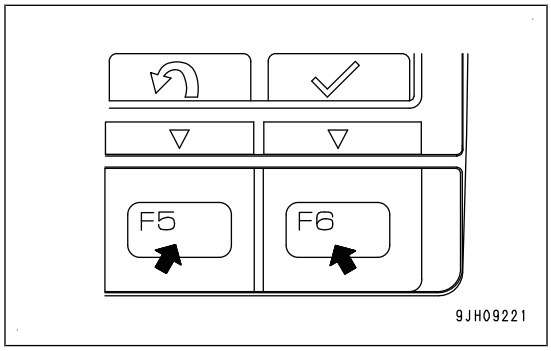
In this case, turn the starting switch to ON position to re-check the message, and if the message is requesting a response, make a reply to it.



BASIC OPERATION OF MACHINE MONITOR WHEN STARTING SWITCH IS ON WHILE OPERATOR ID INPUT IS SET



- If inputting ID number for operator identification function (with SKIP) is set, the starting screen GG switches to ID number input screen LL (with SKIP) when the starting switch is turned to ON position.
- If inputting ID number for operator identification function (without SKIP) is set, the starting screen GG switches to ID number input screen MM (without SKIP) when the starting switch is turned to ON position.
- On the ID number input screen LL (with SKIP) or MM (without SKIP), input the already registered ID number, and press the switch F6. The screen changes to the check before starting screen BB. If you input an incorrect ID number, press the switch F5, and clear an input character at a time.



Symbols	Type of caution lamp	Color/Machine state (action level)			
		Red	Yellow	White	Blue
 G0058665	NOx control system caution lamp	Abnormal (L04, L03)	Abnormal (L03)	-	-

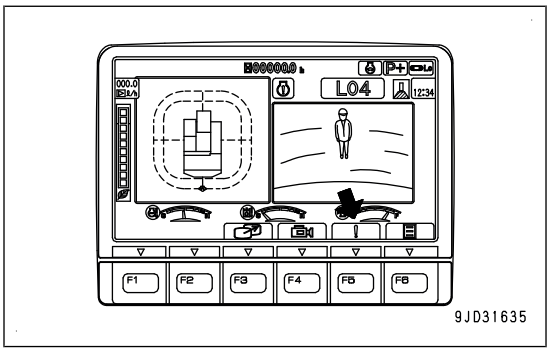
For the meaning of caution lamps and required actions, see the section of the caution lamps.

CURRENT ABNORMALITY DISPLAY SWITCH

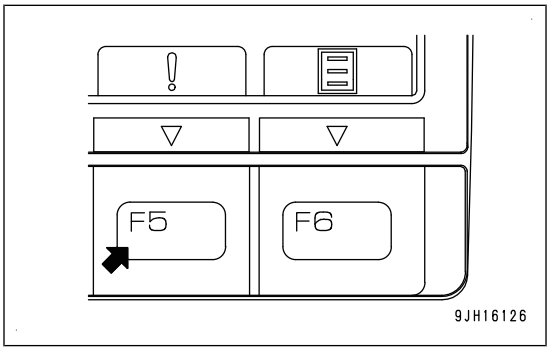
If there is any abnormality currently generated, "!" is displayed above the switch F5.

While "!" is displayed, press the switch F5 to shift the monitor display screen to the Current Abnormality screen.

Take appropriate actions according to the message displayed on the monitor.



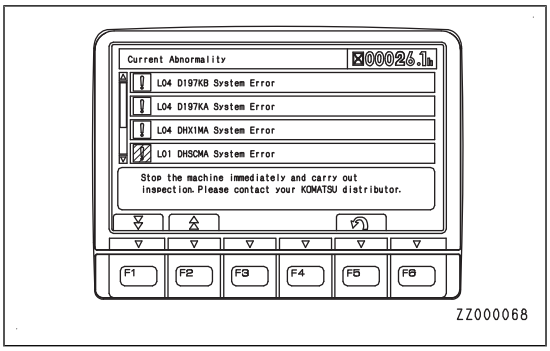
9JD31635



9JH16126

Operation on the Current Abnormality screen

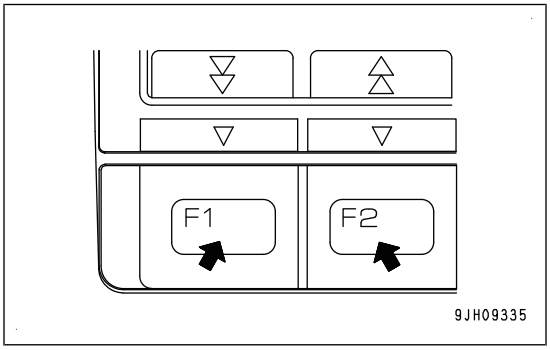
On the Current Abnormality screen, you can perform the following operations with the switches F1, F2 and F5.



ZZ000068

F1: Displays the next page. When on the last page, it displays the first page.

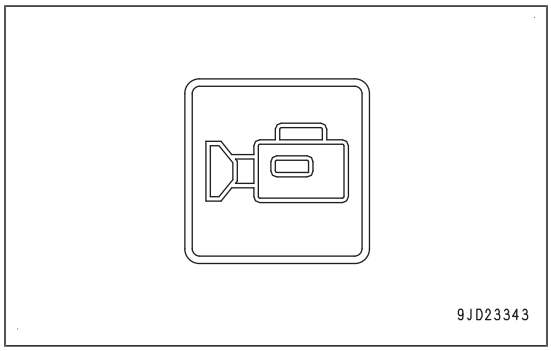
F2: Displays the previous page. When on the first page, it displays the last page.



9JH09335

CAMERA SYSTEM CAUTION LAMP

Camera system caution lamp warns about the signal trouble caused by such as breakage in cables, loose and disconnected connectors.



When the action level “L03” is displayed

The rear camera signal has abnormality.

The caution lamp lights up in red and the alarm buzzer sounds intermittently.

If the caution lamp is lit, the camera image is not displayed on the machine monitor.

Stop the operation and move the machine to a safe place, then ask your Komatsu distributor for the inspection and maintenance.

⚠ WARNING

Do not move the machine when camera image is not displayed on the machine monitor.
Arrange a conductor always when moving the machine to the safe place. Operator should pay careful attention to the label when there is any labels. Follow the instructions from the conductor.

When the action level “L01” is displayed

The caution lamp lights up in yellow.

If the caution lamp is lit, the camera image is not displayed on the machine monitor.

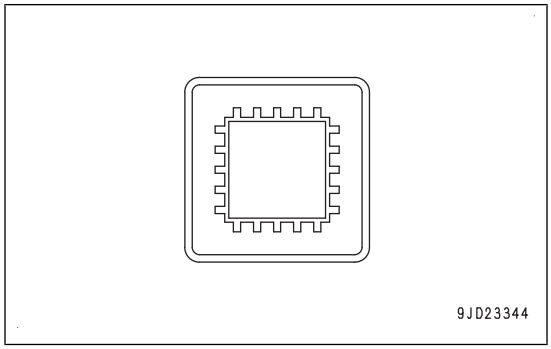
Visually check the safety around the machine always when operating the machine.

When you finish the operation, always perform the inspection and maintenance.

Ask your Komatsu distributor for the inspection and maintenance as needed.

CAMERA SYSTEM CAUTION LAMP

When an abnormality occurs in KomVision system controller, the caution lamp lights up in yellow, and the action level “L01” is displayed.



If the caution lamp is lit, the camera image is not displayed on the machine monitor.

Visually check the safety around the machine always when operating the machine.

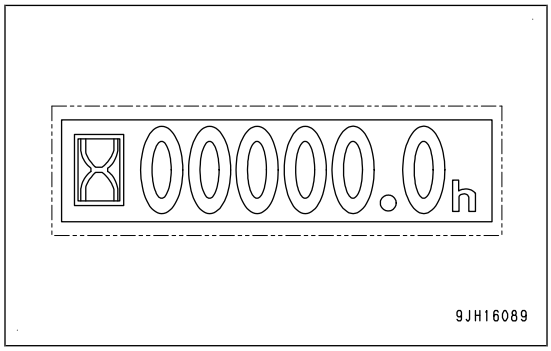
Ask your Komatsu distributor for the inspection and maintenance.

SERVICE METER / CLOCK

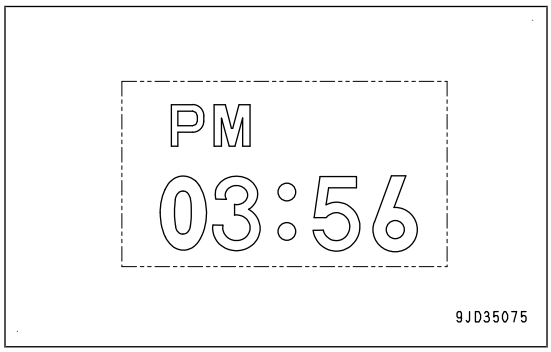
The service meter/clock shows the total hours of operation of the machine or the present time.

When the engine is running, the service meter advances even if the machine is not moving. The service meter advances 0.1 every 6 operation minutes, regardless of the engine speed.

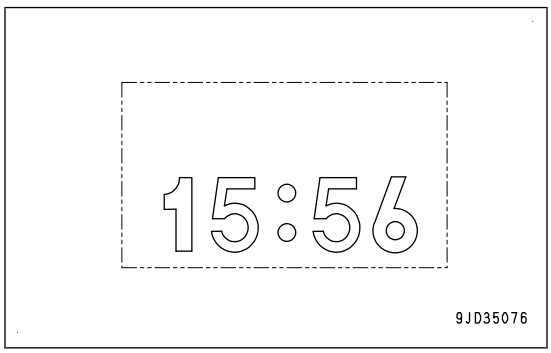
- Service meter display



- Clock display (12-hour display)



- Clock display (24-hour display)



REMARK

- If the battery is disconnected for a long period for storage etc., the time information may be lost.
- Clock display (12-hour or 24-hour display is available)
- For the setting and correction of time, see “CLOCK ADJUSTMENT”.

WIPER SWITCH

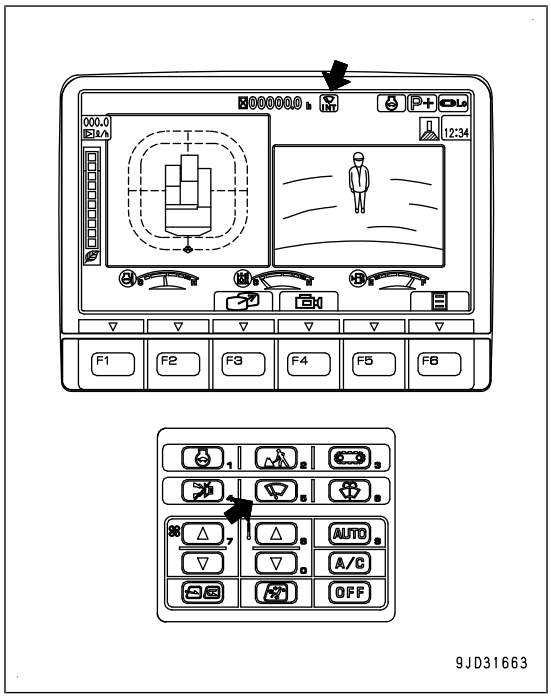
Wiper switch actuates the front windshield wiper.

Each time the switch is pressed, it changes INT → ON → stop (lamp goes out).

Wiper pilot lamp INT lights up: Windshield wiper operates intermittently

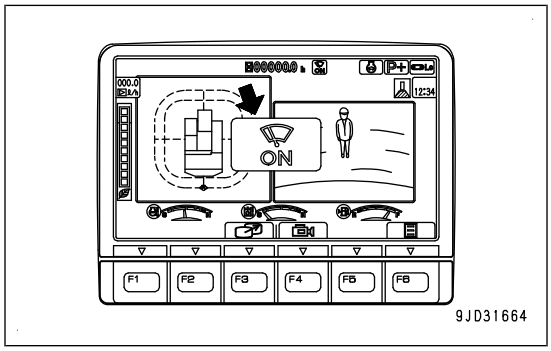
Wiper pilot lamp ON lights up: Windshield wiper operates continuously.

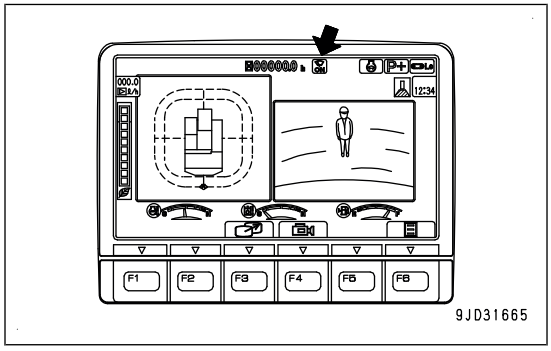
Wiper pilot lamp off: Windshield wiper stops.



REMARK

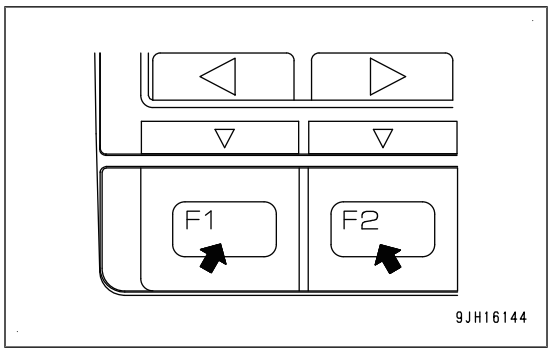
- Each time wiper switch is pressed, the mode is displayed in the center of the monitor display, and after 2 seconds, the screen returns to the standard screen.
- For the machine equipped with the lower windshield wiper (optional), the windshield wiper and the lower windshield wiper are operated alternately when the lower wiper switch is turned on.





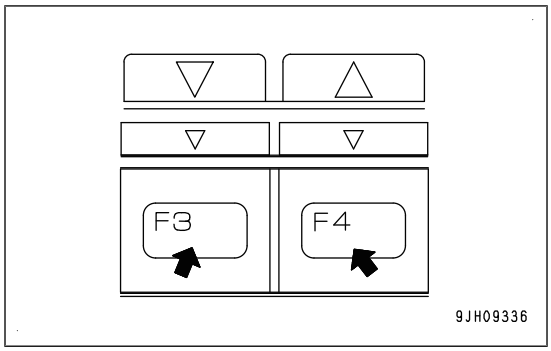
F1: Moves the selection to the left menu. It moves to the right end menu when it is on the left end menu.

F2: Moves to the right menu. It moves to the left end menu when it is on the right end menu.



F3: Moves to the next item (1 line below). When it is on the last line, it moves to the first line.

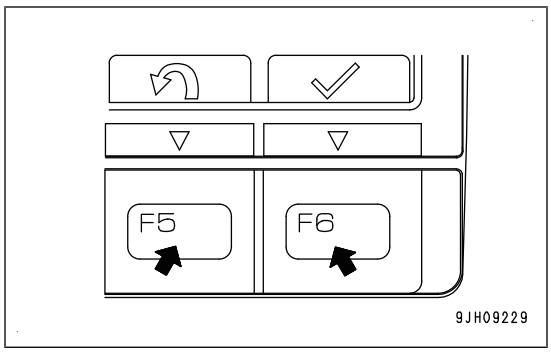
F4: Moves to the previous item (1 line above). When it is on the first line, it moves to the last line.



F5: The screen goes back to the standard screen.

F6: The setting screen for the selected item is shown.

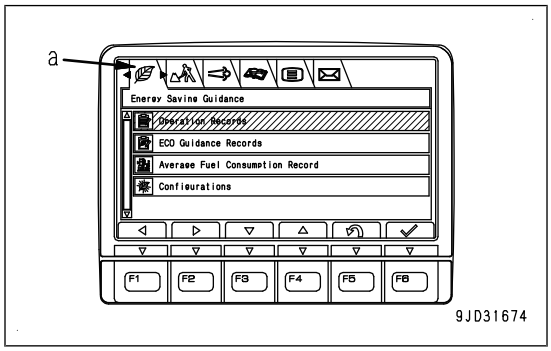
- If no switch is operated for 30 seconds when the user menu screen is shown, the screen automatically goes back to the previous screen.



ENERGY SAVING GUIDANCE

Each item of “Energy Saving Guidance” menu (a) is used for displaying and setting the notification relevant to energy saving.

- “Operation Records”
- “ECO Guidance Records”
- “Average Fuel Consumption Record”
- “Configurations”



AUTOMATIC LOW IDLE SETTING

Function of the automatic low idle

The auto-deceleration function decreases the engine speed from the working speed to the decelerated speed after approximately 4 seconds when the work equipment control lever and the travel lever are in NEUTRAL position while the auto-deceleration is enabled. The engine speed drops to the low idle speed when the work equipment control lever and the travel lever are still in NEUTRAL position for 30 seconds while the automatic low idle function is enabled. The fuel efficiency can be improved when no operation is performed.

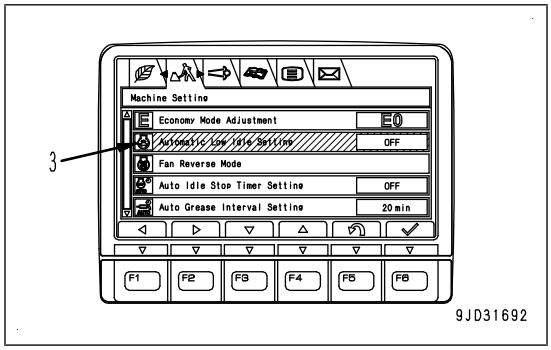
The setting ON and OFF of the automatic low idle function can be switched with this item.

(Automatic low idle function is set in ON at factory shipment.)

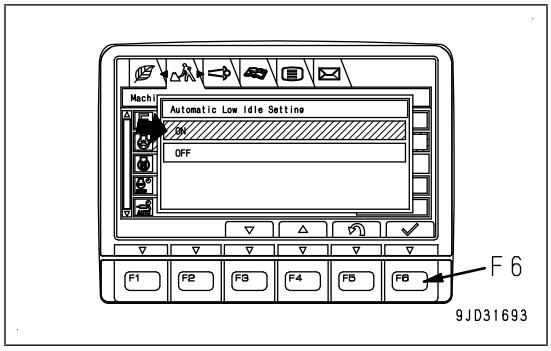
To enable the automatic low idle function

Set the mode as follows to enable the automatic low idle function.

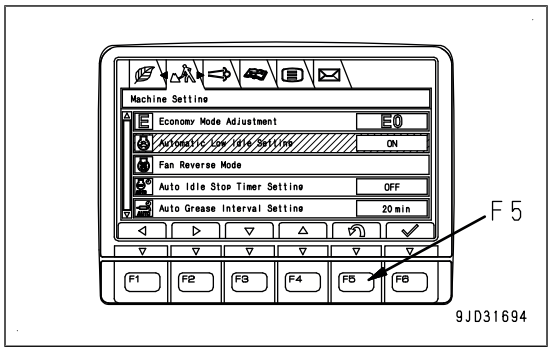
1. Select “Automatic Low Idle Setting” (3) on “Machine Setting” menu screen (b), then press the switch F6.



2. When the screen is switched to “Automatic Low Idle Setting”, select “ON”, then press the switch F6. The screen returns to the user menu.

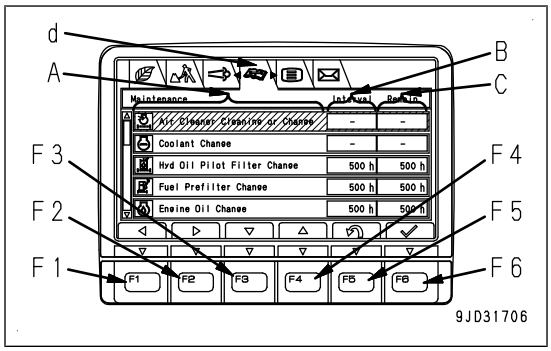


3. Press the switch F5. The screen returns to the standard screen.



4. The automatic low idle function is enabled.

MAINTENANCE SCREEN SETTING



Each item of setting menu (d) on “Maintenance” screen is used for displaying and setting the notification relevant to maintenance.

The items on “Maintenance” display are as follows.

A	B
Air Cleaner Cleaning or Change	-
Coolant Change	-
Hyd Oil Pilot Filter Change	500
Fuel Prefilter Change	500
Engine Oil Change (*1)	500
Engine Oil Filter Change (*1)	500
Hyd Oil Drain Filter Change	500
Hyd Oil Tank Breather Change	1000
Fuel Main Filter Change	1000
Hydraulic Oil Filter Change	1000
PTO Case Oil Change	1000
Swing Machinery Case Oil Change	1000
Swing Motor Cooling Filter Change	1000
Fuel Tank Breather Change	1000
Final Drive Case Oil Change	2000
KCCV Filter Change	2000
KDPF Filter Cleaning	4500
Fuel Doser Cleaning	4500
Hydraulic Oil Change	5000

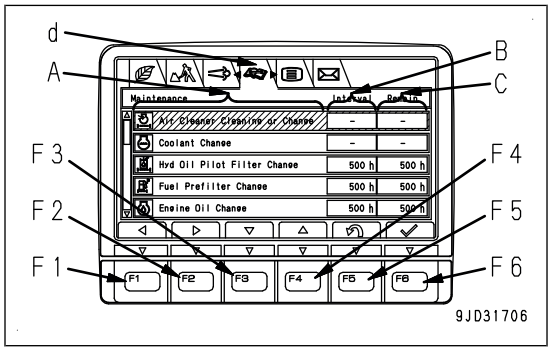
A: Maintenance items

B: Default maintenance interval settings (h)

C: Time remaining until maintenance (h)

*1:

When using the engine oil for cold district, the maintenance interval setting must be changed.



On “Maintenance” menu screen, you can perform the following operations with switches F1 to F6.

F1, F2: Moves to the right and left menus.

F3: Moves to the next item (1 line below). When it is on the last line, it moves to the first line.

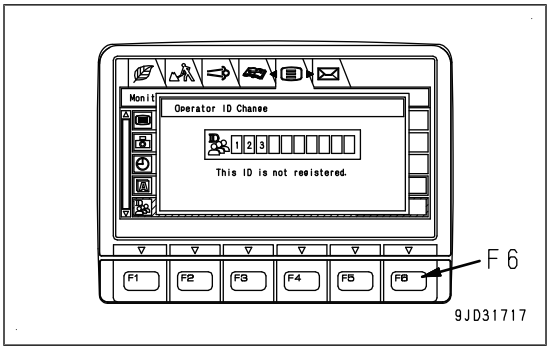
F4: Moves to the previous item (1 line above). When it is on the first line, it moves to the last line.

F5: Returns the screen to the standard screen.

F6: If this switch is kept pressed, the screen changes to the screen for resetting the remaining time to the maintenance for the selected item.

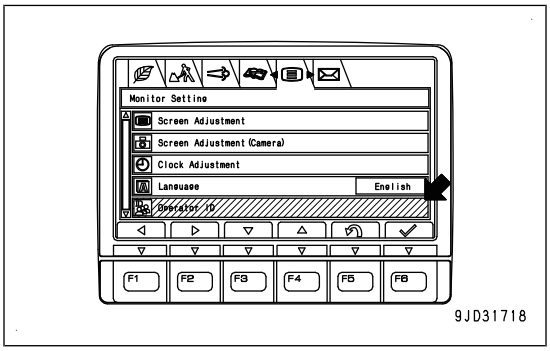
- When you press the switch F6 after inputting the ID which is not registered to “Operator ID Change” screen, a message is displayed below and the screen changes to “Monitor Setting” menu screen.

  In this case, the identified ID is not changed.
- On “Operator ID Change” screen, if no switch is operated for more than 30 seconds, the screen automatically changes to “Monitor Setting” menu screen.
  In this case, the identified ID is not changed.

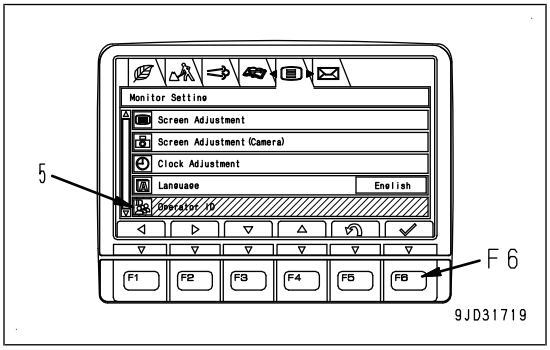


WHEN OPERATOR IDENTIFICATION FUNCTION IS AVAILABLE WITHOUT SKIP

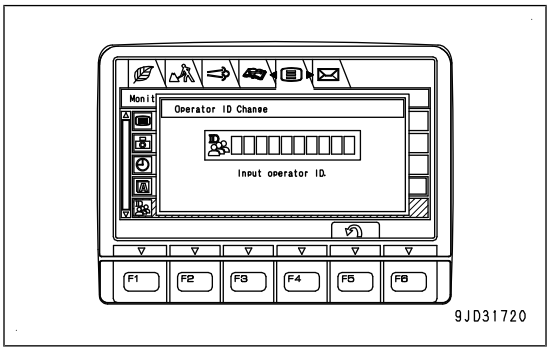
When the operator identification function is available without skip, the identified ID number is not displayed in “Operator ID” column on “Monitor Setting” menu screen.



1. Select “Operator ID” (5) on “Monitor Setting” menu screen, then press the switch F6 for 1 second.

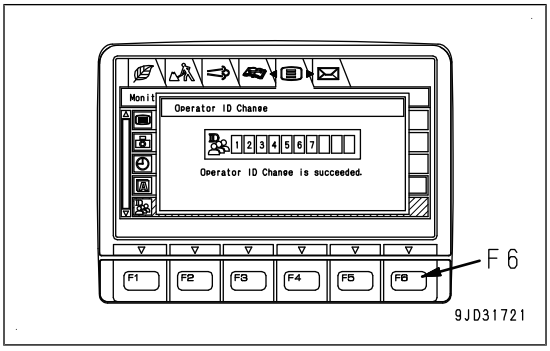


2. “Operator ID Change” screen is displayed.



- Input the already registered ID on “Operator ID Change” screen and press F6. Then, the identified ID can be changed.

  A message is displayed below and the screen returns to “Monitor Setting” menu screen.



SWING PARKING BRAKE CANCEL SWITCH

NOTICE

Swing operations can be performed temporarily with the swing parking brake cancel switch when there is a problem in the swing parking brake system. Do not use it except for emergency. Repair the problem as soon as possible.

Swing operations can be performed temporarily with the swing parking brake cancel switch when there is a problem in the swing parking brake system (when the upper structure does not swing but the display does not show “L03”).

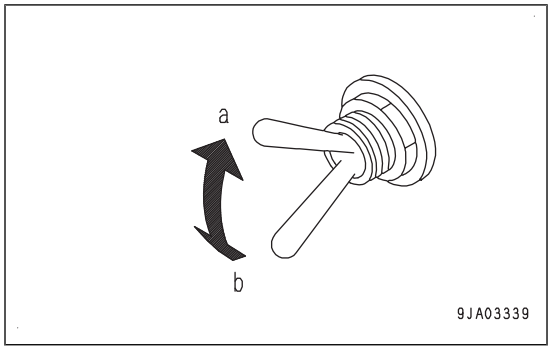
(a) Cancel

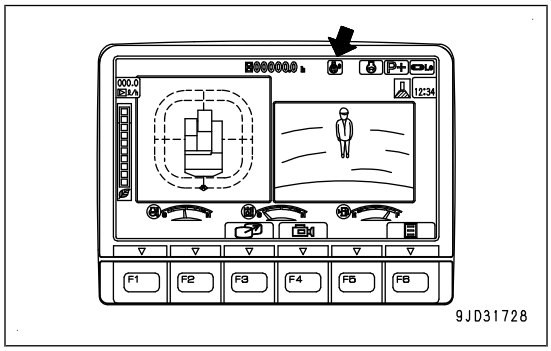
When abnormal (switch is set to upper position)

(b) Normal

When normal (switch is set to lower position)

- When the upper structure does not swing but the display does not show “L03”, move this switch to the Cancel position (a), and operation can be performed.
- When the switch is moved to Cancel position (a), the swing lock pilot lamp flashes.





OTHER EQUIPMENT

METHOD FOR OPENING AND CLOSING CAB FRONT WINDOW

(Only the pull-up cab specification machine)

⚠ WARNING

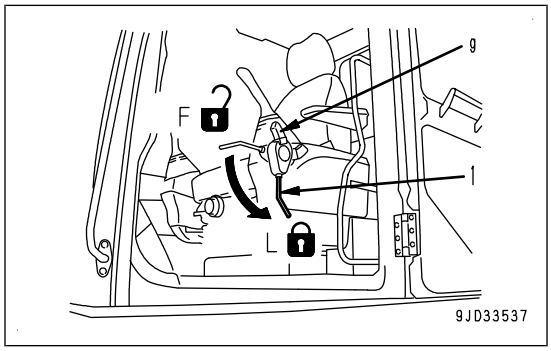
- **Set the lock lever in LOCK position always when opening or closing the front window, lower window, or door.**
  If the control lever or control pedal is touched by mistake when the lock lever is in FREE position, it may cause serious personal injury or death.
- **When opening or closing the front window, stop the machine on a level ground, lower the work equipment to the ground, stop the engine, and then perform the work.**
- **When opening the front window, hold the handle securely with both hands to pull up, and do not release your hands until the front window is locked by the automatic lock catch.**
- **Hold the handles securely with both hands when closing the front window otherwise it may drop under its own weight.**

It is possible to stow (pull-up) the front window (upper side) in the roof of the operator's compartment.

WHEN OPENING

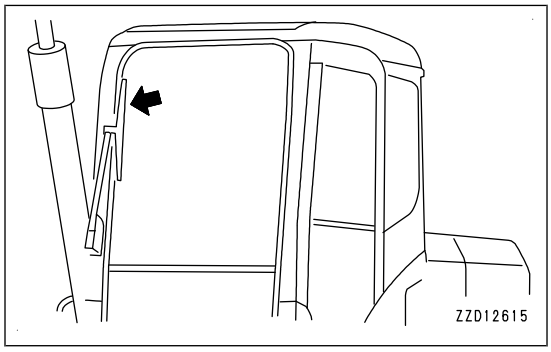
1. Stop the machine on a level ground, lower the work equipment to the ground, then stop the engine.

   Operate the operating portion (g) of the lock lever (1) to set it securely to LOCK position (L).



2. Check that the wiper blade is stowed in the right stay.

   If the wiper blade is stowed in wrong stowing position (b), lift it to move to the correct stowing position (a), or ask your Komatsu distributor for repair.

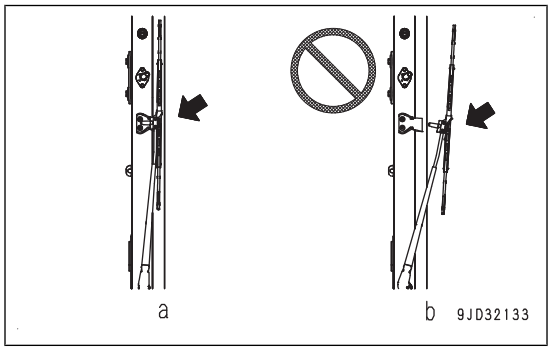


(a) Correct stowing position

The wiper blade is on the cab.

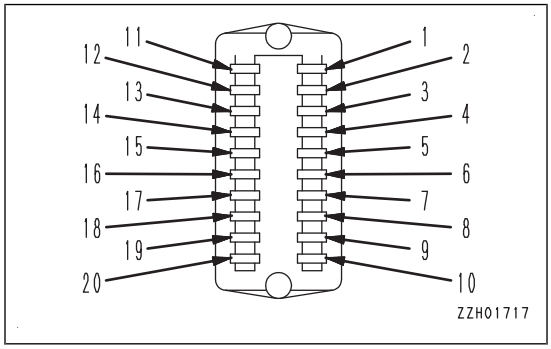
(b) Wrong stowing position

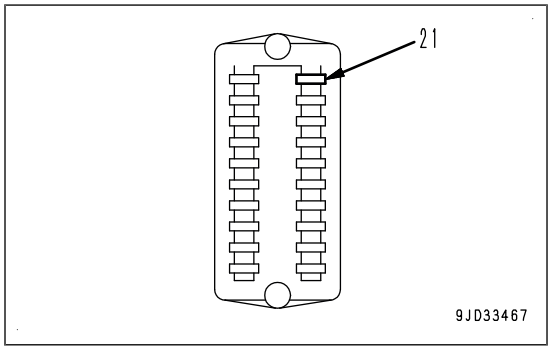
The wiper blade is on the glass.



Fuse capacities and circuit names

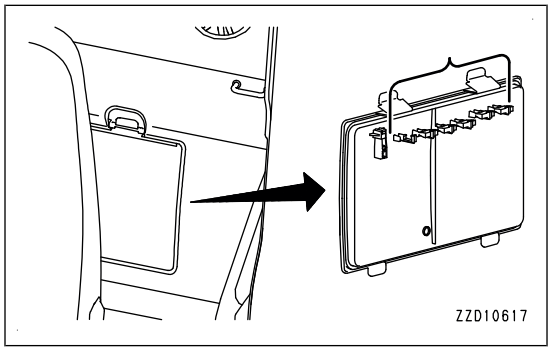
No.	Fuse capacity	Name of circuit
(1)	10 A	Pump secondary drive switch, swing parking brake cancel switch
(2)	10 A	Optional power supply (1), heater drain (if equipped)
(3)	10 A	PPC oil pressure lock solenoid, starting motor cut-off relay
(4)	20 A	Window washer, cigarette lighter
(5)	10 A	Horn, flash light
(6)	10 A	Ribbon heater relay
(7)	10 A	Revolving lamp (if equipped)
(8)	10 A	Radio
(9)	10 A	Hydraulically operated stairway (if equipped)
(10)	20 A	Air conditioner unit, air conditioner compressor
(11)	10 A	Power supply for external devices (if equipped)
(12)	10 A	Machine push-up, boom vibration control
(13)	20 A	Optional power supply (2), 12 V power supply, seat heater, air suspension seat
(14)	5 A	Air conditioner ECU power supply
(15)	10 A	ACC (each controller)
(16)	10 A	Radio backup, room lamp, system operating lamp
(17)	10 A	Staircase lighting, Hydraulically operated stairway (if equipped)
(18)	10 A	Walk-through lighting
(19)	5 A	Air conditioner ECU backup
(20)	10 A	Optional power supply (3)
(21)	10 A	KDPF temperature sensor





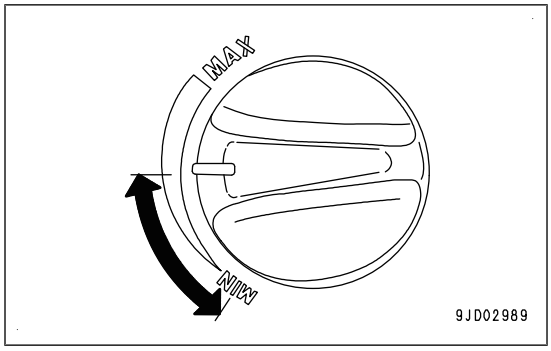
REMARK

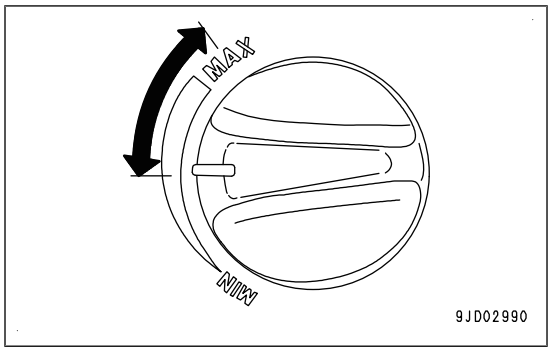
- The spare fuses are installed in the back of the fuse holder lid at the rear of the operator's seat.
- After using the spare fuses, replenish them immediately.
- One spare fuse is installed for each 5A, 10A, 15A, 20A, 25A, and 30A.



REMARK

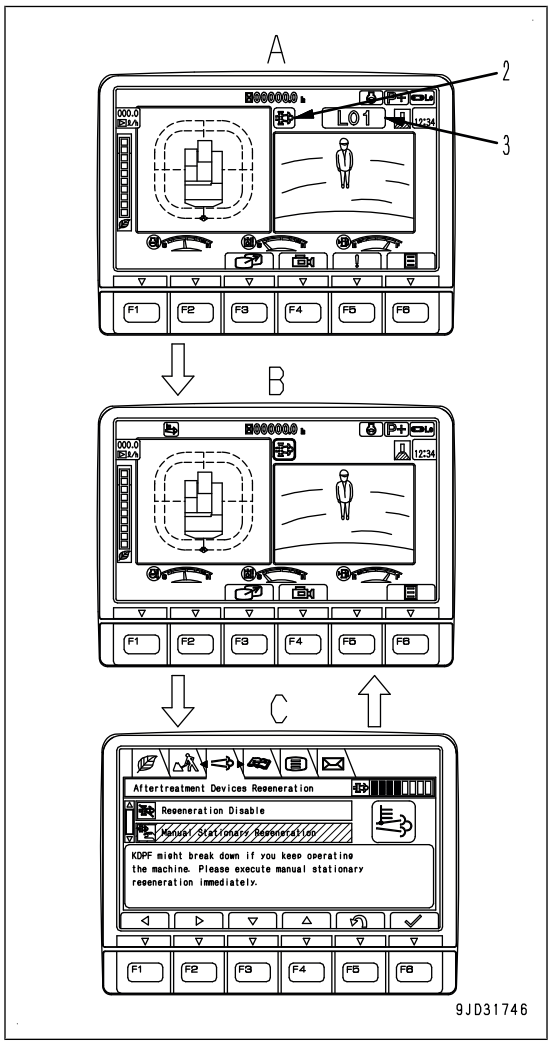
If heavy-duty operation is done for more than 30 minutes while the fuel control dial is in the midpoint or below between Low idle (MIN) position and High idle (MAX) position, soot is accumulated much and the action level “L03” can be shown, but it is not a problem.
Do the manual stationary regeneration, and then turn the fuel control dial to above the midpoint between Low idle (MIN) position and High idle (MAX) position to continue the operation.





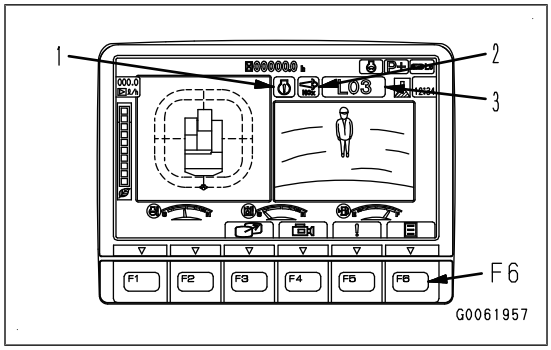
When the degree of urgency is low

- If KDPF soot accumulation caution lamp (2) lights up in yellow (action level (3): “L01”), screen (A) is shown first.
- The action level goes off 2 seconds after and the screen changes to the standard screen (B).
- If the lock lever is set to the LOCK position or all the work equipment control levers are set in NEUTRAL, the screen changes to “Aftertreatment Devices Regeneration” screen (C) after 3 seconds only the first time. If the manual stationary regeneration is not done, the screen goes back to the standard screen (B) after 30 seconds.
  Then, if the accumulated soot does not decrease, “Aftertreatment Devices Regeneration” screen (C) is shown for 30 seconds every 2 hours.
- If the KDPF soot accumulation caution lamp (2) lights up in yellow, stop the machine in a safe area after you finish the work, and do the manual stationary regeneration.



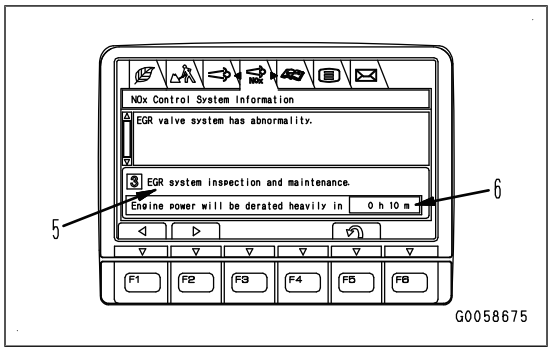
- Low level Inducement

  The alarm buzzer operates in the Intermittent alarm.
  The engine system caution lamp (1) lights up in red.
  The NOx control system caution lamp (2) lights up in red.
  “L03” is shown in red on the action level display (3).
  Push the switch F6 to show “NOx Control System Information” screen.



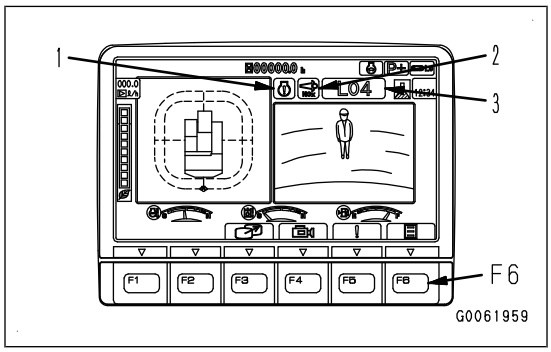
  “NOx Control System Information” screen message (5): “3 EGR system inspection and maintenance”

  The duration time of “Low level Inducement” is 10 hours. The remaining time (hours and minutes) to “Severe Inducement” is shown in the column (6) of “NOx Control System Information” screen.
  In “Severe Inducement”, engine power will be further derated.
  Stop the operation and move the machine to a safe area, then consult your Komatsu distributor for inspection and maintenance.



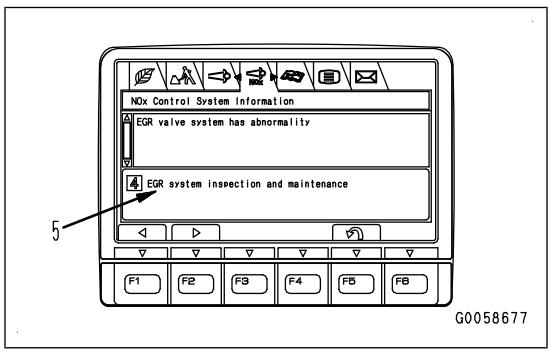
- “Severe Inducement”

  The alarm buzzer operates in the Continuous alarm.
  The engine system caution lamp (1) lights up in red.
  The NOx control system caution lamp (2) lights up in red.
  The action level “L04” (3) is shown in red.
  Push the switch F6 to show “NOx Control System Information” screen.



  “NOx Control System Information” screen message (5): “4 Engine power is under heavy deration.”

  Because of the further deration of engine power, the machine operation will be limited further.
  Stop the operation and move the machine to a safe area, then consult your Komatsu distributor for inspection and maintenance.



  Engine power can be restored temporarily from power derate. If Inducement goes to “Severe Inducement” and it becomes necessary to restore engine power temporarily, use the engine power restoration function to move the machine to a safe area and consult your Komatsu distributor for inspection and maintenance. This engine power restoration works only when the Inducement status is “Severe Inducement” and relieves back temporarily to the power deration of “Low level Inducement”. The operator can restore engine power through the machine monitor. For the engine power restoration procedure, see the section of “Temporary Restoration from Inducement” in this manual.

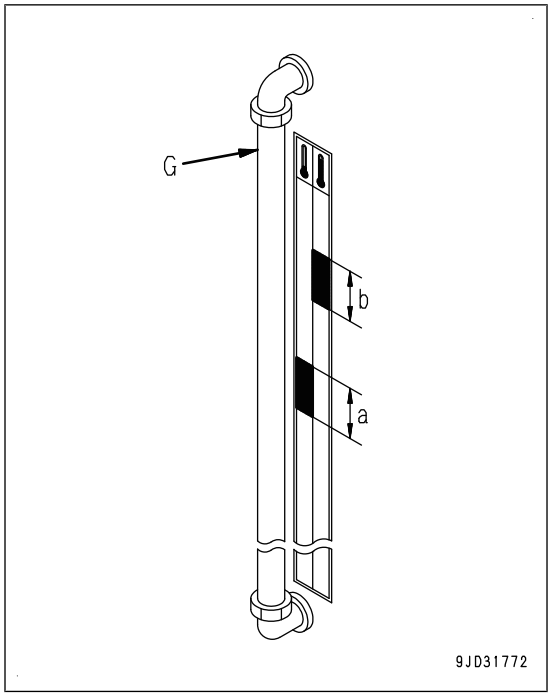
Temporary Restoration from Inducement

Temporary Restoration from Inducement is one of the Inducement strategies allowed to be included in the NOx control systems.

In case the NOx control system goes to “Severe Inducement”, engine power is derated heavily. This can cause difficulties to move the machine to a safe area for inspection and maintenance of the EGR valve system. For

Check that the hydraulic oil level is correct according to the following.

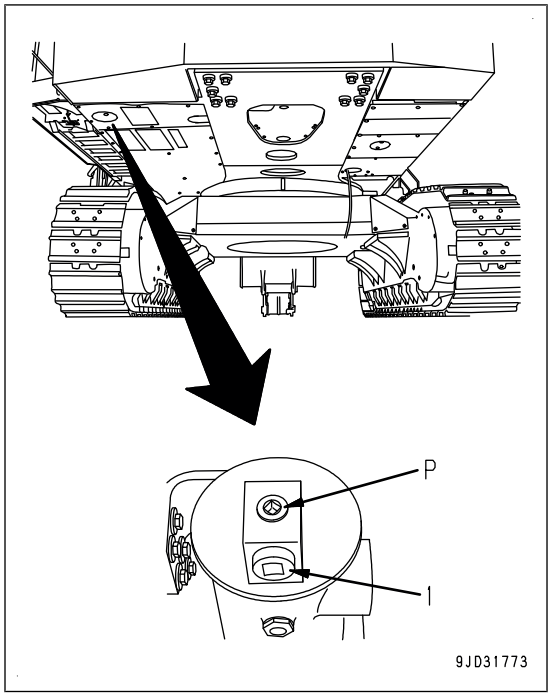
- Hydraulic oil level is within the correct level when it is within the blue range of gauge label (a) in the right figure while the hydraulic oil temperature is normal temperature (15 to 30 °C).
- Hydraulic oil level is within the correct level when it is within the red range of gauge label (b) in the right figure while the hydraulic oil temperature is high temperature (50 to 80 °C).



5. Add oil through oil filler port (F) on the top face of the hydraulic tank when the oil level is below the correct level.

NOTICE

Add oil so that it does not exceed the correct level. It may damage the oil circuit and cause the oil to spurt out.
If oil has been added until it exceeds the correct level, remove the plug (1) on the bottom of the machine body, and loosen the drain valve (P) to drain the excessive oil.



METHOD FOR ADJUSTING

METHOD FOR ADJUSTING OPERATOR'S SEAT

⚠ WARNING

When adjusting the position of the operator's seat, always set the lock lever to LOCK position to prevent any malfunction due to accidental contact with the control levers.

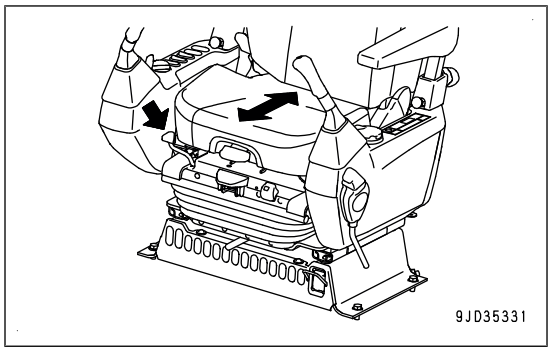
NOTICE

If the seat position is adjusted while the parts, tools, or empty cans are left around the operator's seat, the peripheral parts or operator's seat may be damaged.
Check that there is no parts etc., around the operator's seat, and adjust the seat position.

- Always adjust the operator's seat before starting each operation or when the operators change shift.
- Adjust the operator's seat so that control levers and switches can be operated freely and easily with the operator's back against the backrest.

METHOD FOR ADJUSTING SEAT IN FORE-AND-AFT DIRECTION

Pull up the fore-aft adjustment lever, set the seat to the desired position, then let go of the lever.
Fore-and-aft adjustment: 160 mm (16 steps)



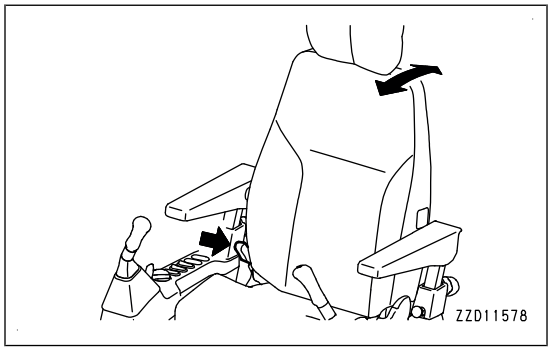
METHOD FOR RECLINING SEAT

The reclining of the seat becomes large when the seat is moved forward, and it becomes smaller as the seat is moved backward. When moving the seat backward, return the reclined seat back to the original position.

Pull up the reclining adjustment lever and set the seat back to a position which is comfortable for operation, then release the lever.

REMARK

Sit with your back against the backrest when adjusting. If your back is not touching the backrest, the backrest may suddenly move forward.



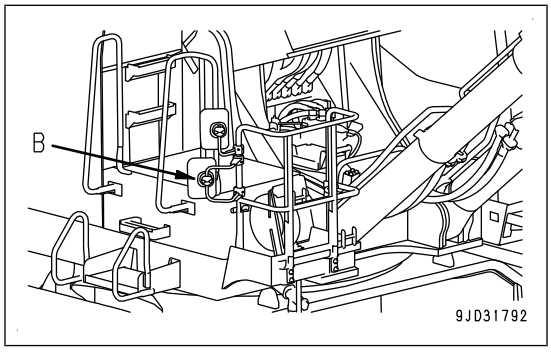
PROCEDURE FOR ADJUSTING MACHINE RIGHT FRONT MIRROR (B)

⚠ CAUTION

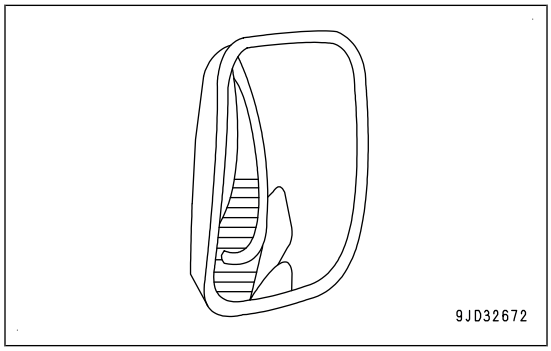
The following conditions must be met before starting the work to prevent the machine from moving during the work.

- **The machine is placed on a level ground.**
- **The work equipment is lowered to the ground in secure posture.**
- **The lock lever is in LOCK position.**
- **The engine is stopped.**

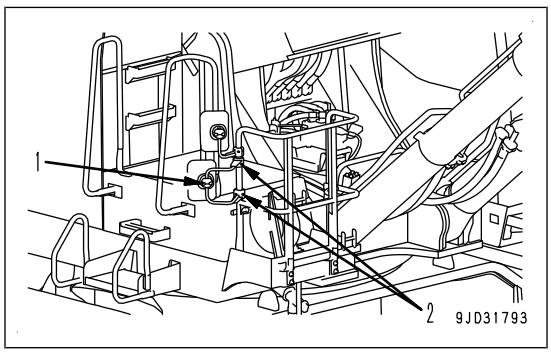
Adjust the mirror so that you can see a person at the rear right end of the machine.



1. Adjust the mirror with your hand so that the side of the machine is reflected in the mirror as shown in the figure.
2. Check that you can see a person at the rear right end of the machine.



3. If you cannot adjust, loosen the mounting bolt (1) of mirror and the mounting bolt (2) of stay, and adjust the angles.



If the mirror is adjusted by loosening the mounting bolts, be sure to adjust the mirror to its regular position. For the adjustment method, see “PROCEDURE FOR ADJUSTING REGULAR POSITION OF MACHINE RIGHT FRONT MIRROR (B)”.

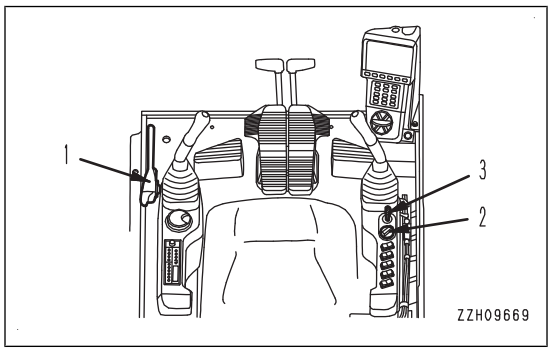
METHOD FOR STARTING ENGINE

⚠ WARNING

- **Start the engine only while sitting on the operator's seat.**
- **Do not attempt to start the engine by short-circuiting the engine starting circuit. Doing so may cause a serious personal injury or death or fire.**
- **Check that there is no person or obstacle in the area around the machine, then sound the horn and start the engine.**
- **Never use starting aid fluids as they may cause explosions.**
- **Exhaust gas is toxic. When starting the engine in confined spaces, be particularly careful to ensure good ventilation.**

NOTICE

- **Check that the fuel control dial (2) is at Low idle (MIN) position before starting the engine. The engine will accelerate suddenly and cause damage to the engine parts if the fuel control dial is at High idle (MAX) position.**
- **Do not keep the starting switch key (3) at START position continuously for more than 20 seconds. If the engine does not start, wait for at least 2 minutes, then start again from the beginning.**
- **After the engine starts, wait for the engine oil pressure caution lamp to go out. Do not touch the control levers or control pedal while the engine oil pressure caution lamp is lit.**



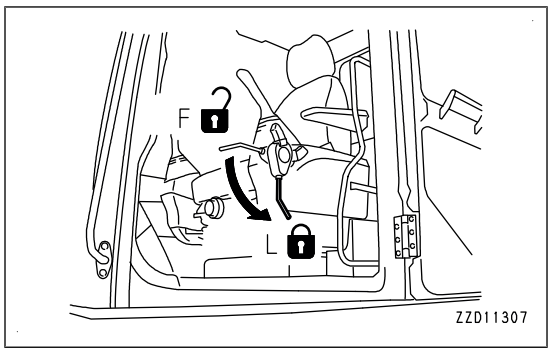
This machine is equipped with an engine automatic preheating function (engine automatic preheating system) that starts the engine preheating automatically.

When the ambient temperature is low, the preheating caution lamp lights up when the key in starting switch (3) is turned to ON position to inform the operator that preheating has been started automatically.

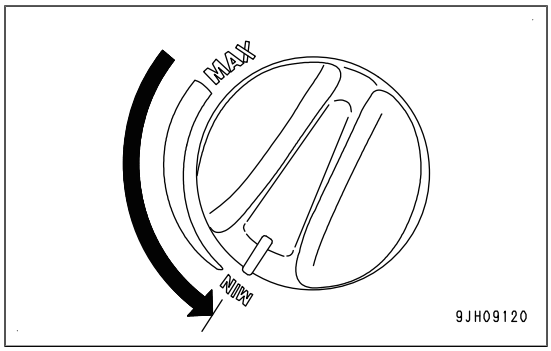
Start the engine according to the following procedure.

1. Check that the lock lever (1) is at LOCK position (L).

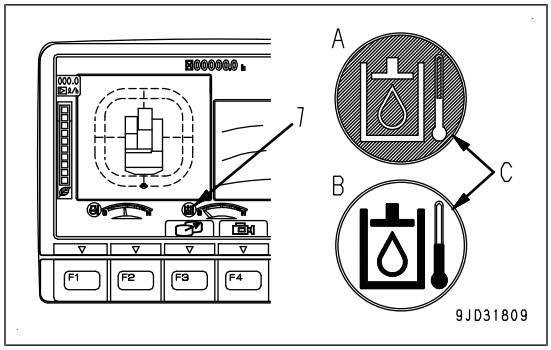
   If the lock lever (1) is in FREE position (F), the engine does not start.



2. Turn the fuel control dial (2) to Low idle (MIN) position.

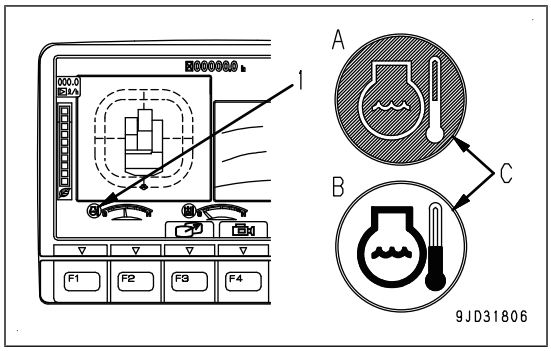


- Display (A): when temperature is correct: Caution lamp background (C) is blue.
- Display (B): when temperature is low: Caution lamp background (C) is white.



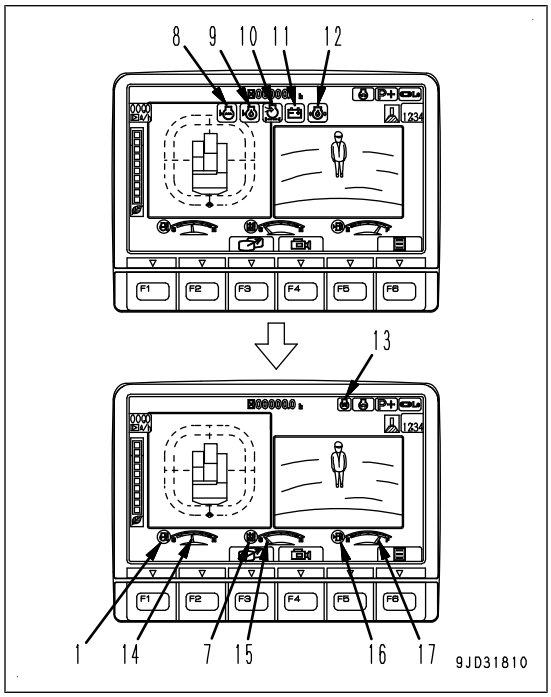
9. Check that the engine coolant temperature caution lamp (1) displays the correct temperature.
   - Display (A): when temperature is correct: Caution lamp background (C) is blue.
   - Display (B): when temperature is low: Caution lamp background (C) is white.

   If it displays the low temperature, perform additional warm-up operation of the engine until the engine coolant temperature caution lamp (1) displays the correct temperature.



10. Check that the hydraulic oil temperature caution lamp and engine coolant temperature caution lamp display the correct temperature, then check that all the instruments, caution lamps, and pilot lamps on the machine monitor are in the following conditions.
    - Radiator coolant level caution lamp (8): OFF
    - Engine oil level caution lamp (9): OFF
    - Air cleaner clogging caution lamp (10): OFF
    - Charge level caution lamp (11): OFF
    - Engine oil pressure caution lamp (12): OFF
    - Engine preheating pilot lamp (13): OFF
    - Engine coolant temperature gauge (14): Indicator is in green range
    - Engine coolant temperature caution lamp (1): Displays correct temperature
    - Hydraulic oil temperature gauge (15): Indicator is in green range
    - Hydraulic oil temperature caution lamp (7): Displays correct temperature
    - Fuel level caution lamp (16): Displays correct level
    - Fuel gauge (17): Indicator is in green range
11. Check for abnormal exhaust gas color, noise, or vibration.

    If any problem is found, contact your Komatsu distributor.



NOTICE

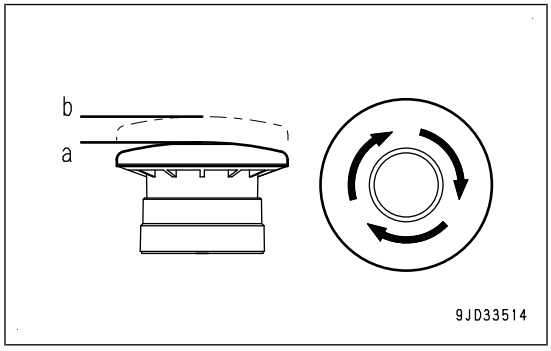
Warm-up all the hydraulic component by performing the warm-up operation for hydraulic system in cold weather (ambient temperature less than 0 °C) even when the hydraulic oil temperature caution lamp displays the correct temperature.

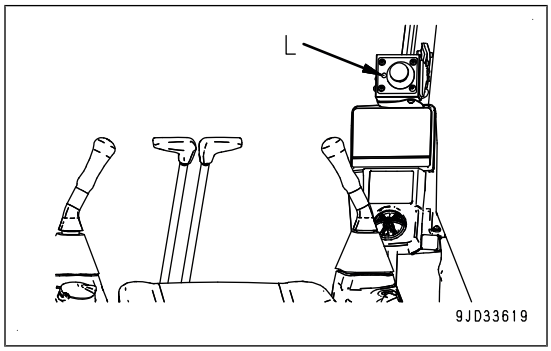
12. Hydraulic system warm-up operation in cold weather

Restart the engine after stopping according to the following procedure.

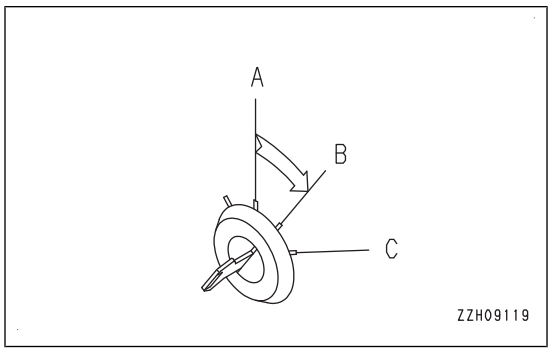
1. Turn the top of the engine emergency shut down switch (S) clockwise.

   The switch protrudes a little and it returns to OFF (normal operation) position (b). At this time, check that the indicator lamp (L) in cab is not lit.





2. Turn the starting switch key to ON position (B).
3. Start the engine.



REMARK

If the engine is stopped by the operation of engine emergency shut down switch, air bleeding from fuel circuit is not necessary.

ECONOMY MODE SELECTION

The relationship between the economy mode and work performance is as follows. Select the suitable economy mode by referring to the following table.

REMARK

As the number of the mode to be selected increases, the fuel efficiency increases, but on the other hand, the work performance decreases.

Mode	Loading on dump truck		Topsoil operation		Mucking blasted rock	Root cutting	Face operation	Ditching		Slinging operation
	Blasted rock	Crumbled sandy soil	Soft rock	Sandy loam bank				Soft rock	Sandy loam bank	
E0	◎	◎	○	◎	○	○	○	○	○	◎
E1	○	○	△	△	△	△	△	△	△	◎
E2	△	△	△	△	x	x	x	x	△	○
E3	x	△	x	x	x	x	x	x	x	○

◎: Operation can be performed with no difficulty.

○: Operation can be performed with a little difficulty.

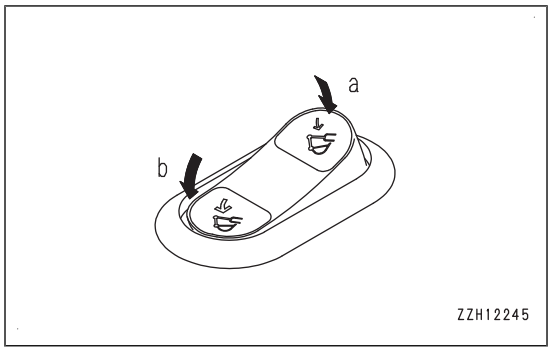
△: Operation is possible, but has a lot of problem.

x: Operation is impossible due to too much problem.

METHOD FOR ESCAPING FROM MUD

Always operate carefully to avoid getting stuck in mud. If the machine does get stuck in mud, do as follows to get the machine out.

Set the machine push-up switch to the high-pressure setting position (b).
The machine can easily get out since the boom pressing force against ground increases.

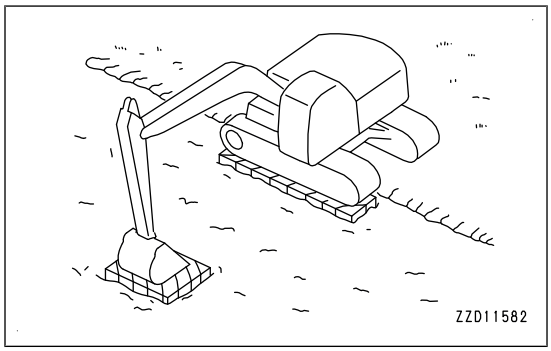


Track on one side stuck

NOTICE

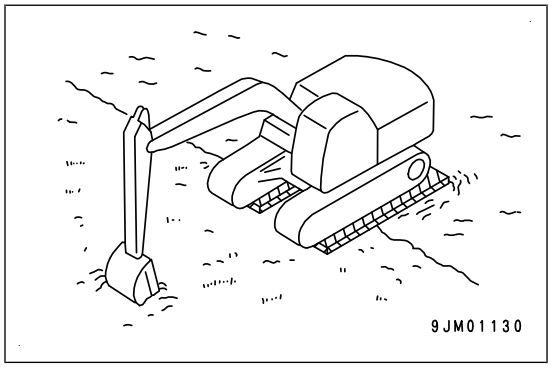
When using the boom or arm to raise the machine, push the ground by using the bottom of the bucket.
At this time, set the angle between the boom and the arm at 90° to 110° and lower the bucket bottom surface to the ground.
The same applies when using the bucket installed in the reverse direction.

When only one side is stuck in mud, raise the track by lowering the bucket to the ground on the stuck side. Lay boards or logs under the raised track. Then raise the bucket and drive the machine out.

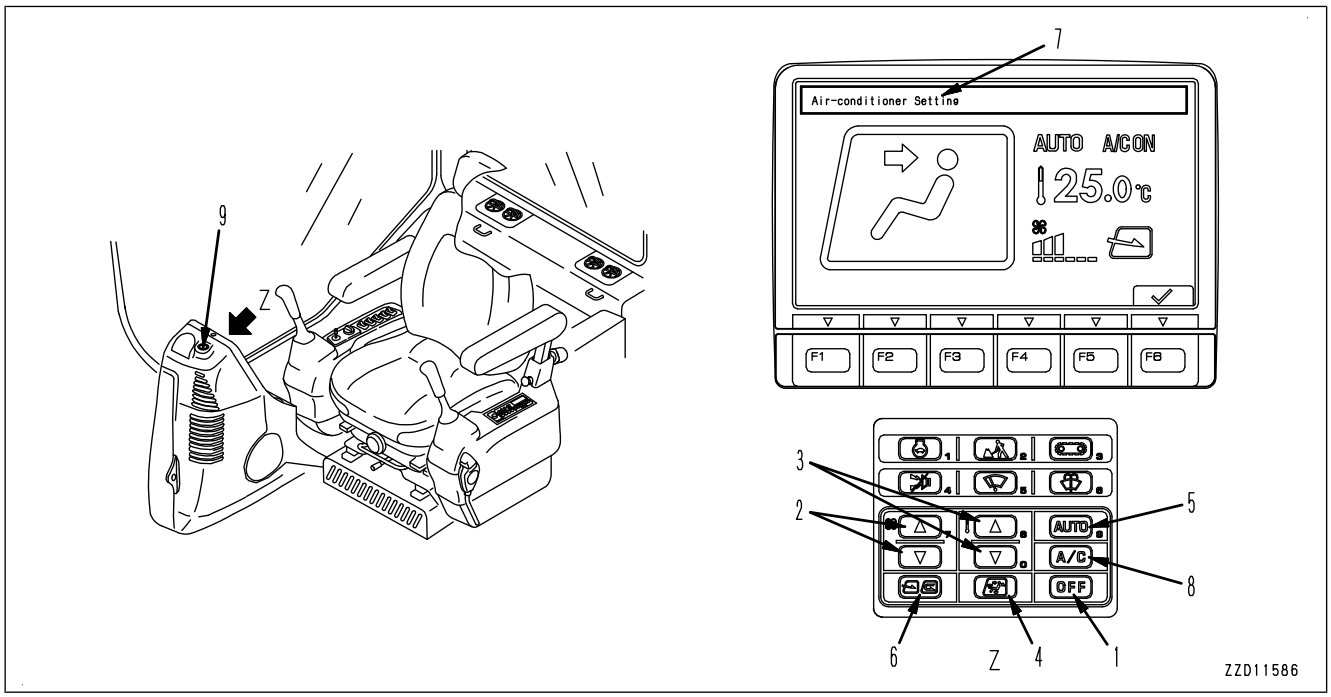


Tracks on both sides stuck

When the tracks on both sides get stuck and slip, lay logs, wooden blocks, etc. according to the preceding procedure. Stick the bucket into the front ground, pull in the arm as in digging operation, and set the travel lever to FORWARD position to drive the machine out.



EXPLANATION OF AIR CONDITIONER EQUIPMENT



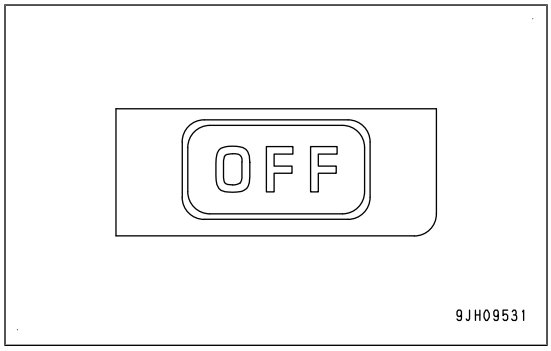
(1) OFF switch
(2) Fan switch
(3) Temperature control switch
(4) Vent selector switch
(5) Auto switch
(6) FRESH/RECIRC air selector switch
(7) Display monitor
(8) Air conditioner switch
(9) Sunlight sensor

OFF SWITCH

This switch is used for stopping the fan and air conditioner.

REMARK

Even if this OFF switch is pressed, the monitor screen does not switch to the air conditioner adjustment screen.

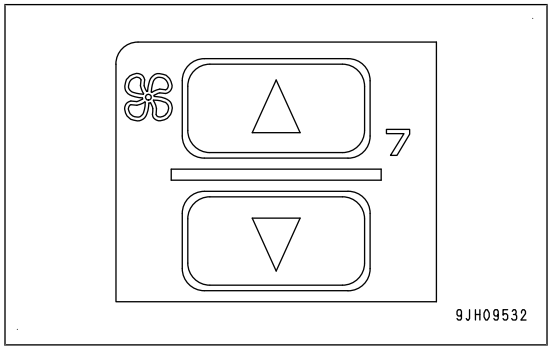


FAN SWITCH

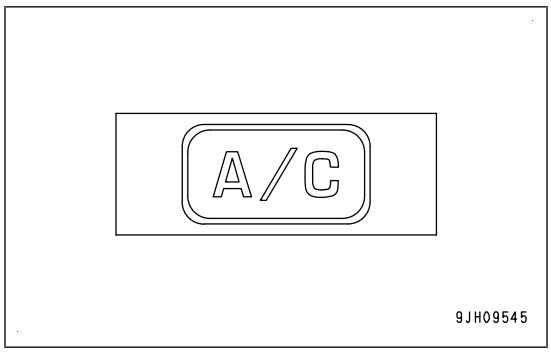
You can adjust the air flow by using the fan switch.

The air flow can be adjusted to 6 levels.

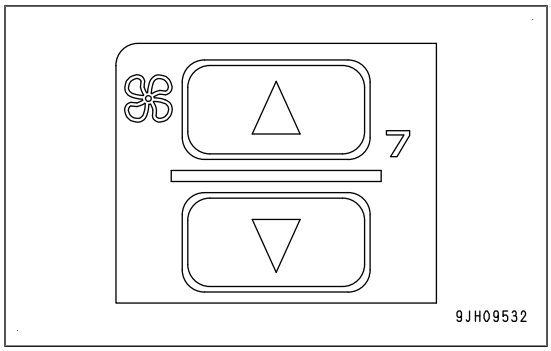
- Press the △ switch to increase the air flow; press the ▽ switch to decrease the air flow.
- During auto operation, the air flow is automatically adjusted.

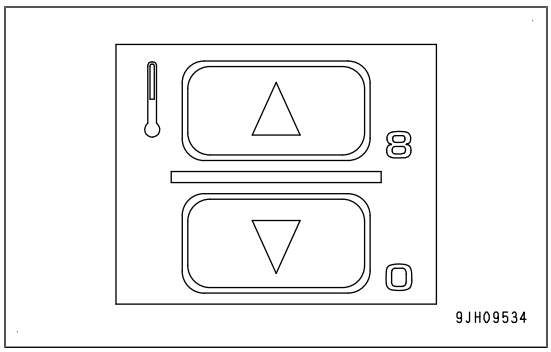


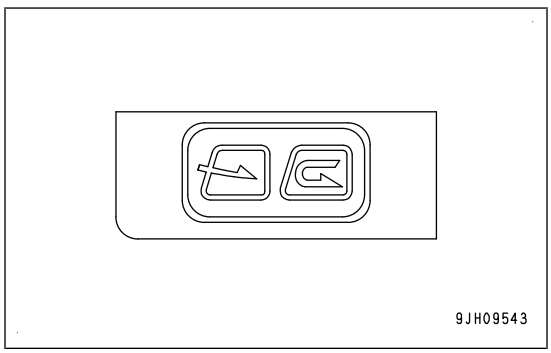
3. Turn on the air conditioner switch (3).



4. Adjust fan switch (1), temperature control switch (4) and FRESH/RECIRC selector switch (5) to the desired positions.

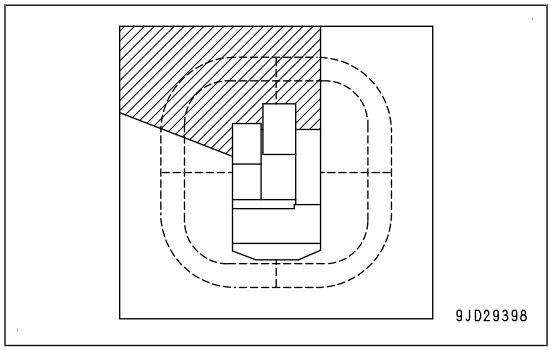






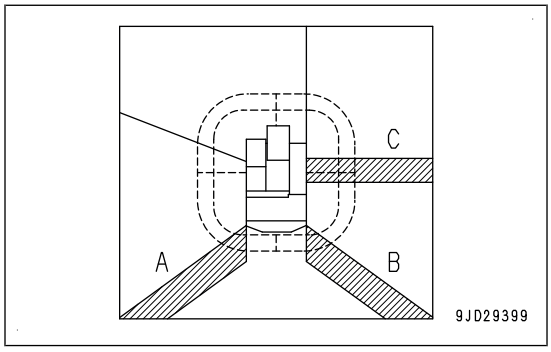
KomVision synthesizes the images of 4 cameras. The bird's eye view display covers the view of 275 °.

The shaded area in the figure is not displayed on the monitor screen even if the camera images are synthesized.



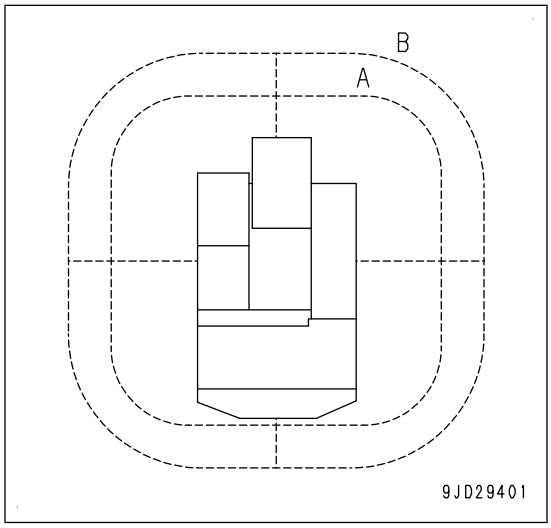
Since this image is electronically synthesized, the objects in the image may be displayed double or distortions or misalignment may occur in the shaded areas of the back of the machine (A) and (B) and the right of the machine (C).

For the camera image, the image shot by each of the loaded cameras is displayed.

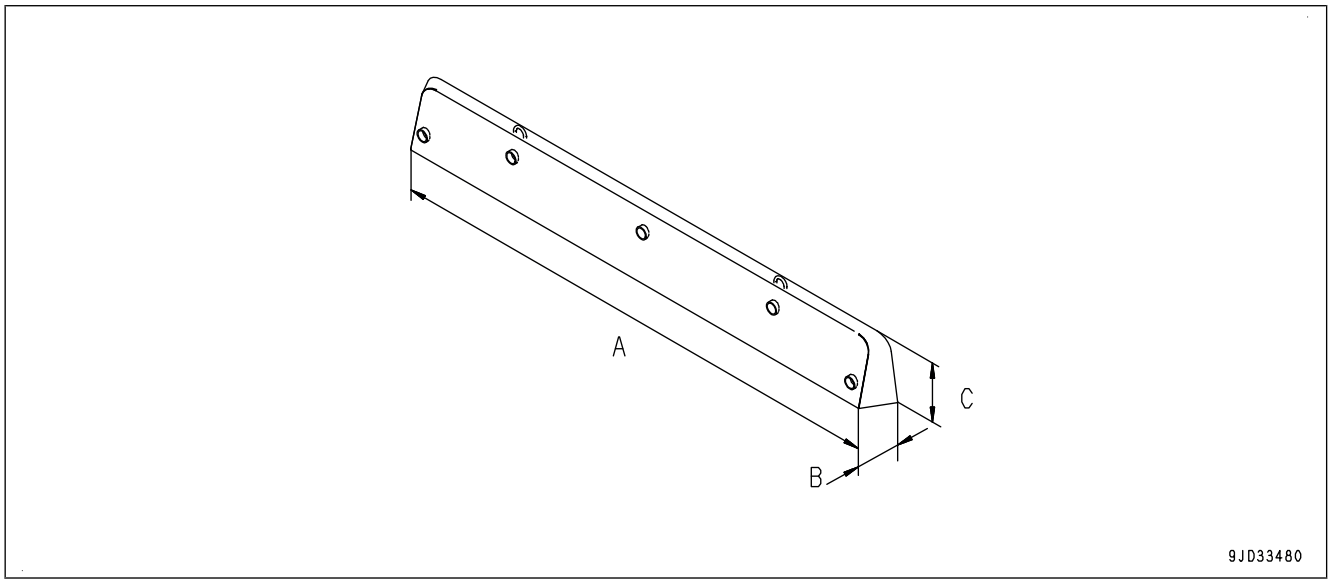


Reference line is displayed as follows:

Display area	Display color
Quadrangle (A) in which the rear of the machine is inscribed when the machine swings	Red
Quadrangle + 2 m (B) in which the rear of the machine is inscribed when the machine swings	Yellow

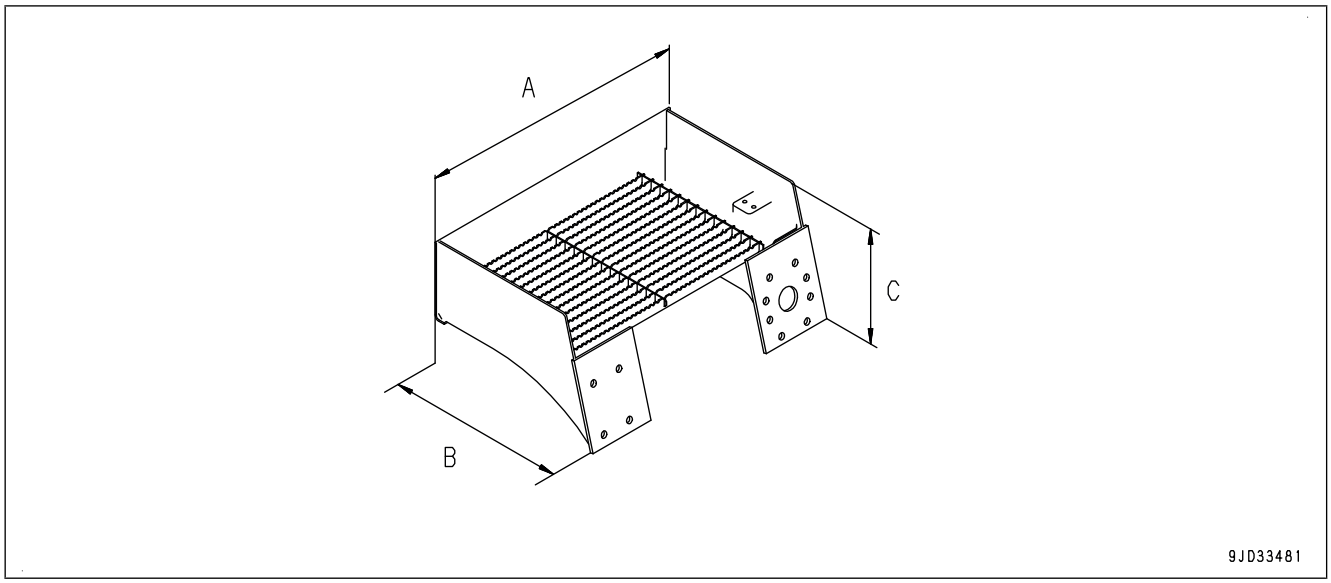


- Upper cover of radiator duct



	Machine model		PC1250,PC1250SP
A	Overall length	mm	2015
B	Overall width	mm	105
C	Overall height	mm	220
	Weight	kg	15

- Cat walk (R.H.)



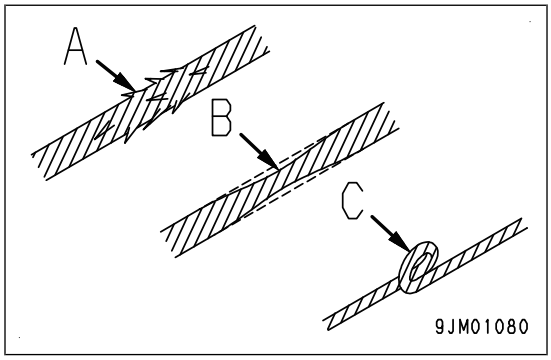
	Machine model		PC1250,PC1250SP
A	Overall length	mm	780
B	Overall width	mm	560
C	Overall height	mm	430
	Weight	kg	45

PRECAUTIONS FOR TOWING MACHINE

⚠ WARNING

Use the correct towing equipment and towing method. Any mistake in the selection of the wire rope or drawbar or the method for towing a disabled machine and being towed may lead to serious personal injury or death.

- **Always confirm that the wire rope or drawbar used for towing has ample strength for the weight of the machine being towed.**
- **A wire rope having cut strands (A), reduced diameter (B), or kinks (C) may break. Never use such a wire rope.**
- **Wear the leather gloves always when handling the wire ropes.**
- **Never tow a machine on a slope.**
- **During the towing operation, never stand between the towing machine and the machine being towed.**
- **Operate the machine slowly and be careful not to apply any sudden load to the wire rope.**

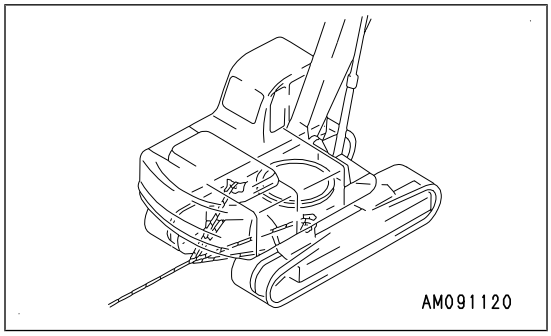


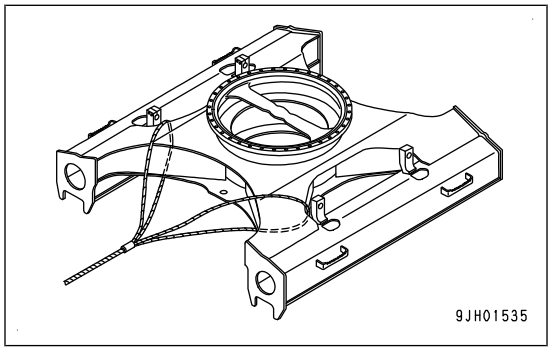
NOTICE

The maximum towing capacity for this machine is 686000 N {70000 kgf}.
Do not tow any load greater than this.

- If the machine sinks in mud and cannot get out under its own power, or if the machine tows a heavy object, use a wire rope as shown in the figure on the right.
- Place pieces of wood between the wire ropes and the machine to prevent damage to the ropes and the machine.
- Hold the wire rope level and set it straight to the track frame.
- When towing a machine, travel at a speed of 1 km/h {0.621 MPH} or lower for a distance of only a few meters to a place that is suitable for performing repairs.

  Perform this only in an emergency.





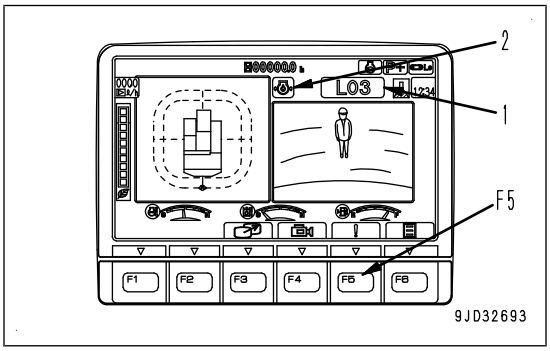
PRECAUTIONS FOR SEVERE JOB CONDITION

- When performing digging operations in water, if the work equipment mounting pin goes into the water, perform greasing every time the operation is performed.
- For heavy-duty operations and deep digging, perform greasing of the work equipment mounting pins every time before operation.
  After greasing, operate the boom, arm and bucket several times, then grease again.

Problem	Main causes	Remedy
An error code is displayed on the monitor.	Contact your Komatsu distributor.	
Alarm buzzer sounds.		
Engine suddenly loses power. It is in derate mode.		

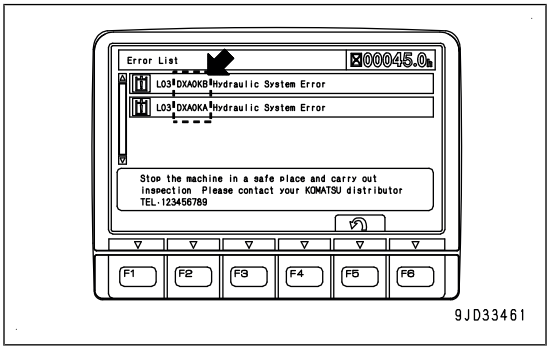
IF MACHINE MONITOR SHOWS WARNING DISPLAY

When the action level display (1) or caution lamp (2) is shown on the display of the machine monitor, press the switch F5 to display the Current Abnormality and check the details and remedy.



- When “DXA0KA”, or “DXA0KB” is on the Current Abnormality screen, turning the pump secondary drive switch to upper (emergency) position enables operations temporarily.

  After that, immediately ask your Komatsu distributor for the inspection and repair.



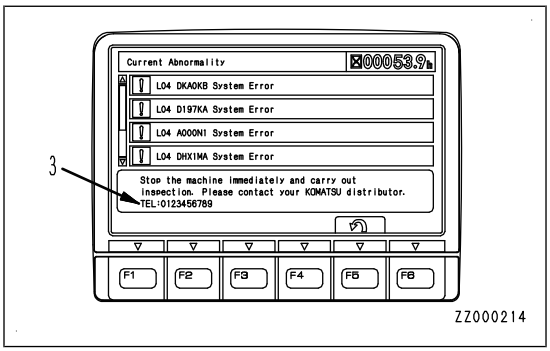
- Even though the machine has not run out of fuel, if “CA2249” or “CA559” is displayed on the Current Abnormality screen, replace both fuel main filter and fuel prefilter immediately. For replacing, see “METHOD FOR REPLACING FUEL PREFILTER CARTRIDGE” and “METHOD FOR REPLACING FUEL MAIN FILTER CARTRIDGE”.
  If “CA2249” or “CA559” is not cleared even after the replacement, ask your Komatsu distributor for the inspection and repair immediately, even though the machine can perform normal operation.

Telephone number for the point of contact if an error occurs

When an error screen is displayed on the monitor, press the switch F5 to display the Current Abnormality screen, and telephone number (3) for the point of contact is displayed in the message column at the bottom of the screen.

REMARK

If no point of contact telephone number is registered, no telephone number is displayed.
Ask your Komatsu distributor for the telephone number registration if necessary.



STANDARD TIGHTENING TORQUE FOR BOLTS AND NUTS

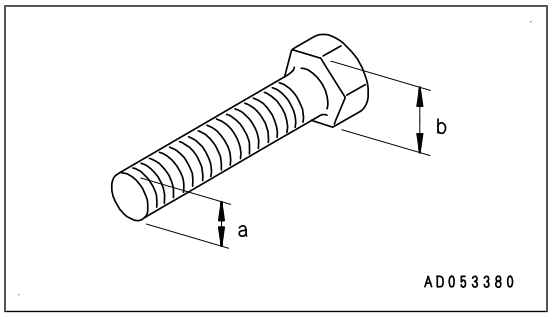
Tightening torque list

⚠ CAUTION

If nuts, bolts, or other parts are not tightened to the specified torque, it will cause looseness or damage to the tightened parts, and this will cause failure of the machine or problems with operation. Always be careful when tightening parts.

Unless otherwise specified, tighten the metric nuts and bolts to the torque shown in the table below.

If it is necessary to replace any nut or bolt, Komatsu recommends using Komatsu genuine part of the same size as the part that is removed.

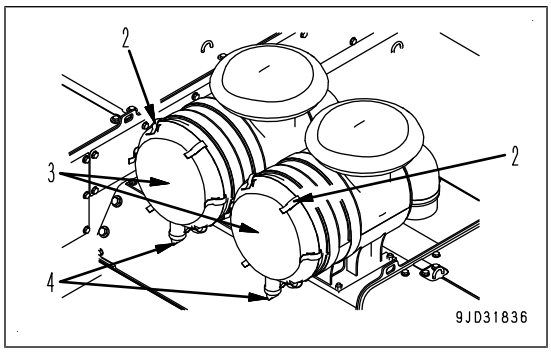


Thread diameter of bolt “a” (mm)	Width across flats “b” (mm)	Tightening torque			
		Target value		Allowable range	
		Nm	kgfm	Nm	kgfm
6	10	13.2	1.35	11.8 to 14.7	1.2 to 1.5
8	13	31	3.2	27 to 34	2.8 to 3.5
10	17	66	6.7	59 to 74	6 to 7.5
12	19	113	11.5	98 to 123	10 to 12.5
14	22	177	18	157 to 196	16 to 20
16	24	279	28.5	245 to 309	25 to 31.5
18	27	382	39	343 to 425	35 to 43.5
20	30	549	56	490 to 608	50 to 62
22	32	745	76	662 to 829	67.5 to 84.5
24	36	927	94.5	824 to 1030	84 to 105
27	41	1320	135	1180 to 1470	120 to 150
30	46	1720	175	1520 to 1910	155 to 195
33	50	2210	225	1960 to 2450	200 to 250
36	55	2745	280	2450 to 3040	250 to 310
39	60	3280	335	2890 to 3630	295 to 370
42	65	3830	390	3430 to 4220	335 to 430

METHOD FOR CHANGING AIR CLEANER ELEMENT

Replace the element in the following procedure.

1. Undo hooks (2) (6 places) of each air cleaner, and remove the cover (3).

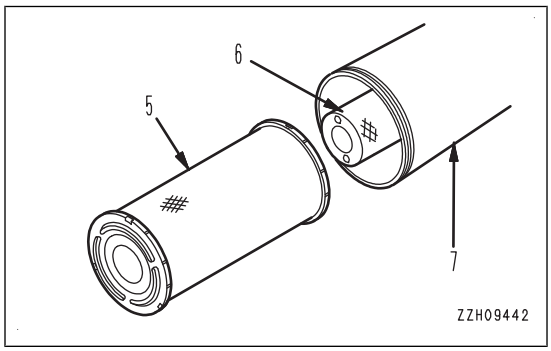


2. Hold the outer element (5), rock it lightly up and down and to the right and left, and pull it out while turning it to the right or left.

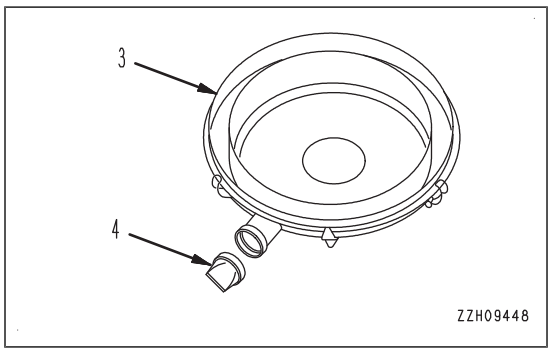
   Do not remove the inner element (6) at this time.

3. When the outer element (5) is removed, check that the inner element does not come out of position and is not at an angle.

   If it is at an angle, push it in straight to the bottom with your hand.



4. Clean the dust sticking inside the air cleaner body (7) and on the cover (3) by using a clean cloth or brush.
5. If any dust is attached to the vacuator valve (4) installed to the cover (3), remove it.



NOTICE

- **Do not clean and reuse the inner element. Replace the inner element with a new one at the same time when the outer element is replaced.**
- **If the outer element and cover are installed while the inner element is not installed properly, the outer element will be damaged.**
- **The sealing portion of the improper part lacks precision, and allows the entry of dust, which leads to damage of the engine. Do not use such an improper part.**

6. Remove the inner element (6), then install the new inner element immediately.

   Install the inner element securely so that it does not move.

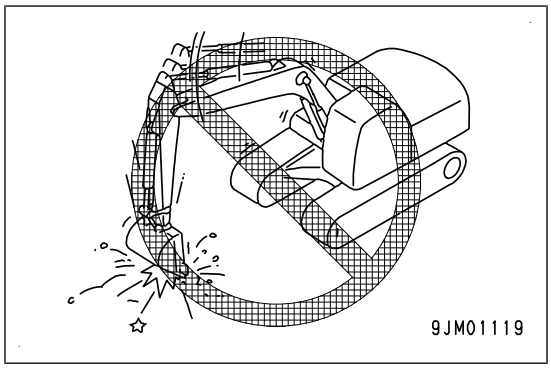
7. Push in the new outer element (5) straight with your hand into the air cleaner body.

   Hold the element, and shake it lightly up and down and to right and left while pushing it in so that the element can be easily inserted.

METHOD FOR REMOVING SLING

⚠ WARNING

- **Remove the sling if it is attached to the bucket teeth. If digging work is performed with the sling attached, the sling may break. The broken pieces may fly and it is dangerous.**
- **It is dangerous if the work equipment moves by mistake during the sling removal work.**
  Set the work equipment in a stable condition, stop the engine and set the lock lever securely to LOCK position.
- **Broken pieces may fly during the sling removal work, so always wear the protective equipment such as protective eyeglasses.**
- **Never hit the rocks with the teeth trying to remove the sling.**
  Broken pieces of the sling may fly and it may lead serious injury.



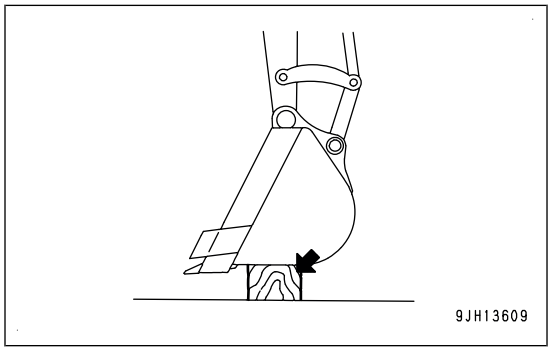
NOTICE

The following problems may occur if you operate the machine without removing the sling.

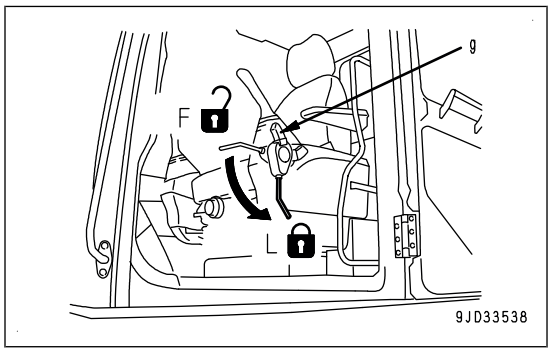
- **The sling at tooth tip interferes with the boom when moving the arm to IN position and the bucket to CURL position.**
- **The crack generated when the sling was broken developed to the teeth, and it may damage the machine body eventually.**
- **The sling may break during the cutting operation, and the broken pieces may get mixed in with the soil or quarry to be loaded.**

Always observe the following procedure for the sling removal work.

1. Place a block under the bucket, and stop the engine.



2. Turn the staring switch key to ON position within 15 seconds after stopping the engine, and move each control lever (for work equipment and travel) to the full stroke in all directions in order to release the internal pressure.
3. Check that the work equipment is in a stable condition, then operate the operating portion (g) of the lock lever to set it to LOCK position (L).



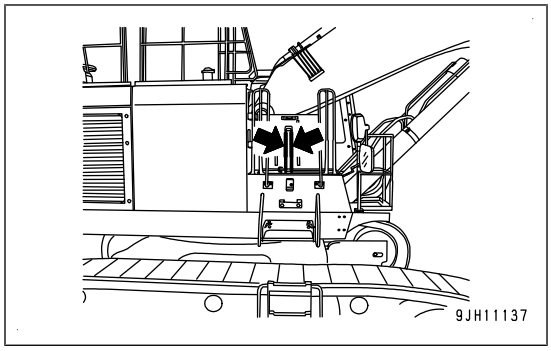
METHOD FOR CHECKING GAS SPRING

⚠ WARNING

The gas spring is charged with high-pressure nitrogen gas, so improper handling may cause an explosion resulting in serious personal injury or death. When handling, always observe the following.

- **Do not disassemble.**
- **Do not bring open flame close to it or do not dispose of it in fire.**
- **Do not perform drilling, welding or flame-cutting.**
- **Do not hit or roll it, or subject it to any impact.**
- **When disposing of it, the gas must be released. Ask your Komatsu distributor to perform this work.**

Gas spring is attached to the battery box cover.



In the following cases, ask your Komatsu distributor for inspection, repair, and replacement.

- Cover cannot be open with light operating effort.
- Cover cannot stay in open position.
- When oil or gas is found to be leaking from the gas spring

EVERY 100 HOURS MAINTENANCE

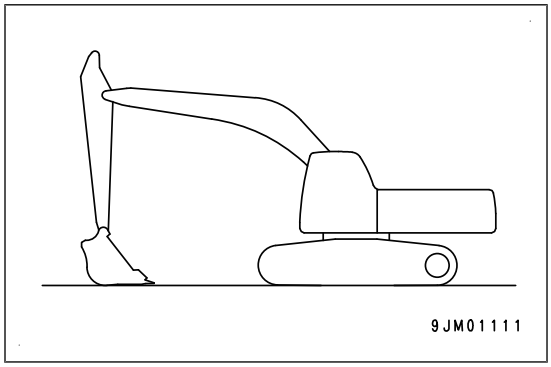
Maintenance for every 10 hours service should be performed at the same time.

METHOD FOR LUBRICATING SWING CIRCLEZ

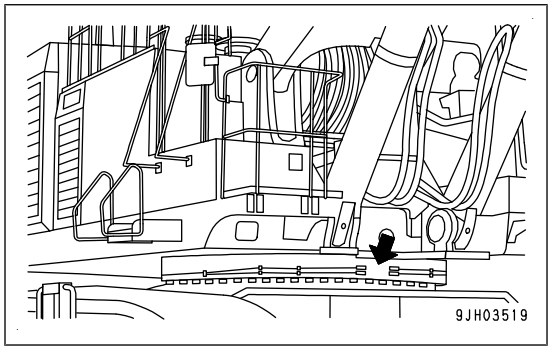
Items to be prepared

Grease pump

1. Lower the work equipment to the ground.

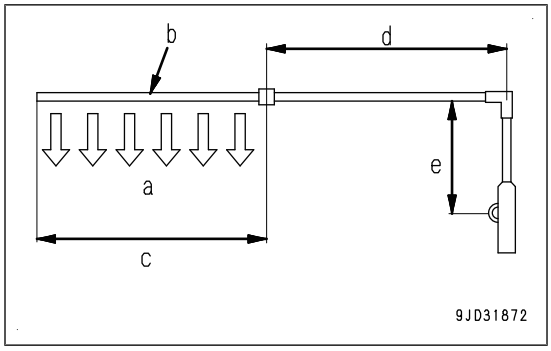


2. Pump in grease through the grease fittings (4 places) shown by arrows by using a grease pump.
3. After greasing, wipe off any old grease that is pushed out.

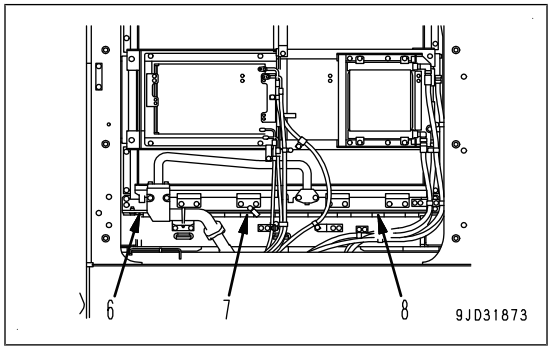


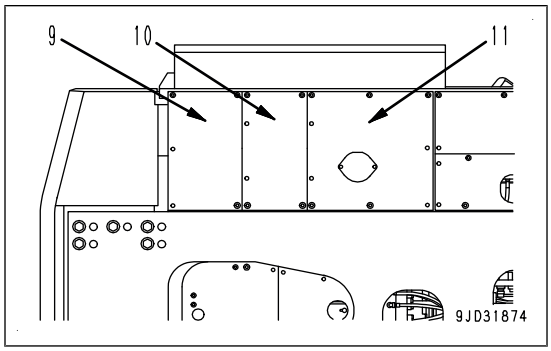
REMARK

- Remove the plate (5). Clean the radiator fin (E), oil cooler fin (D) by using the L-shape cleaning tool as shown in the figure.
  (a): Air
  (b): Nozzle
  (c):300 mm
  (d):300 to 500 mm
  (e):160 mm
- Steam or water may be used instead of compressed air, but keep a distance from the fin.
- Ask your Komatsu distributor for cleaning if the radiator fin (E) and oil cooler fin (D) are grossly dirty.
- You can clean it by rotating the fan in reverse.
- Aftercooler fan does not have the fan reverse function.
- For the method of the fan reverse mode, see “REVERSE HYDRAULIC FAN”.



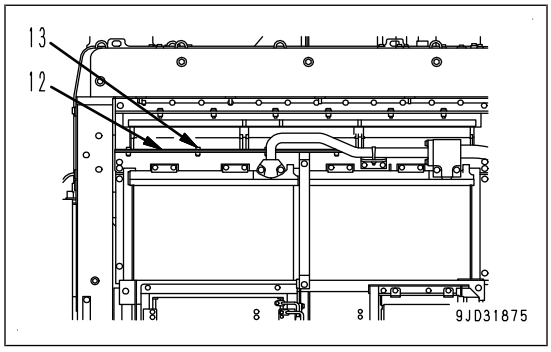
3. Remove the plates (6), (7), (8) and undercovers (9), (10), and (11) to sweep out the mud, dirt, and leaves to the outside of the machine.
4. Check the rubber hoses. If any hose is cracked or hardened by age, replace with a new one. Also check and tighten all loose hose clamps.





INSPECT RADIATOR FIN

1. Remove the plate (12). Remove the bolts (13) (6 pieces), then the plate (12) can be removed.
2. Install the plate (12) with bolts (13) (6 pieces) after the inspection is finished.



METHOD FOR REPLACING FUEL MAIN FILTER CARTRIDGE

⚠ WARNING

- **After the engine stops, all parts are still very hot, so do not replace the filter immediately. Wait for all of parts to cool down before starting the work.**
- **High pressure is generated inside the engine fuel piping system when the engine is running. When replacing the filter, wait for at least 30 seconds after stopping the engine to let the internal pressure go down before replacing the filter.**
- **Do not bring any open flame close.**
- **When opening the air bleeding plug of the fuel filter head, take care. There may be remaining pressure and it may spurt out.**

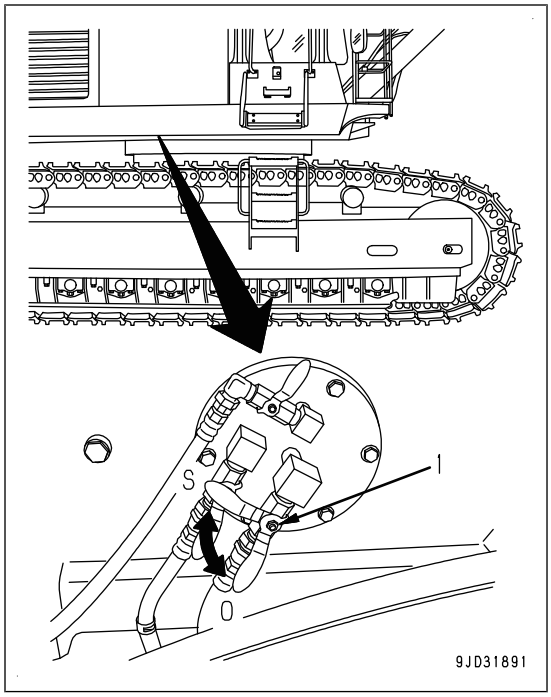
NOTICE

- **Komatsu genuine fuel filter cartridges use a special filter that has highly efficient filtering ability. When replacing the parts, Komatsu recommends using Komatsu genuine parts.**
- **The common rail fuel injection system used on this machine consists of more precise parts than those in the conventional injection pump and nozzles. If any cartridge other than a Komatsu genuine filter cartridge is used, dust or dirt may get in and cause problems with the injection system. Never use a substitute.**
- **When performing inspection and maintenance of the fuel system, be careful not to let any foreign material get in, more than ever before. If dust sticks to the fuel system, wash it off thoroughly with fuel.**

Items to be prepared

- Container to catch the fuel
- Filter wrench

1. Turn the valve (1) at the bottom of the fuel tank to “CLOSE” position (S).



EVERY 2000 HOURS MAINTENANCE

Maintenance for every 10, 100, 250, 500 and 1000 hours should be performed at the same time.

METHOD FOR CHANGING OIL IN FINAL DRIVE CASE

⚠ WARNING

- **Immediately after the engine is stopped, its parts and oil are still very hot and may cause burn injury. Wait for the temperature to go down, and then start the work.**
- **If there is remaining pressure inside the case, the oil or plug may jump out. Loosen the plug slowly to release the pressure.**
- **Do not stand in front of the plug when you loosen the plug.**

Refill capacity: (each of right and left) 21 ℓ

Items to be prepared

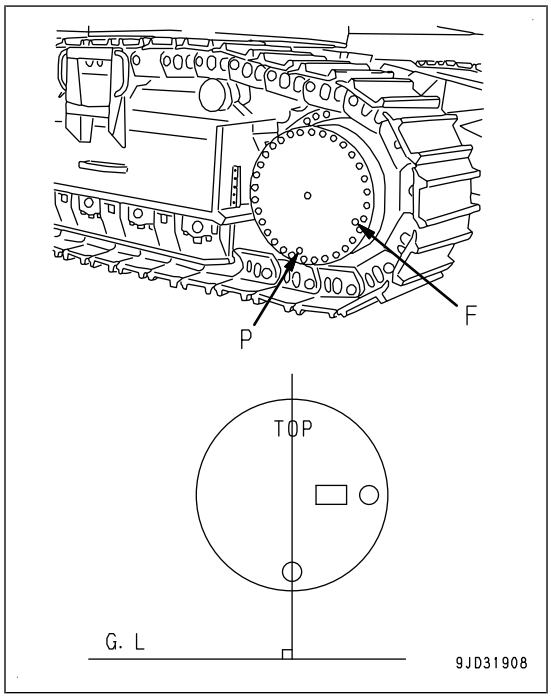
- Container to catch the drained oil
- Handle

1. Set the TOP mark at the top with the line running on TOP mark and plug (P) perpendicular to the ground surface.
2. Place a container under plug (P) to receive the oil.
3. Remove the plugs (P) and (F) by using the handle, and drain the oil.

   REMARK

   Check the O-rings attached to the plugs for damage. If necessary, replace them with new ones.
4. Tighten the plug (P).
5. Refill oil through plug (F) hole.
6. When oil begins to overflow from the plug (F) hole, install the plug (F).

   Tightening torque of plugs (P) and (F): 93.1 to 122.5 Nm {9.5 to 12.5 kgfm}



METHOD FOR REPLACING ACCUMULATOR (FOR CONTROL CIRCUIT)

⚠ WARNING

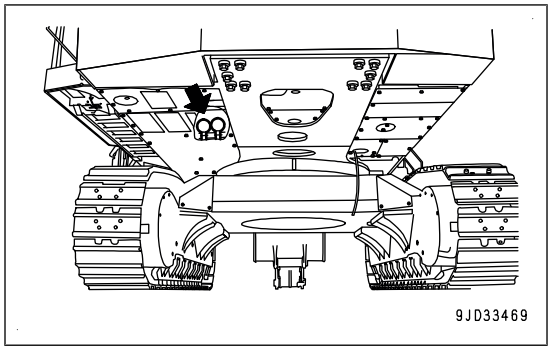
The accumulator is charged with high-pressure nitrogen gas, and improper operation may cause an explosion which will lead to serious injury or death. When handling, always observe the following.

- **The pressure in the hydraulic circuit cannot be completely removed. When removing the hydraulic equipment, do not stand in the direction that the oil spurts out when performing the operation. In addition, loosen the bolts slowly when performing the work.**
- **Do not disassemble.**
- **Do not bring open flame close to it or do not dispose of it in fire.**
- **Do not perform drilling, welding or flame-cutting.**
- **Do not hit or roll it, or subject it to any impact.**
- **When disposing of it, the gas must be released. Ask your Komatsu distributor to have this work performed.**

NOTICE

If the nitrogen gas charge pressure in the accumulator is low and operations are continued, it becomes impossible to release the remaining pressure inside the hydraulic circuit if a failure occurs on the machine.

Replace the accumulator every 2 years or every 4000 hours, whichever comes sooner. Ask your Komatsu distributor for replacement.
The accumulator is installed to the position shown in the figure.



METHOD FOR CHECKING AND ADJUSTING AIR COMPRESSOR

Ask your Komatsu distributor for inspection and adjustment of the air compressor.

EVERY 9000 HOURS MAINTENANCE

Maintenance for every 10, 100, 250, 500, 1000 and 4500 hours service should be performed at the same time.

METHOD FOR REPLACING FUEL SPRAY PREVENTION CAP ON FUEL DOSER PIPING

Special techniques and tools are required for this work.

Ask your Komatsu distributor for replacement of the fuel spray prevention cap on fuel doser.

ATTACHMENTS AND OPTIONS

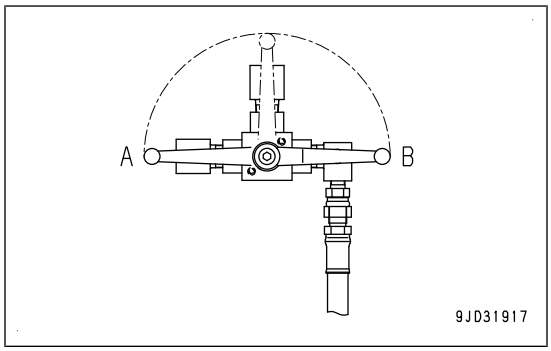
⚠ WARNING

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

AUTO-GREASING AND GREASE GUN SELECTOR VALVE LEVER

The auto-greasing and grease gun selector valve lever is used to switch the flow of grease into grease gun. Set it to the auto-greasing side (A) when using the auto-greasing system, and set it to the grease gun side (B) when using the grease gun.

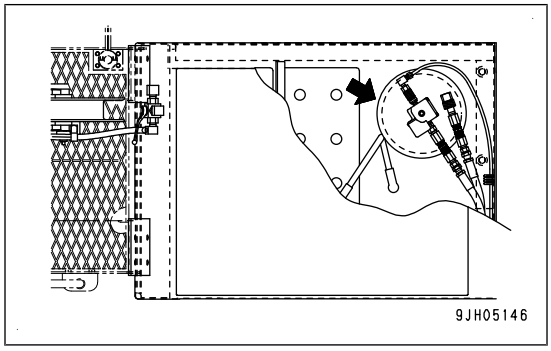
Be sure to return this selector valve to the auto-greasing side after using the grease gun.



GREASE PUMP

Grease pump is a pump which discharges the grease.

For handling the grease pump, see “METHOD FOR USING GREASE PUMP”.



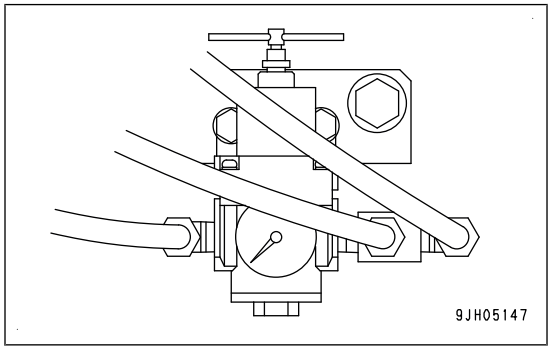
REGULATOR

⚠ WARNING

Do not increase the pressure of regulator up to 0.49 MPa or more {5 kgf/cm^2 or more} . Since the pump pressure ratio is 50:1, the pressure of grease increases up to 24.5 MPa250 kgf/cm^2. If it is used when the pressure exceeds the specified value, this may cause a serious accident.

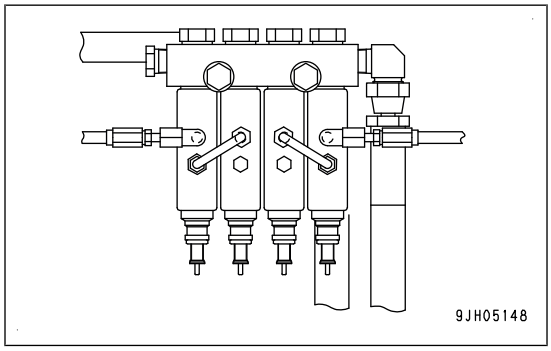
Regulator is used to adjust and stabilize the pressure of the compressed air discharged from compressor to the appropriate one.

The pressure of regulator is set at 0.44 MPa {4.5 kgf/cm^2} when the machine is shipped from factory.



INJECTOR

The injector discharges the grease which is discharged from the grease pump to each greasing point.



METHOD FOR BLEEDING AIR FROM GREASE LINE

⚠ WARNING

The service grease nipple which is installed to injector does not have the counterflow prevention function. If the cap is left open, highly pressurized grease will spurt out when the grease pump operates, and it is dangerous.
Be sure to tighten the cap.

Bleed air from the grease line if a lot of air is mixed into the grease line if the grease pump is actuated when it is empty, or the grease piping is disassembled and assembled.

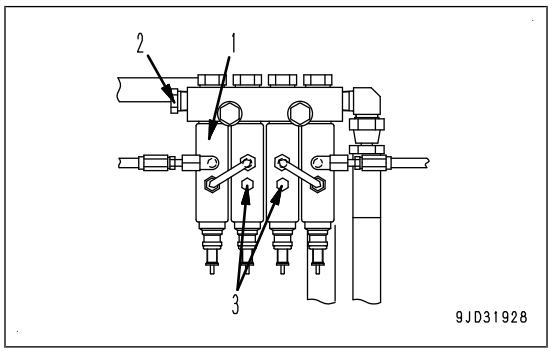
NOTICE

Grease pressure does not rise to the specified pressure, or it takes longer to reach the specified pressure, then the injector does not operate correctly.

Check item

- Loosen the plug which is attached to the injector in order to bleed air from the main piping. Perform the work by two workers.
- Perform bleeding of the air from the nearest injector to the grease pump in order.
  (Swing circle → boom cylinder bottom → boom → arm)
- Check that the auto-greasing and grease gun selector valve lever in the battery relay case is on the auto-greasing side.

METHOD FOR BLEEDING AIR



1. Remove the plug (2) of the injector (1).

   The plug (2) is attached to the manifold end of each terminal injector. Remove the plug (2) to bleed air if air bleeding is needed for the main piping.
2. The greasing mode selector switch is in the box next to the right console in the operator's cab. Another worker turn it to manual position to actuate the grease pump.

   For operating the grease pump, see “MACHINE OPERATIONS AND CONTROLS”.
3. Grease which is mixed air is discharged through the plug hole of the injector. (It is often cloudy due to the mixed air.)
4. Stop the grease pump by turning the greasing mode selector switch to AUTO position when normal grease comes out.

ACTIONS IF PROXIMITY SWITCH HAS FAILED

⚠ WARNING

Setting the lock lever automatic lock cancel switch to CANCEL position cancels the PPC (pilot pressure control) lock constantly (the machine is operable) regardless of the hydraulically operated stairway position.

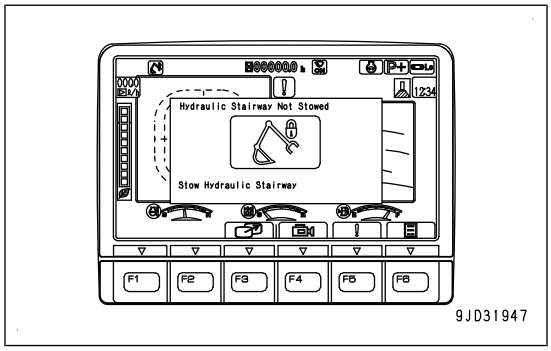
- **Use this method for moving the machine temporarily to a safe place. After moving the machine to a safe place, immediately ask your Komatsu distributor for repair.**
- **The machine may start moving and it is very dangerous. Before performing this method, be sure to store the hydraulically operated stairway securely and hang the chain to prevent the stairway from falling onto the hook on the machine.**

STAIRWAY CAUTION LAMP

The stairway caution lamp warns that the hydraulically operated stairway is lowered.

PPC lock is applied this time. As a result, the swing operation, travel, and work equipment operation cannot be performed. When each device is stored, the lamp goes out and the PPC lock is released.

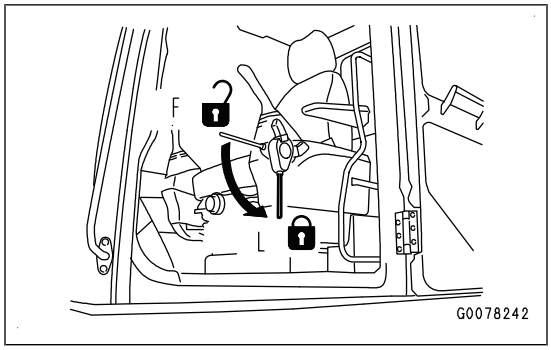
For the storing method of the hydraulically operated stairway, see “PROCEDURE FOR STORING STAIRWAY BY OPERATING FROM MACHINE”.



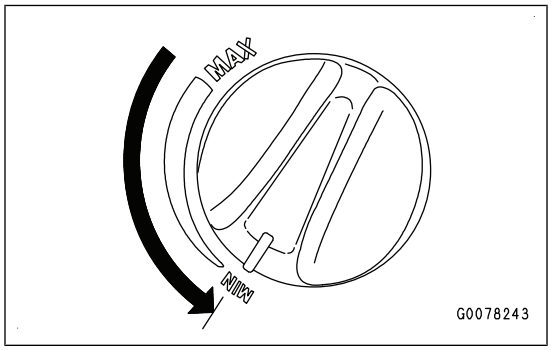
NOTICE

If the lamp does not go out even after the devices are stored, ask your Komatsu distributor for investigation of cause and repair.

1. Check the lock lever (1) is in LOCK position (L). If the lock lever (1) is in FREE position (F), the engine does not start.

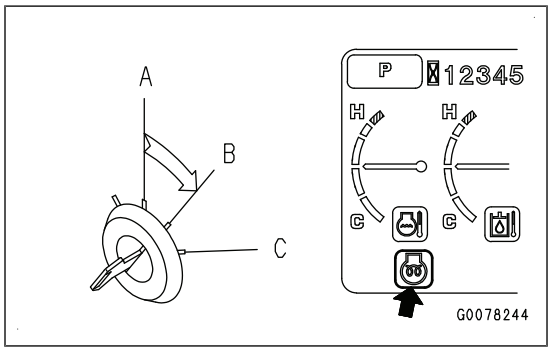


2. Set fuel control dial (2) to Low idle (MIN) position.



3. Turn the key in starting switch (3) to ON position (B).

   If the ambient temperature is low, the preheating monitor lights up and automatic preheating is performed. Keep the key in starting switch (3) at ON position (B) until the preheating monitor goes out.
   The time that the preheating monitor stays lit depends on the ambient temperature as shown in the table on the right.

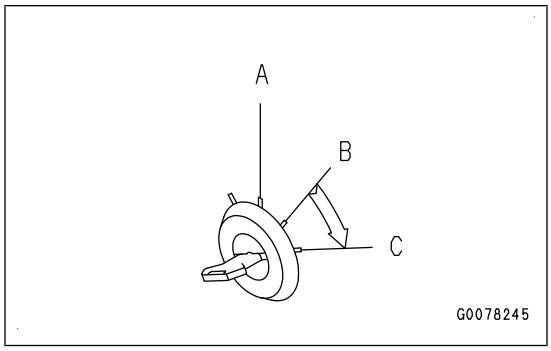


Ambient temperature	Lighting time
Above 0 °C	0 seconds
-20 °C to 0 °C	20 seconds to 45 seconds
below -20 °C	45 seconds

4. If the preheating monitor does not light up, or it lights up and then goes out to inform that the engine preheating has been completed, turn the key in starting switch (3) to START position (C) and start the engine.

   REMARK

   If the ambient temperature is low, the engine may not start even when the key in the starting switch (3) is kept at START position for 20 seconds. If this happens, wait for at least 2 minutes, then start again from the beginning.

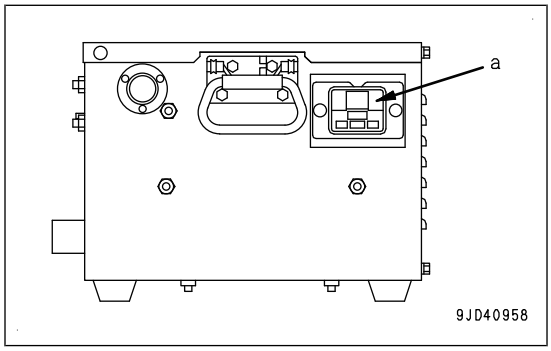


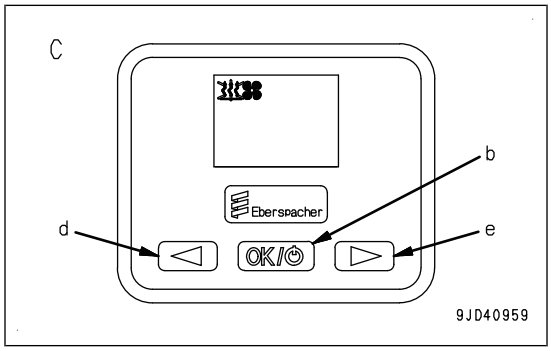
METHOD FOR STARTING OPERATION

1. Set the operation time of the movable diesel preheater in the procedure that follows.
   - Possible setting range of the maximum operation time: 10 to 720 min
   - Default setting operation time: 60 min

   1) Push the button (b) on the control panel (a) to show the start screen (C) of control panel.

      (C): Start screen





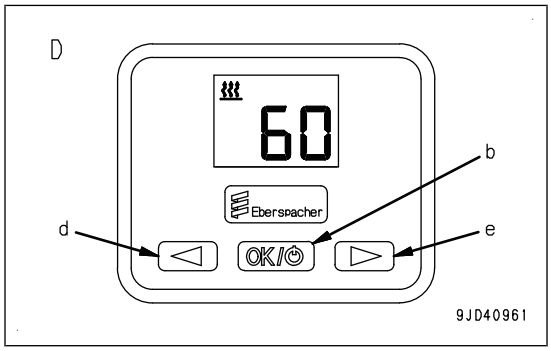
   2) Use the L.H. button (d) and R.H. button (e) to select the menu item 4“Change of duration”, and validate it with the button (b).

      (D): Screen when the menu item 4 is selected/ Operation time display

   3) Change the maximum operation time (minutes) with the L.H. button (d) or R.H. button (e), and push the button (b) for 2 seconds or below.

      The operation time will be different by the ambient temperature, the battery state, and the type of oil which is used.

      See the table below.



When C200 battery and engine oil E015W40-LA are used	
Ambient temperature	Preheating time
-30 °C	20 min

Do not operate for longer than the specified time since it will decrease the battery performance.

Unlike the normal engine operation, the battery is not charged by the alternator.

For the loading specification machine, explanation is given only of the different switches.

Starting switch

Fuel control dial

(with Auto-deceleration System)

Cigarette lighter

Lamp switch

Swing lock switch

Machine push-up switch

Boom shock absorbing control switch

Lower wiper switch

(machines equipped with fixed front window cab)

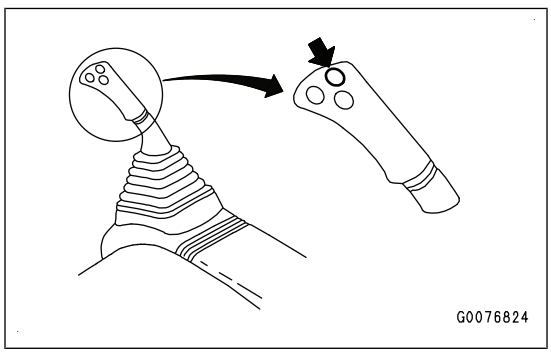
Revolving lamp switch

(if equipped)

Seat heater switch

Horn switch

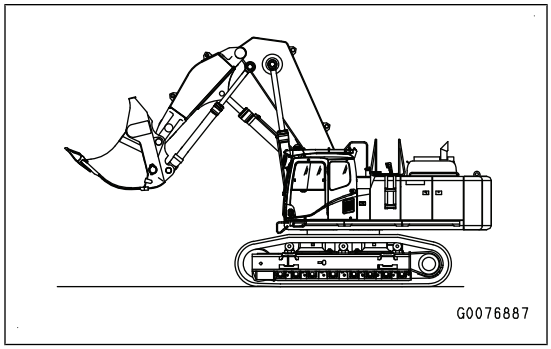
When the switch (11) at the tip of the right work equipment control lever is pressed, the horn will sound.



PRECAUTIONS FOR OPERATION

PRECAUTIONS WHEN TRAVELING

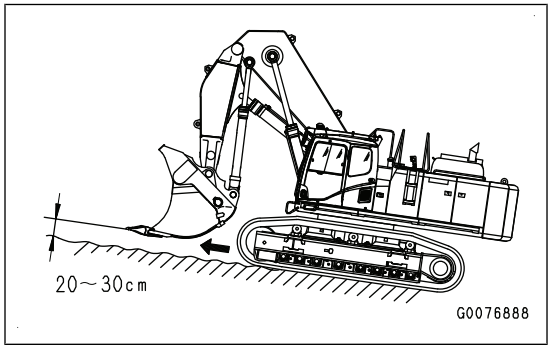
If the forward view is poor when traveling on level ground, raise the work equipment to ensure better visibility.

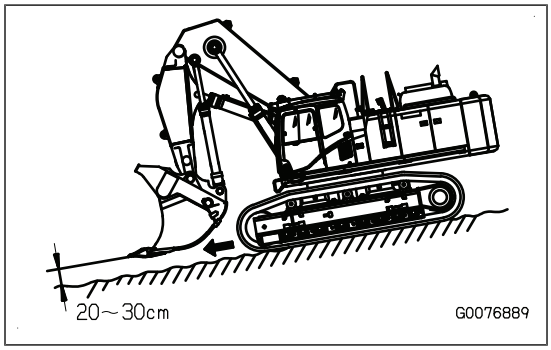


PRECAUTIONS WHEN TRAVELING ON SLOPES

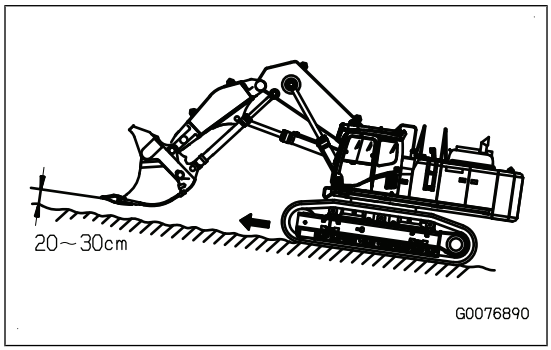
To prevent the machine from tipping over or slipping to the side, always observe the following.

- Keep the work equipment at height of approximately 20 to 30 cm above the ground. In case of emergency, lower the work equipment to the ground immediately to help stopping the machine.

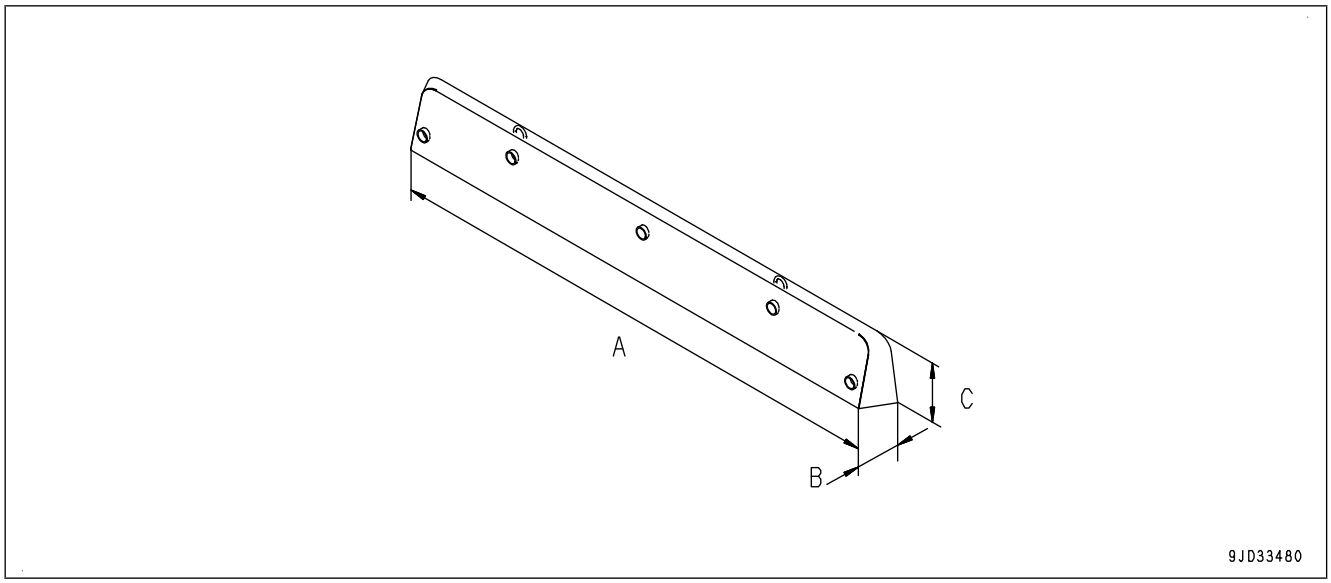




- When driving the machine t up a steep slope, extend the work equipment to the front to improve the balance, keep the work equipment at height of approximately 20 to 30 cm above the ground, and drive it at low speed.

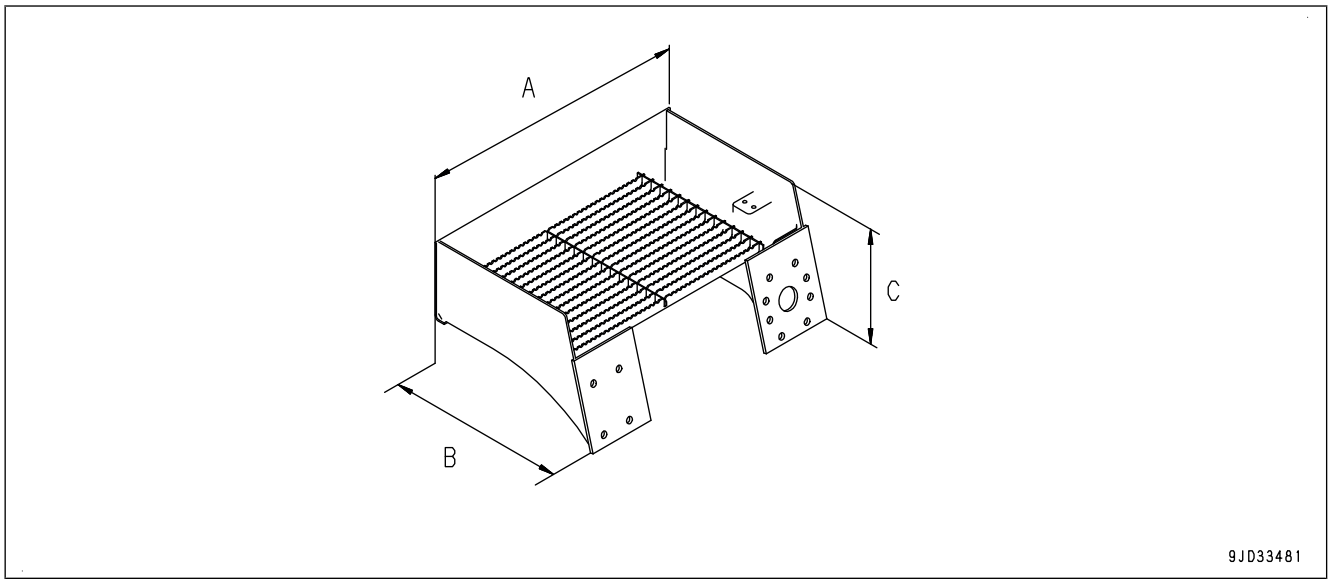


- Upper cover of radiator duct



	Machine model		PC1250、PC1250SP
A	Overall length	mm	2015
B	Overall width	mm	105
C	Overall length	mm	220
	Weight	kg	15

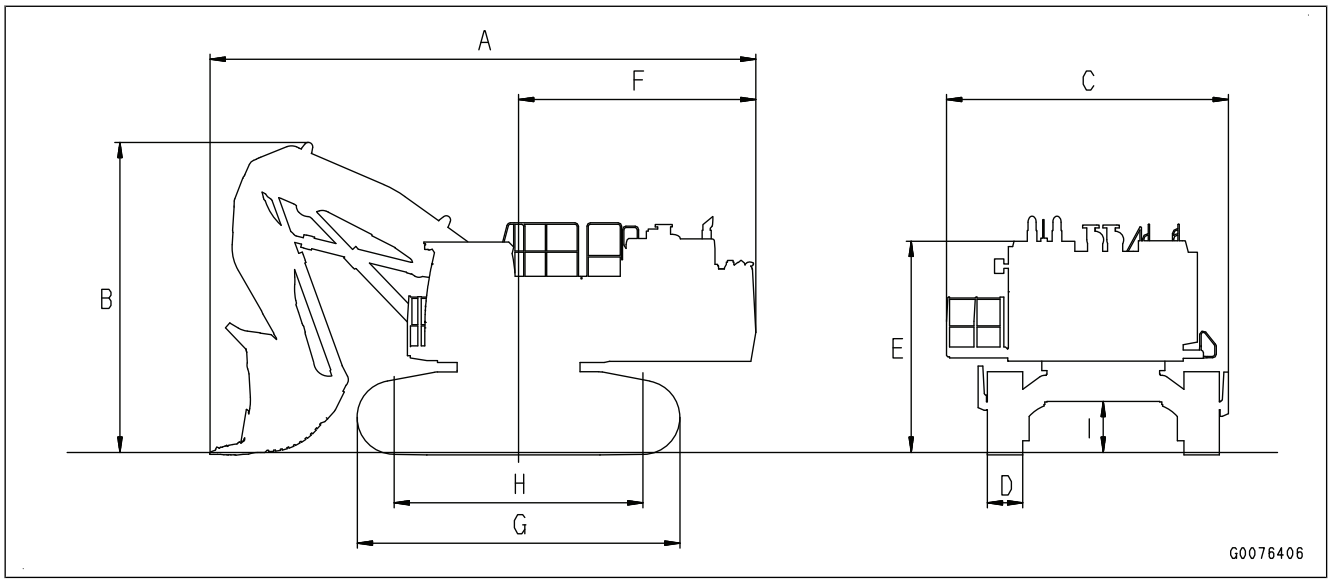
- Cat walk (R.H.)



	Machine model		PC1250、PC1250SP
A	Overall length	mm	780
B	Overall width	mm	560
C	Overall length	mm	430
	Weight	kg	45

SPECIFICATIONS: PC1250-11

	Item		Unit	PC1250-11
	Operating weight		kg	119500
	Bucket capacity		m^3	6.5
	Engine model		-	Komatsu SAA6D170E–7 diesel engine
	Rated horse-power	SAE J1995 (gross)	kW / min^{-1}	578 / 1800
		ISO14396		578 / 1800
		ISO 9249 /SAE J1349 (net)		565 / 1800
A	Overall length		mm	10990
B	Overall height		mm	6200
C	Overall width		mm	5570
D	Track width		mm	700
E	Cab height		mm	4120
F	Tail swing radius		mm	4920
G	Overall length of track		mm	6425
H	Distance between tumbler centers		mm	4995
I	Minimum ground clearance		mm	990
	Travel speed (Lo/Hi)		km/h	2.3/3.3
	Swing speed		min^{-1}	5.8



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

Reservoir	Fluid type	Recommended Komatsu Fluids	Ambient temperature, degrees Celsius (°C)	
			Min	Max
Engine oil pan	Engine oil for KDPF used in cold terrain (Oil Change interval 250 hours) (Note.1)	EOS5W30-LA (KES)	-25	35
		EOS5W40-LA (KES)	-25	40
	Engine oil for KDPF (Oil Change interval 500 hours)	EO10W30-LA (KES)	-20	40
		EO15W40-LA (KES)	-15	50
P.T.O. case	Power train oil (Note.2)	TO10 (KES)	-30	10
		TO30 (KES)	0	40
Swing machinery Case Final drive case Damper case	Power train oil (Note.2)	TO30 (KES)	-30	50
Hydraulic System	Power train oil	TO10 (KES) (Note.5)	-20	50
	Hydraulic Oil	HO56-HE (KES)	-30	50
		HO46-HM (KES) (Note.5)	-20	50
Grease fitting	Hyper grease (Note.3)	G2-TE (KES)	-20	50
	Lithium EP grease	G2-LI (KES)	-20	50
Cooling system	Non-Amine Engine Coolant AF-NAC (Note.4)	AF-NAC (KES)	-40	50
Fuel tank	Diesel fuel	EN 590 Class2	-30	20
		EN 590 Grade D	-10	50

- KES: Komatsu Engineering Standard

Reservoir	Specified capacity (Liter)	Refill capacity (Liter)
Engine oil pan	97	86
Swing machinery case (each of front and rear)	20	20
Final drive case (each of right and left)	22	21
P.T.O case	13.5	13.5
Hydraulic oil system	1180	670
Cooling system	142	142
Fuel tank	1360	-

REMARK

Specified capacity means the total amount of oil including the oil in the tank and the piping. Refill capacity means the amount of oil needed to refill the system during inspection and maintenance.