TEN00331-00

Operation & Maintenance Manual

DUMP TRUCK

HD325-7
HD405-7

SERIAL NUMBERS HD325-7569 and up
HD405-7569

ecot3

⚠ WARNING

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

NOTICE

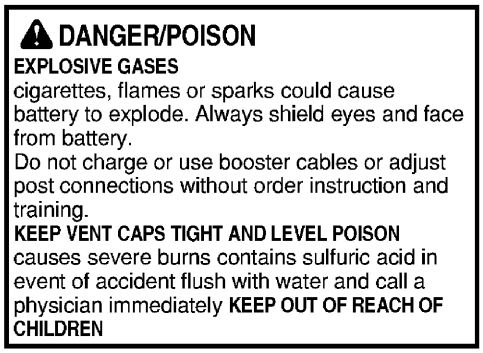
Komatsu has Operation & Maintenance Manuals written in some other languages. If a foreign language manual is necessary, contact your local distributor for availability.

KOMATSU

(10) Caution for avoiding falling down (09805-13000)

(11) Precautions for handling accumulator (09659-53000)

(12) Caution when handling battery (09664-30011)
(For North America only)



Distr. By
KOMATSU AMERICA CORP.
:Rolling Meadows IL60008, USA
KOMATSU LATIN AMERICA CORP.
:Miami, FL 33126, USA

(13) Caution when handling battery
This safety label is provided by the battery manufacturer.

ENSURE GOOD VISIBILITY

This machine is equipped with mirrors to ensure good visibility, but even then there are places that cannot be seen from the operator's seat, so be careful when operating.

When traveling or carrying out operations in places with poor visibility, it is impossible to check for obstacles in the area around the machine and to check the condition of the jobsite. This leads to danger of serious personal injury or death. When traveling or carrying out operations in places with poor visibility, always observe the following.

- Position a signalman if there are areas where the visibility is not good.
- Only one signalman should give signals.
- When working in dark places, turn on the working lamp and front lamps installed to the machine, and set up additional lighting in the work area if necessary.
- Stop operations if the visibility is poor, such as in mist, snow, rain, or dust.
- When checking the mirrors installed to the machine, remove all dirt and adjust the angle of the mirror to ensure good visibility.
- If the machine is equipped with cameras, clean off any dirt from the lens and make sure that the camera gives a clear view.

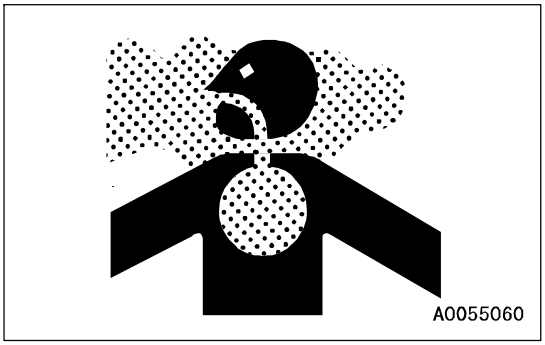
CHECKING SIGNS AND SIGNALMAN'S SIGNALS

- Set up signs to inform of road shoulders and soft ground. If the visibility is not good, position a signalman if necessary. Operators should pay careful attention to the signs and follow the instructions from the signalman.
- Only one signalman should give signals.
- Make sure that all workers understand the meaning of all signals and signs before starting work.

BEWARE OF ASBESTOS DUST

Asbestos dust in the air can cause lung cancer if it is inhaled. There is danger of inhaling asbestos when working on jobsites handling demolition work or work handling industrial waste. Always observe the following.

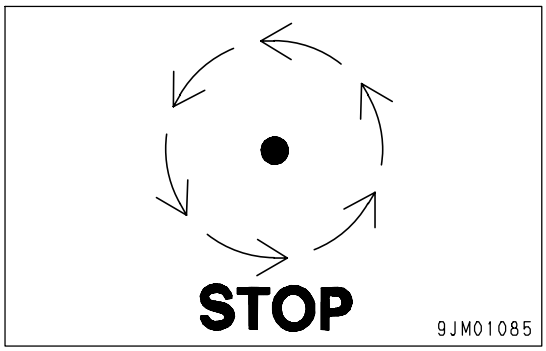
- Spray water to keep down the dust.
- Do not use compressed air.
- If there is danger that there may be asbestos dust in the air, always operate the machine from an upwind position, and make sure that all workers operate on the upwind side.
- All workers should use anti-dust masks.
- Do not allow other persons to approach during the operation.
- Always observe the rules and regulations for the work site and environmental standards.



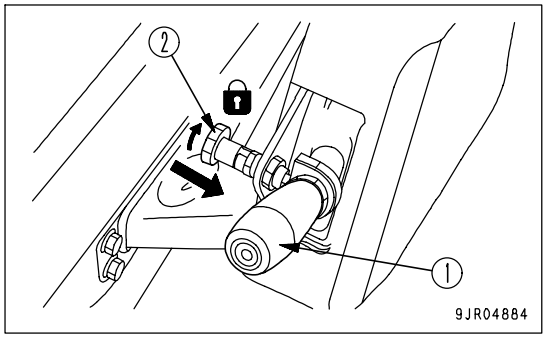
This machine does not use asbestos, but there is a danger that imitation parts may contain asbestos, so always use genuine Komatsu parts.

STOP ENGINE BEFORE CARRYING OUT INSPECTION AND MAINTENANCE

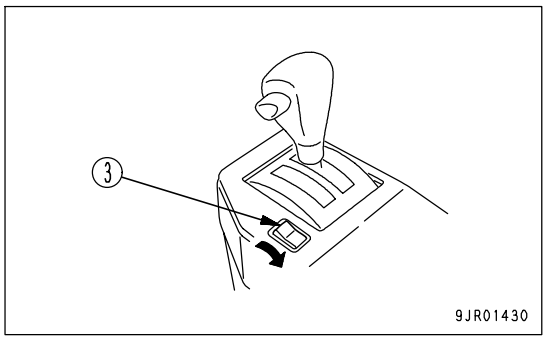
- Always stop the machine before performing any inspection and maintenance.

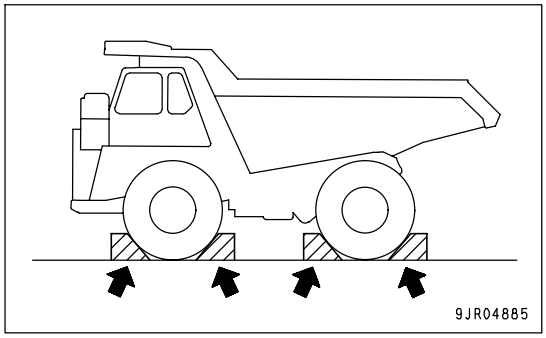


- Lower the dump body completely, set dump lever (1) to the HOLD position, lock with dump lever lock knob (2), then stop the engine.

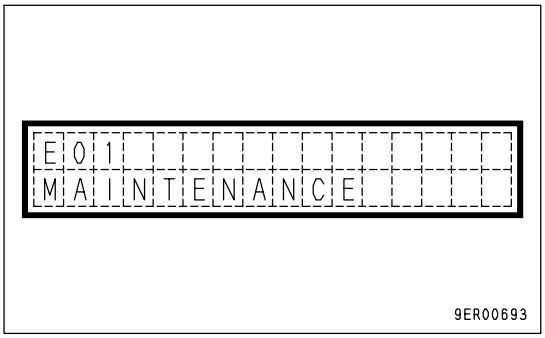


- Set parking brake switch (3) to the PARKING position to apply the parking brake, then put blocks in front of and behind the tires to prevent the machine from moving.



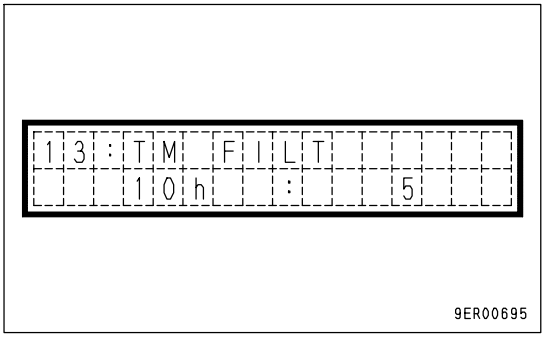


E01: If maintenance location is displayed and the maintenance caution lamp lights up, carry out inspection and maintenance of the displayed item after the completion of operations or when the shift changes.
If "MAINTENANCE" is displayed together with E01, check the failure code and contact your Komatsu distributor for repairs.



REMARK
"E01" is displayed on the top line of the character display and "MAINTENANCE" or the part of the machine requiring inspection, filling of fluid, or replacement is displayed on the bottom line.

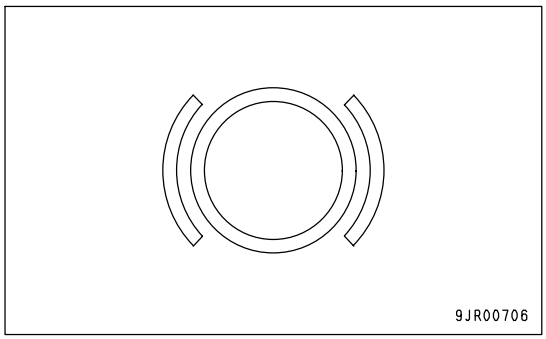
FILTER, OIL REPLACEMENT TIME DISPLAY
After completion of the system check, this display (5) shows for 30 seconds the filters and oil which are near the replacement interval. The maintenance caution lamp also flashes or lights up at the same time.
After replacing the filter or changing the oil, reset the replacement interval. For details, see "RESET METHOD FOR FILTER, OIL REPLACEMENT TIME (PAGE 3-27)".



REMARK
- The top line of the character display shows the name and ID number of the item needing replacement. The line at the bottom shows the remaining time until replacement and the total number of times the item has been replaced.
- After giving the display for 30 seconds, the display does not appear again until the starting switch is turned again to the ON position.
- If the action code is being displayed, the message in the diagram above is not displayed on the character display.
- If there two or more items to be displayed, they are displayed every three seconds.
- If there are more than 10 items to be displayed, all the items are displayed once each.
- The display is given when the time reaches 30 hours before the filter and oil replacement interval.
- When the replacement interval approaches, the maintenance caution lamp flashes, and if the replacement interval has passed, the lamp lights up.

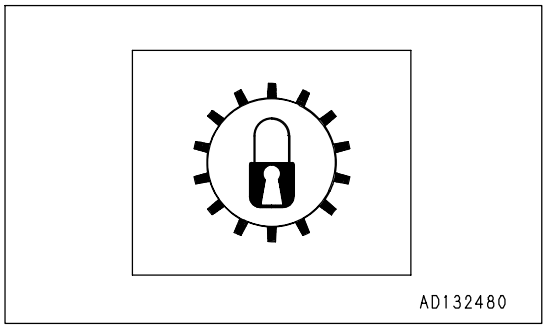
RETARDER PILOT LAMP

This monitor (2) lights up when the retarder control lever is pulled and the retarder is actuated.



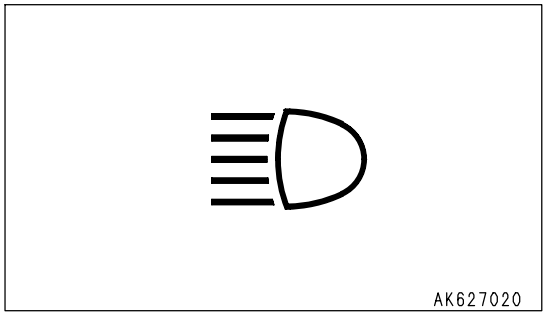
LOCKUP PILOT LAMP

This monitor (3) lights up when the torque converter lockup is engaged and the transmission is shifted to direct drive.



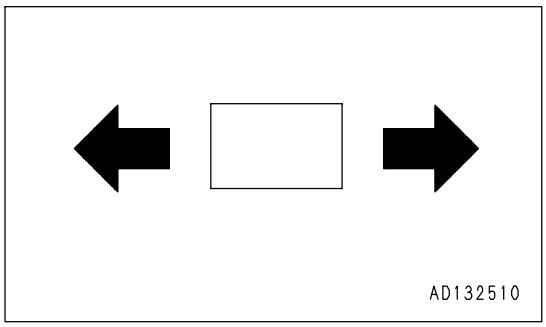
HEAD LAMP HIGH BEAM PILOT LAMP

This monitor (4) lights up when the head lamps are set to high beam.

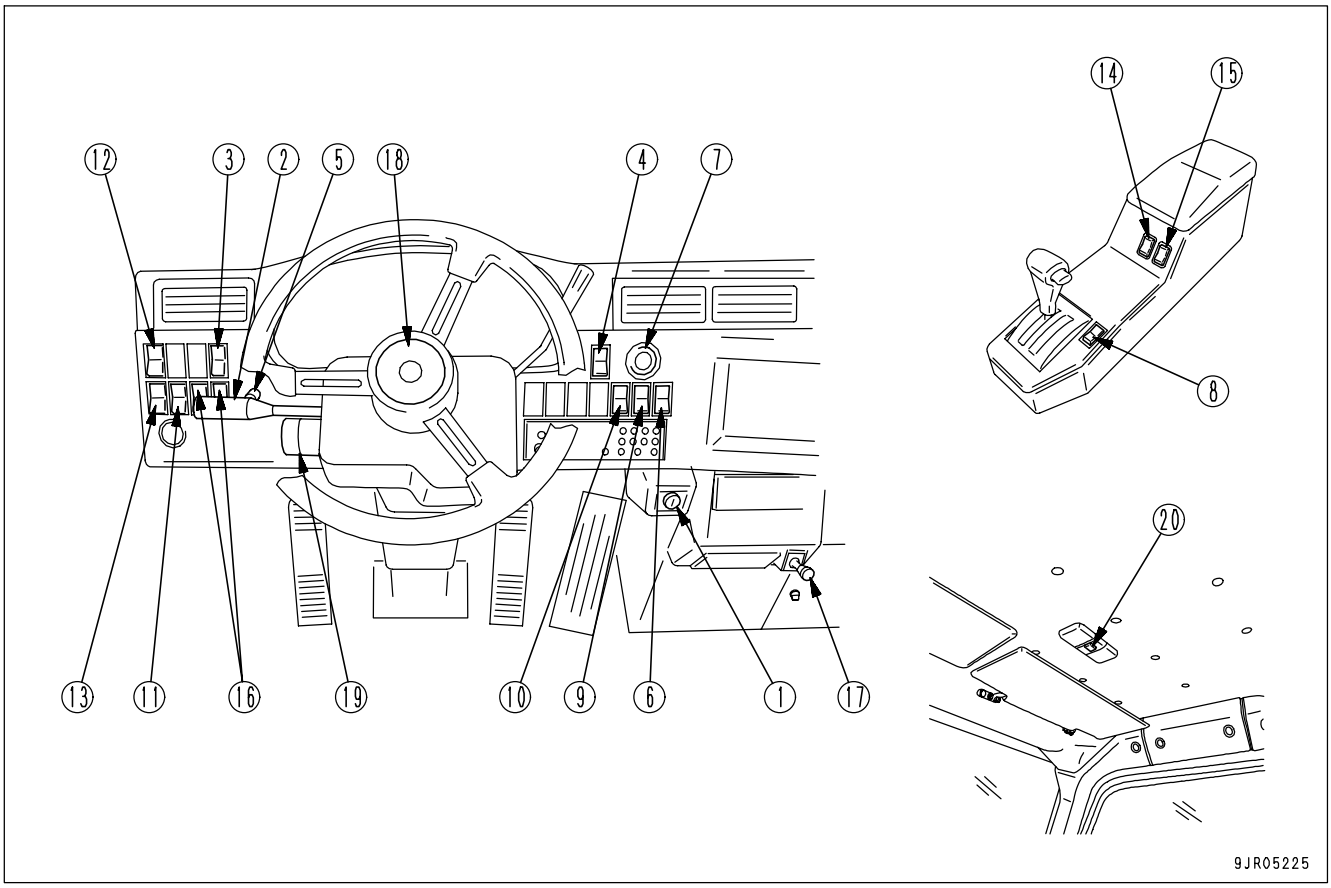


TURN SIGNAL PILOT LAMP

This monitor (5) flashes at the same time as the turn signal lamp flashes.



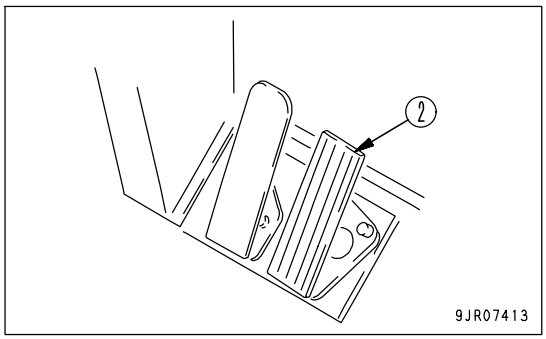
SWITCHES



(1) Starting switch
(2) Lamp switch
Turn signal lever
Dimmer switch
(3) Machine monitor bulb check switch
(4) Hazard lamp switch
(5) Night lighting dimmer switch
(6) Power mode selector switch
(7) Emergency steering switch
(8) Parking brake switch
(9) AISS LOW switch
(10) Front brake cut-off switch
(11) Fog lamp switch (if equipped)
(12) Side lamp switch (if equipped)
(13) Yellow rotating lamp switch (if equipped)
(14) Power window switch (right) (if equipped)
(15) Power window switch (left)
(16) Machine monitor mode selector switch 1, 2
(17) Cigarette lighter
(18) Horn button
(19) Wiper, window washer switch
(20) Room lamp switch

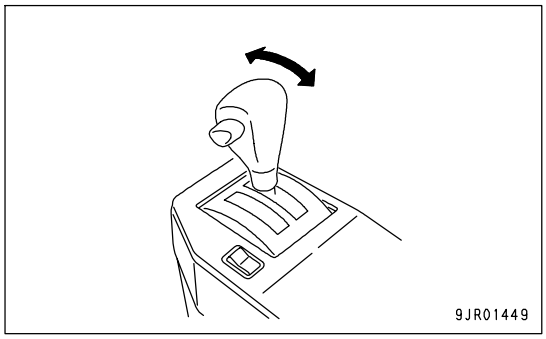
ACCELERATOR PEDAL

This pedal (2) is used to adjust the engine speed.
It can be operated freely between the engine low idle position and the full throttle position.



GEAR SHIFT LEVER

The gear range can be selected with this lever (3) to match the travel conditions.



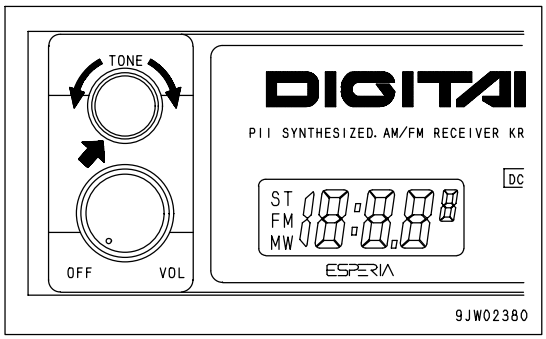
D position:
This is used for normal travel.
If the lever is placed in this position, the transmission is shifted automatically from 2nd torque converter drive to 7th speed to match the travel speed of the machine.
If the dump body is raised, the shift lever is fixed at 1st. Always lower the dump body when traveling.
The maximum speed in this position is 70.0 km/h (43.5 MPH).

REMARK
To comply with the EU safety standards (EN 474-6 5.1.3), if the machine travels with the dump body not completely lowered, the transmission is fixed in 1st and the gear cannot be shifted.

R position:
This is used when traveling in reverse.
This position uses the torque converter drive. The maximum travel speed in this position is 10.6 km/h (6.6 MPH).
It is impossible to travel in reverse if the dump body is raised. Lower the dump body, set the dump lever to the "FLOAT" position, then set the gearshift lever to the "R" position.

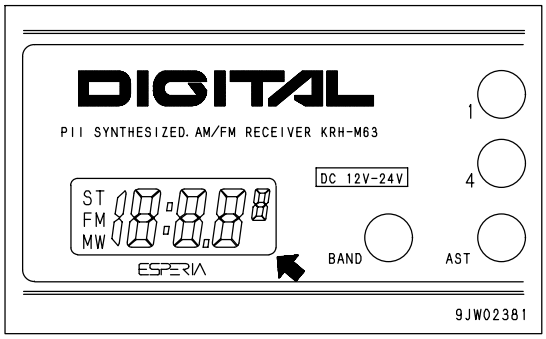
TONE CONTROL KNOB

If this knob (2) is turned to the right, the high tone is emphasized; if it is turned to the left, the high tone is reduced.



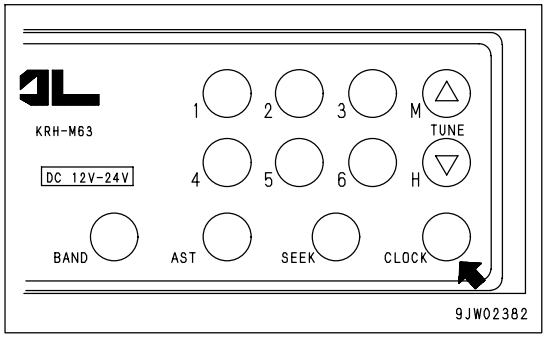
DISPLAY

This display (3) shows the radio reception frequency and the operating mode.



CLOCK BUTTON/DISPLAYING FREQUENCY

When this button (4) is pressed, the display changes to the time. If it is pressed again, it displays the frequency.

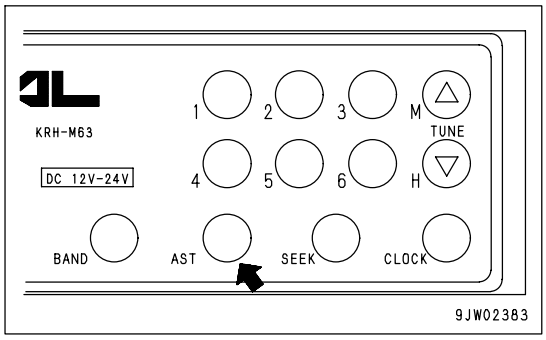


AST

When this button (5) is pressed, the preset stations are called up in turn.

When the desired broadcasting station is reached, press the button again to stop it.

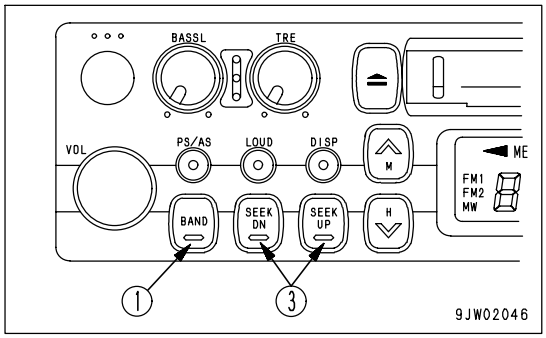
If the button is kept pressed continuously for 2 seconds, it is set to auto memory.



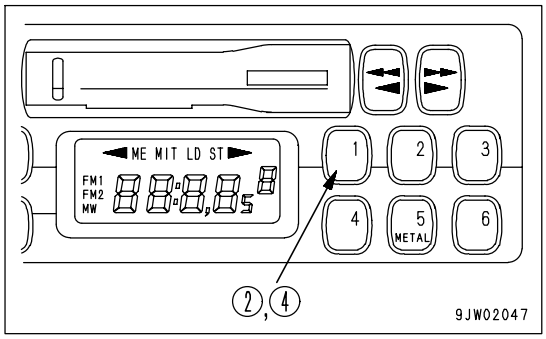
METHOD OF OPERATION

METHOD OF SETTING PRESET BUTTONS

To listen to a preset station, use band selector button (1) to select AM, FM1, or FM2, then press the preset switch number to listen to the desired station.
It is possible to preset six AM stations and 12 FM stations (FM1: 6, FM2: 6).



1. If you are playing a cassette, press the tape eject button to stop the tape.
2. Select the station to be preset.
   Use band selector button (1) to select MW (AM), FM1, or FM2, then use the manual tuning button to select the frequency of the broadcasting station.
3. Press manual memory button (2) or seek tuning button (3).
4. Press preset button (4) of the number to be preset for 2 seconds while the frequency display is being shown on the display. (The preset channel and frequency are displayed and the presetting is completed).
5. Repeat Steps 2 to 4 to preset other stations.



REMARK

- Use Steps 2 to 4 also when changing the setting of a preset switch to another station.
- When the power is disconnected, such as when the battery is replaced, all the settings are deleted, so preset the stations again.

8. Check dump body mount rubber
   Check for any cracks, embedded foreign objects, or loose bolts.

9. Check for damage to handrail, loose bolts
   Repair any damage and tighten any loose bolts.

10. Check for damage to gauges, lamps on the instrument panel and loose bolts.
    Check for damage to the panel, gauges and lamps. If any problem is found, replace the parts. Clean off any dirt on the surface. Tighten any loose bolts.

11. Check rear view mirror, under view mirror
    Check that the mirrors are not damaged. Replace them if they are damaged. Clean the surface of the mirrors and adjust the angle so that the operator can see the area to the rear and under the machine from the operator's seat.

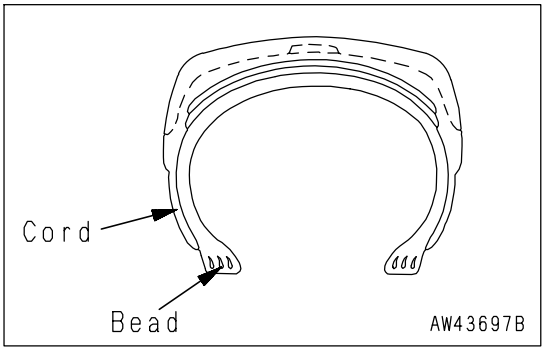
12. Check for damage to the seat belt and mounting clamps.
    Check for damage to seat belt and mounting clamps. If damages are found, replace with the new one.
    - Check for any loose bolts of the clamps mounting the equipment to the machine. Tighten any loose bolts.
    - When the belt has been used for a long time, if any external damage or fraying of the belt can be seen, or if the clamps are broken or deformed, replace the seat belt.

13. Inspect tires.

⚠ WARNING

If worn or damaged tires are used, they may burst and cause serious injury or death.
To ensure safety, do not use the following tires.
Wear:
- **Tires with a tread grooves of less than 15% of that of a new tire**
- **Tires with extreme uneven wear or with stepped-type wear**

Damage:
- **Tires with damage that has reached the cords, or with cracks in the rubber**
- **Tires with cut or pulled cords**
- **Tires with peeled (separated) surface**
- **Tires with damaged bead**
- **Leaking or improperly repaired tubeless tires**
- **Deteriorated, deformed or abnormally damaged tires, which do not seem usable**



14. Inspect rims.

⚠ WARNING

Check the rims (wheels) and rings for deformation, corrosion and cracks.
In particular, check the side rings, lock rings and rim flanges thoroughly.

CHECK INFLATION PRESSURE OF TIRES

Measure the inflation pressure with a tire pressure gauge, while the tires are cool, before starting work.
Check for damage or wear to the tires and the rims.
Check for loose wheel hub bolts.
The proper inflation pressure is shown below.

• HD325

Tire size	Inflation pressure
18.00-33-32PR (standard)	0.56MPa {5.75kg/cm^2, 81.7 PSI}
18.00R33★★ (if equipped)	0.69MPa {7.00kg/cm^2, 99.4 PSI}

• HD405

Tire size	Inflation pressure
18.00R33★★	0.69MPa {7.00kg/cm^2, 99.4 PSI}

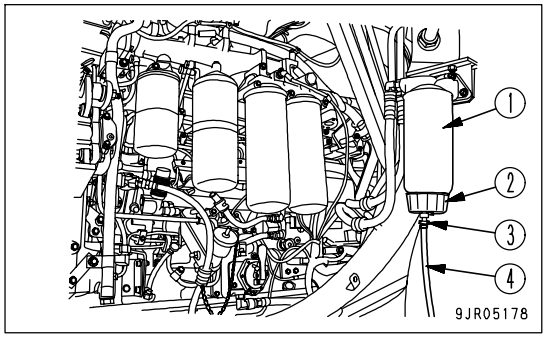
NOTICE

If the tires are used when the inflation pressure is less than the value given in the table above, the rim may be damaged. Always keep the tire inflation pressure within +0 to +0.03 MPa {0.3 kg/cm^2, 4.3 PSI} of the value in the table above.

CHECK WATER SEPARATOR

The water separator and fuel prefilter (1) are made one and composed of (2) to (4) in the lower section.

1. Water and sediment on the bottom can be checked through transparent cap (2). If there is water or sediment, prepare a container to receive it under drain hose (4).
2. Loosen drain valve (3) to drain the water.
3. If fuel starts flowing out through drain hose (4), close valve (3) immediately.

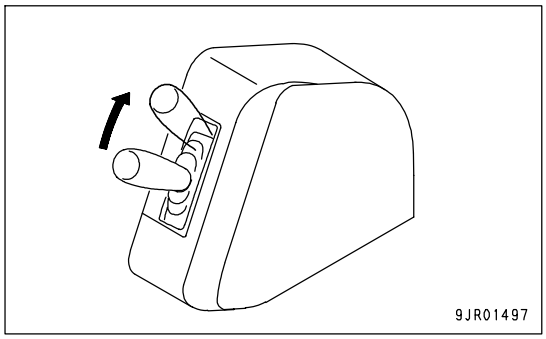


DOES BODY POSITIONER OPERATE NORMALLY?

1. Turn the starting switch key to the START position and start the engine.
2. Operate the dump control lever to the RAISE position, then release it.
   Check that the dump body stops before the end of the stroke.

REMARK

If the dump body reaches the end of the stroke, the contact of the body will cause an impact. The body positioner is functioning, so the dump body stops without any impact.



OPERATIONS, CHECKS AFTER STARTING ENGINE

BREAKING-IN THE MACHINE

CAUTION

Your Komatsu machine has been thoroughly adjusted and tested before shipment. However, operating the machine under severe conditions at the beginning can adversely affect the performance and shorten the machine life.
Be sure to break-in the machine for the initial 100 hours (as indicated by the service meter).
During break-in operations, follow the precautions described in this manual.

- Idle the engine for 5 minutes after starting it up.
- Avoid operation with heavy loads or at high speeds.
- Immediately after starting the engine, avoid sudden starts, sudden acceleration, unnecessary sudden stops, and sudden changes in direction.

WARMING-UP OPERATION

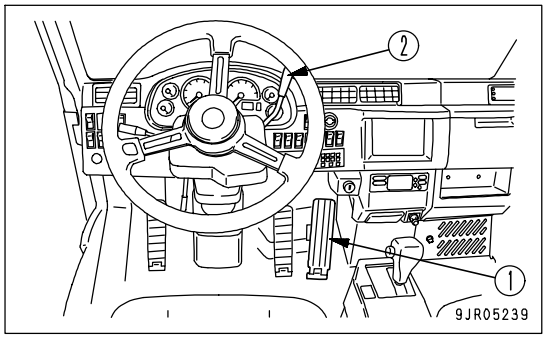
NOTICE

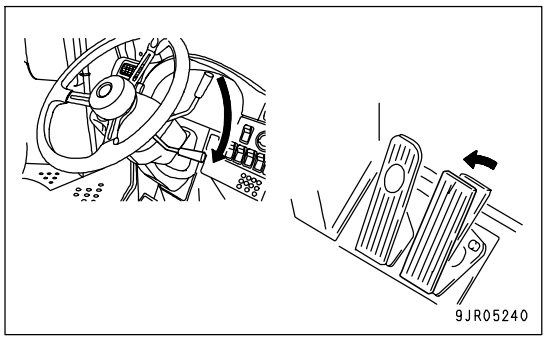
- **Avoid accelerating the engine suddenly before the warming-up operation is completed.**
  Do not run the engine for more than 20 minutes at low idling or high idling.
  If it is necessary to idle the engine, apply a load from time to time or run at a mid-range speed.
- **On machines equipped with auto emergency steering, if the machine is not fully warmed up, the emergency steering may be actuated momentarily when the parking brake switch is set to TRAVEL or the dump control lever is operated.**

After the engine starts, do not start operating the machine immediately. First, carry out the following operations and checks.

1. After starting the engine, run the engine at idle for 5 minutes for warming up operation.
2. After the warming-up operation, check that the machine monitor is normal.
   If there is any problem, carry out maintenance or repair.
   When the AISS LOW switch is at the AUTO position and the engine water temperature is still low, high idle revolution is automatically maintained.
3. Check if there is no problem in the steering operation, flashing of lights, sound of horn, exhaust gas color, noise, or vibration. If any problem is found, repair it.
   When the steering oil temperature is low, the steering will become slightly heavier, so avoid operating the steering when traveling at high speed.

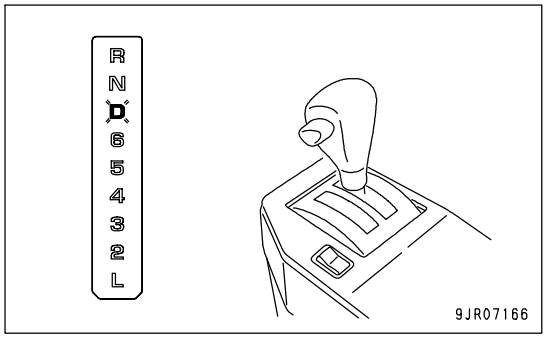
1. Before starting to travel downhill, release accelerator pedal (1) and operate retarder control lever (2) to slow the machine down.



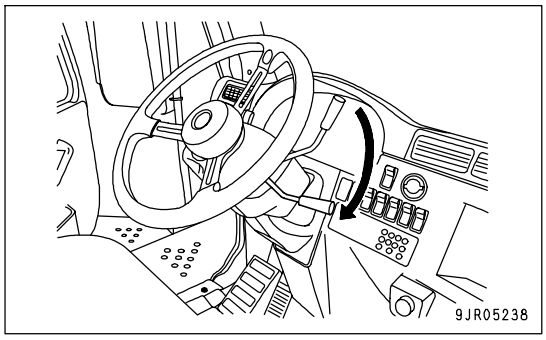


2. Leave the gear shift lever in position D.
   When the machine reduces speed, the transmission will automatically shift down to the appropriate gear range.

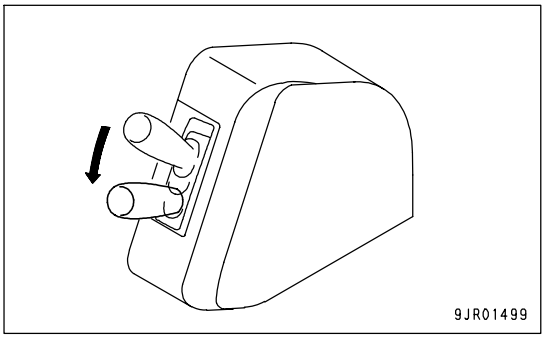
   If the condition of the road makes it necessary to travel downhill in 1st, set the gear shift lever to any position except D (6, 5, 4, 3, 2, L).



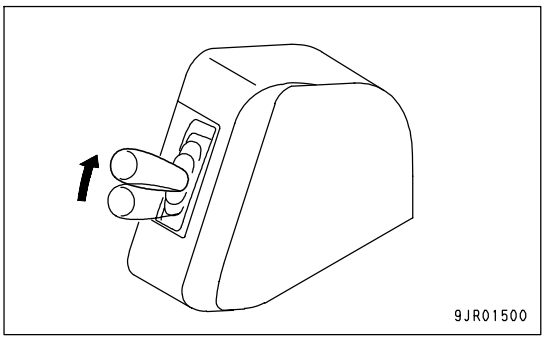
3. When traveling downhill, operate retarder control lever (2), run the engine at a speed of 1800 to 2200 rpm, and travel so that the retarder brake oil temperature gauge is in the white range.



4. When dump lever (3) is moved to the LOWER position, the dump body will start to move down.



5. When the dump body has moved down a certain distance, move dump lever (3) to the FLOAT position. (When the lever is released, it will return to the FLOAT position.) The dump body will then move down under its own weight.



NOTICE

- **If the dump control lever is not at the FLOAT sign position or the gear shift lever is not at the N position, the central warning lamp will light up and the alarm buzzer will sound.**
  On machines equipped with auto emergency steering, if the machine is not fully warmed up, the emergency steering may be actuated momentarily when the parking brake switch is set to TRAVEL or the dump control lever is operated.
- **When raising the dump body, to prevent any impact load on the hydraulic circuit or hoist cylinder, let the accelerator pedal back when the dump body is near the maximum angle.**
- **Regardless of the position of the gear shift lever, if the parking brake switch is at the "TRAVEL" position and the dump body is raised, the speed range is fixed at 1st. Lower the dump body before traveling.**

The dump control is carried out electrically. If there is any problem in the sensors or valves, a failure code is displayed and the dump body is held in position. If it is desired to move the dump body forcibly for inspection or repair, please ask your Komatsu distributor to carry out the operation.

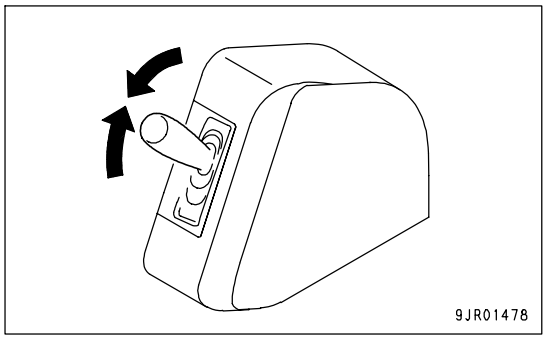
PRECAUTIONS FOR OPERATION

- When traveling on roads in rain or snow, or when traveling on muddy or soft ground, consider the loaded condition of the machine and be extremely careful not to let the tires slip or the machine spin and sink into the ground.
- If the engine should stop when the machine is traveling, stop the machine immediately, then move the gear shift lever to the N position, and start the engine again.
- If the central warning lamp and pilot lamp for any EMERGENCY item on the machine monitor should flash and the buzzer sounds during operation, stop the machine immediately and investigate the cause.
  For details, see "TROUBLESHOOTING (PAGE 3-125)".
- When loading, be careful to load the dump body uniformly, and be particularly careful to avoid loading too much at the front.
- On slippery road surfaces, apply the retarder control lever slowly and shift the transmission down to prevent the rear wheels from locking.
- When traveling through pools of water, water may get inside the front brakes and cause a big drop in the braking force, so drive carefully in such areas. If water should get into the brakes, apply the brakes several times while traveling to produce friction heat between the pad and disc to remove the water.

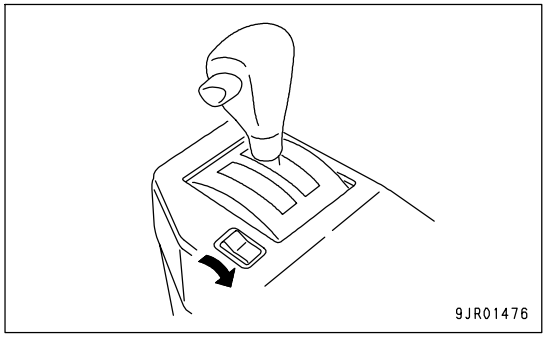
LIFTING PROCEDURE

Lifting work can be carried out only with machines displaying a lifting mark.
When carrying out the lifting operation, stop the machine on firm level ground, and do as follows.

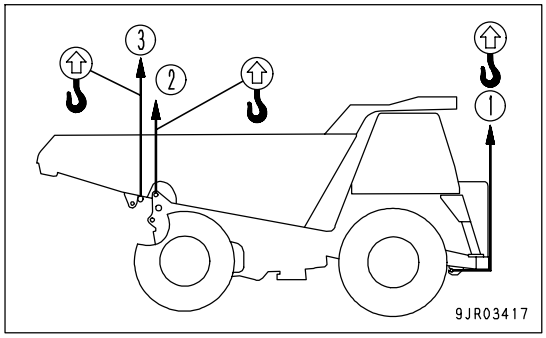
1. Start the engine, set the dump lever to the FLOAT position, and check that the body pilot lamp goes out.



2. Stop the engine, apply the brake, and check that the area around the operator's compartment is safe.



3. Select wire ropes, slings, spreader bars and other lifting equipment to match the weight of the machine, and fit the wire ropes to the lifting positions.



REMARK
The lifting positions for the machine differs according to the conditions.
Machine with body:Positions (1) and (3)
Total:4 places (2 at front, 2 at rear)
Machine without body:Positions (1) and (2)
Total:4 places (2 at front, 2 at rear)

4. Fit protector blocks at the contact points between the lifting equipment and the body to prevent damage to the King equipment.

5. When the machine comes off the ground (raised 10 to 20 cm(3.9 to 7.9 in)), stop the lifting operation, check carefully that the machine is balanced and that the wire ropes are not loose, then continue the lifting operation slowly.

WHEN ENGINE RUNS

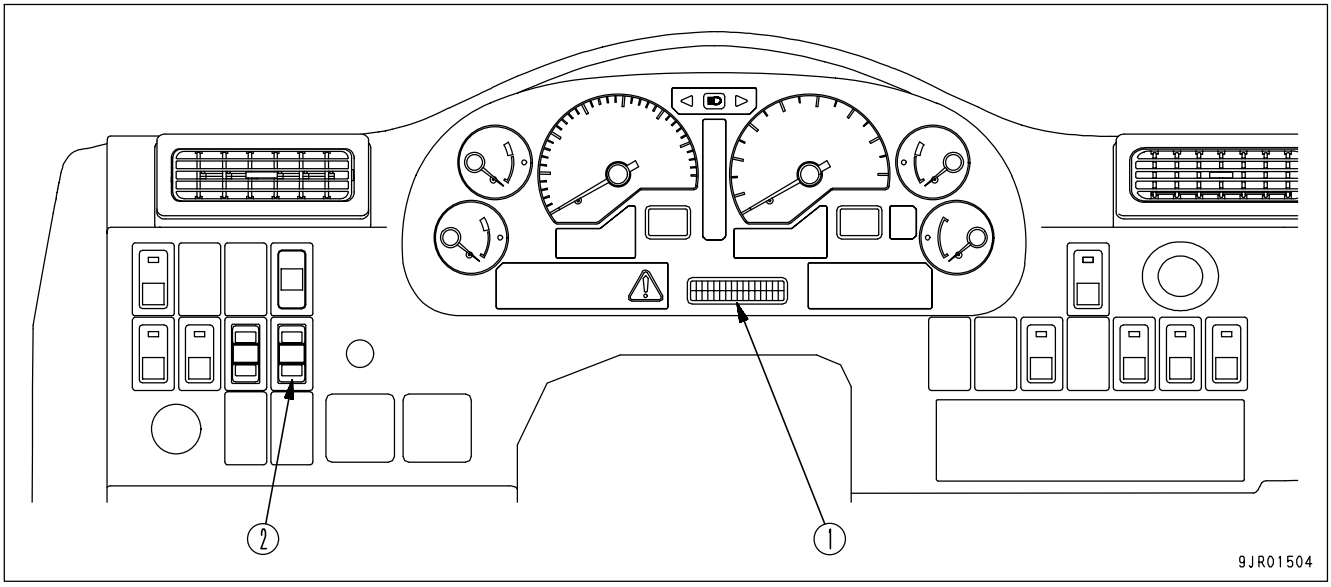
- If the transmission and steering wheel can be operated, and the engine is running, it is possible to tow the machine out of mud or to move it for a short distance to the edge of the road.
- Check the effect of the brakes, and if the brakes do not work properly, take the action given in "When engine does not run".
- Check if it is possible to steer the machine. If the machine cannot be steered, follow the procedure given in "WHEN ENGINE DOES NOT RUN".
- The operator should sit on the machine being towed and operate the steering in the direction that the machine is towed.
- Always run the engine to allow the steering and brakes to be used.

WHEN ENGINE DOES NOT RUN

- The brakes will not work, so be extremely careful.
- Connect the towing machine securely to the towed machine. Use two towing machines of the same class or larger than the machine being towed: connect one machine each to the front and rear of the machine being towed.
- If it is necessary to change the direction of the machine being towed, it is possible to use the emergency steering, but it can be used for a maximum of only 90 seconds.
- If the emergency steering cannot be used, disconnect two hydraulic hoses each on the left and right from the steering cylinders, then carry out the towing operation. When removing the hoses, block the hoses with plugs and fit oil containers to the mouthpiece of the cylinder to prevent oil from draining to the ground.

ACTION CODE

If any problem occurs, stop the machine, apply the parking brake and check the service code, then contact your Komatsu distributor for repairs.



If action code "E03" is displayed on the character display (1), or if an action code is displayed after taking the remedy when action code "E02" was displayed, or if "MAINTENANCE" is displayed together with action code "E01", do as follows to check the failure code.

1. If an action code is displayed, pressed the top (>) portion of machine monitor mode selector switch (2) and check the failure code. The failure code is displayed on character display (1).
2. Press the top (>) portion of machine monitor mode selector switch (2) again. The service meter and odometer will be displayed for several seconds, and the screen will then return to the action code screen.
   If more than one failure has occurred, the next failure code is displayed.
3. Check the failure code, then contact your Komatsu distributor for repairs.

REMARK

- The 6-digit code displayed on the left of the line at the top of the character display is the failure code.
- The code displayed at the right side of the failure code shows the controller that detected the failure code.
  MON: Machine monitor
  TM: Transmission controller
  ENG: Engine controller
  BK: Retarder controller
- The line at the bottom of the character display shows the system where the failure was generated.

STORING OIL AND FUEL

- Keep indoors to prevent any water, dirt, or other impurities from getting in.
- When keeping drum cans for a long period, put the drum on its side so that the filler port of the drums is at the side to prevent moisture from being sucked in.
  If drums have to be stored outside, cover them with a waterproof sheet or take other measures to protect them.
- To prevent any change in quality during long-term storage, be sure to use in the order of first in - first out (use the oldest oil or fuel first).

FILTERS

- Filters are extremely important safety parts. They prevent impurities in the fuel and air circuits from entering important equipment and causing problems.
  Replace all filters periodically. For details, see the Operation and Maintenance Manual.
  However, when working in severe conditions, replace the filters at shorter intervals according to the oil and fuel (sulfur content) being used.
- Never try to clean the filters (cartridge type) and use them again. Always replace with new filters.
- When replacing oil filters, check if any metal particles are attached to the old filter. If any metal particles are found, contact your Komatsu distributor.
- Do not open packs of spare filters until just before they are to be used.
- Always use Komatsu genuine filters.

OUTLINE OF ELECTRIC SYSTEM

- It is extremely dangerous if the electrical equipment becomes wet or the covering of the wiring is damaged. This will cause an electrical short circuit and may lead to malfunction of the machine. Do not wash the inside of the operator's cab with water. When washing the machine, be careful not to let water get into the electrical components.
- Service relating to the electric system is checking fan belt tension, checking damage or wear to the fan belt and checking battery fluid level.
- Never install any electric components other than those specified by Komatsu.
- External electro-magnetic interference may cause malfunction of the control system controller, before installing a radio receiver or other wireless equipment, contact your Komatsu distributor.
- When working at the seashore, carefully clean the electric system to prevent corrosion.
- When installing an operator's cab cooler or any other electrical equipment, connect it to an independent power source connector. The cables to supply power to the optional equipment must never be connected to the fuse, starting switch, or battery relay.

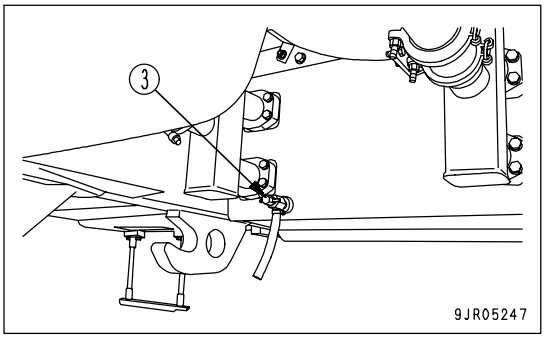
EVERY 4000 HOURS SERVICE

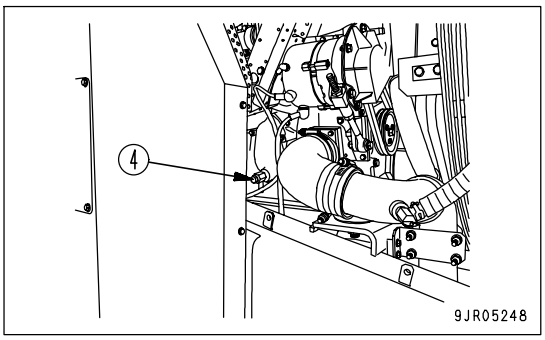
*: For machines equipped with the extended greasing interval drive shaft, carry out greasing every 4000 hours.
For machines equipped with the standard drive shaft, carry out greasing every 250 hours.

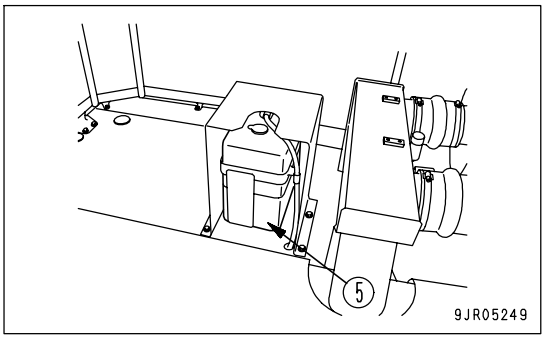
EVERY 8000 HOURS SERVICE

EVERY 15000 HOURS SERVICE

3. Place containers to catch the coolant under drain valve (3) at the bottom of the radiator and drain plug (4) at the side face of the cylinder block.
   Open drain valve (3) and drain plug (4), and drain the water.
4. After draining the water, close drain valve (3) and drain plug (4), and fill with tap water.
5. When the radiator is full, start the engine, and run it at low idle. Keep the engine running at low idle for 10 minutes until the water temperature reaches more than 90°C (194°F).
6. Stop the engine, open drain valves (3) and drain plug (4), and drain the water. After draining the water, close them.
7. Replace the corrosion resistor, then set valve (1) to the OPEN position to open it.
   For replacing corrosion resistor, see "REPLACE CORROSION RESISTOR CARTRIDGE (PAGE 4-64)".
8. Add coolant mixed with antifreeze until it overflows from the water filler.
   Decide the proportions of antifreeze and water according to the table for the mixing rate of water and antifreeze.
9. To remove the air contained in the coolant, run the engine at low idle for 5 minutes, then run for a another 5 minutes at high idle. (When doing this, leave the water filler cap OFF.)
10. Stop the engine. About 3 minutes later, supply city water up to the water filler, then close radiator cap.
11. Drain the cooling water from inside subtank (5), flush the inside of the subtank, then fill with water to a point between the FULL and LOW marks.





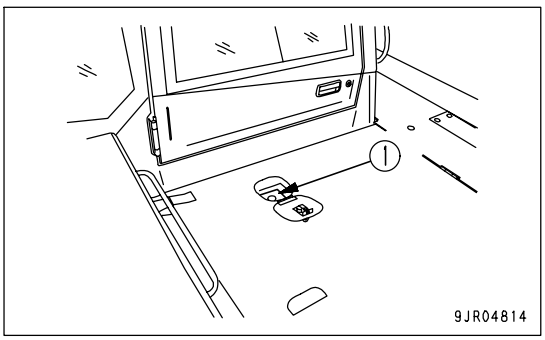


CHECK LEVEL OF WINDOW WASHER FLUID, ADD FLUID

Carry out this check if there is air in the window washer fluid.

Check the level of the fluid in window washer tank (1), and if it is low, fill with automobile window washer fluid.
Be careful not to let dirt or dust get in when adding fluid.

When operating at below freezing point, use fluid with antifreeze.

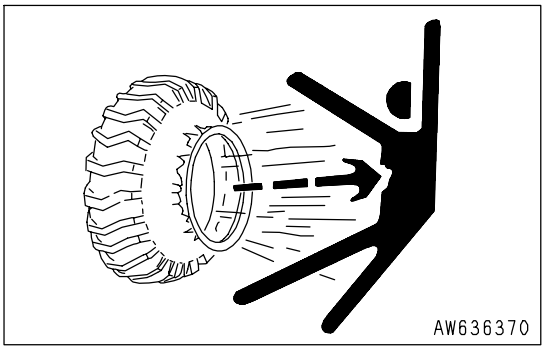


SELECTION AND INSPECTION OF TIRES

WARNING

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

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



SELECTION OF TIRES

WARNING

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

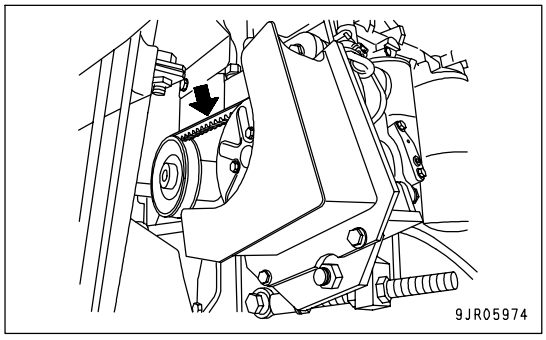
Select the tires according to the conditions of use and the weight of the attachments of the machine. Use the following table.
Since the travel speed indicated on the speedometer varies with the tire size, consult your Komatsu distributor when using optional tires.

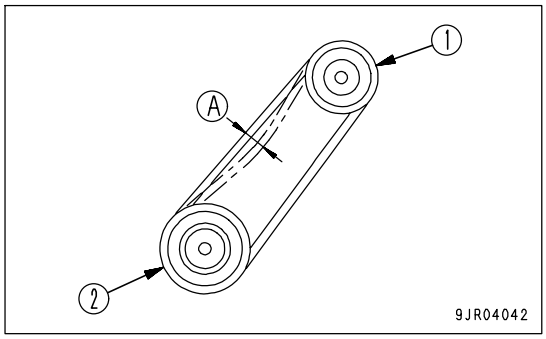
	Max. load [kg (lb)]	Size	Operating model	Remarks
Front wheel	10900	18.00R33★★	HD325: if equipped HD405: standard	Type 1 for construction equipment
	10300	18.00-33-32PR	HD325: standard HD405: not equipped	
Rear wheel	10900	18.00R33★★	HD325: if equipped HD405: standard	
	10300	18.00-33-32PR	HD325: standard HD405: not equipped	

CHECK AIR CONDITIONER COMPRESSOR BELT TENSION, ADJUST

CHECKING

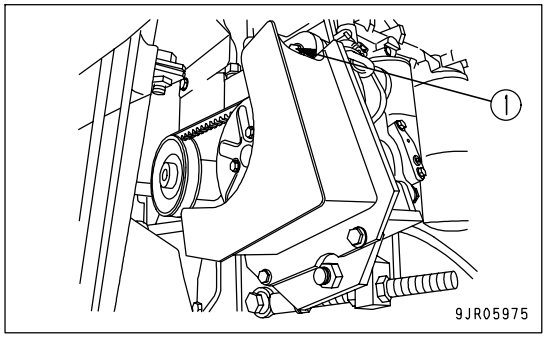
Press the middle of the belt between the air conditioner compressor pulley (1) and drive pulley (2) with the thumb (about 58.8 N {6 kg}).
If deflection (A) is 10 mm (0.4 in), the belt tension is normal.



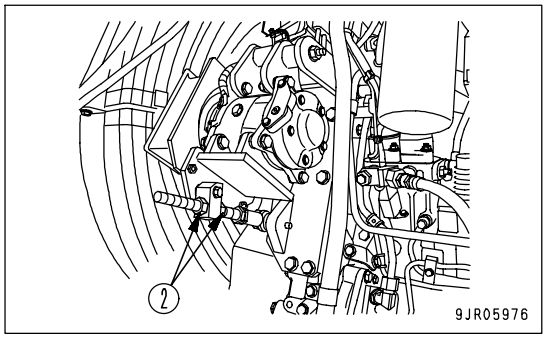


ADJUSTING

1. Loosen bolt (1).



2. Turn nut (2) to adjust so that the belt deflects by approx. 10 mm (0.4 in) when pressed with a finger force of approx. 58.8 N (6 kg) at a point midway between the air conditioner compressor pulley and drive pulley.
3. Tighten bolt (1) and nut (2) to secure the compressor in position.
4. Check each pulley for damage, wear of the V-groove, and wear of the V-belt. In particular, be sure to check that the V-belt is not touching the bottom of the V-groove.
5. If the V-belt is so lengthened that it cannot be adjusted any more or if it has any cuts or cracks, replace it.



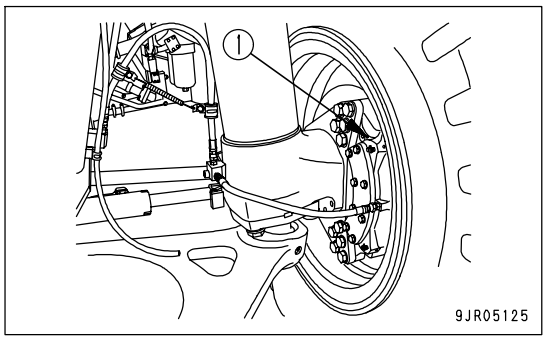
6. If the V-belt has been replaced with a new part, there will be initial elongation, so adjust the belt again after operating for 2 to 3 days.

CHECK WEAR OF FRONT DISC BRAKE PADS

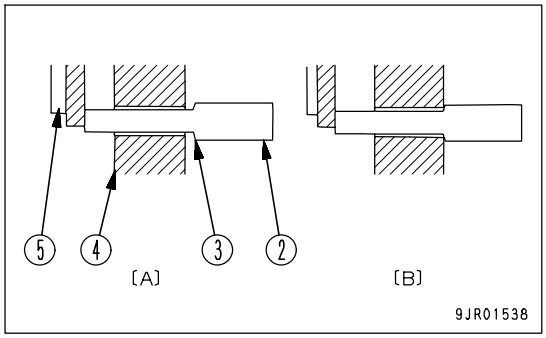
WARNING

- **If the pad is continued to use after the period of wear limit, not only the disc will be damaged but also the brake will loose its effect, and it is dangerous. If the period of wear limit approaches, check frequently the condition to change the pad at proper time.**
- **Perform inspection every 250 hours if the work site is covered by lots of earth and sand and if it is at the location where the foot brake is frequently used.**

1. Insert the inspection gauge into the wear inspection hole (1) and check.



2. The wear limit where stepped portion (3) of gauge (2) contacts caliper (4) is 3 mm (0.1 in) (remaining thickness of pad), so replace pad (5).
   (A): Near wear limit
   (B): Wear limit reached, so replace pad



After the inspection, if it is necessary to change the pad, contact your Komatsu distributor.

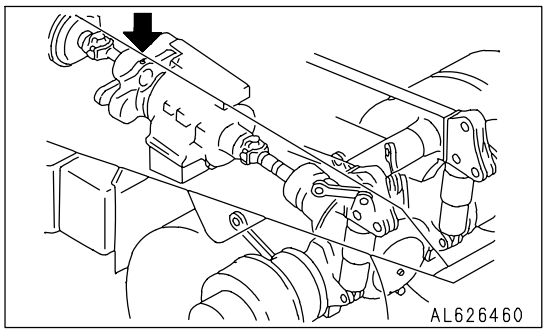
The pad wear is not necessarily the same for the left and right wheels, so always check the pads on both the left and right. If any of the pads has reached the wear limit, always replace all 4 pads.

If the work is performed on the muddy and watery ground, the mud sticks to caliper or disc. Leaving the mud will increase the wear of pad, so wash out thoroughly with water.

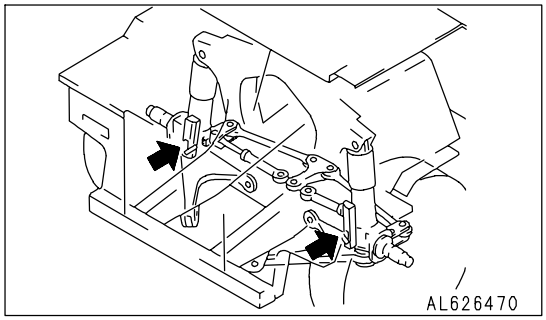
LUBRICATION

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

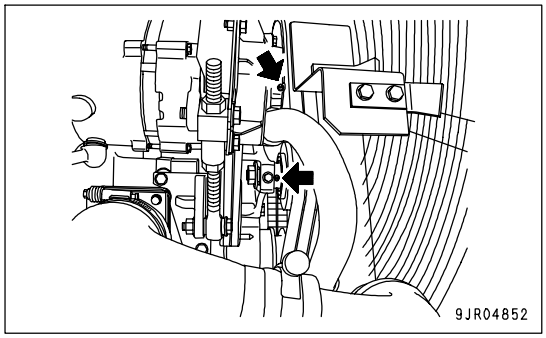
(1) Transmission mount (1 place)



(2) Automatic suspension link (left and right: 1 place each)



(3) Tension pulley and fan pulley (2 places)
Pump in grease through the grease fitting until grease oozes out from the seal.



NOTICE

Do not use air pressure or oil pressure to carry out high-pressure greasing.

CHECK STARTING MOTOR

The brush may be worn or have no grease on the bearing, so contact your Komatsu distributor for inspection or repair.

If the engine is started frequently, carry out inspection every 1000 hours.

CHECK WATER PUMP

Check around the water pump for water leakage. If any part is leaking, ask your Komatsu distributor for inspection/repair.

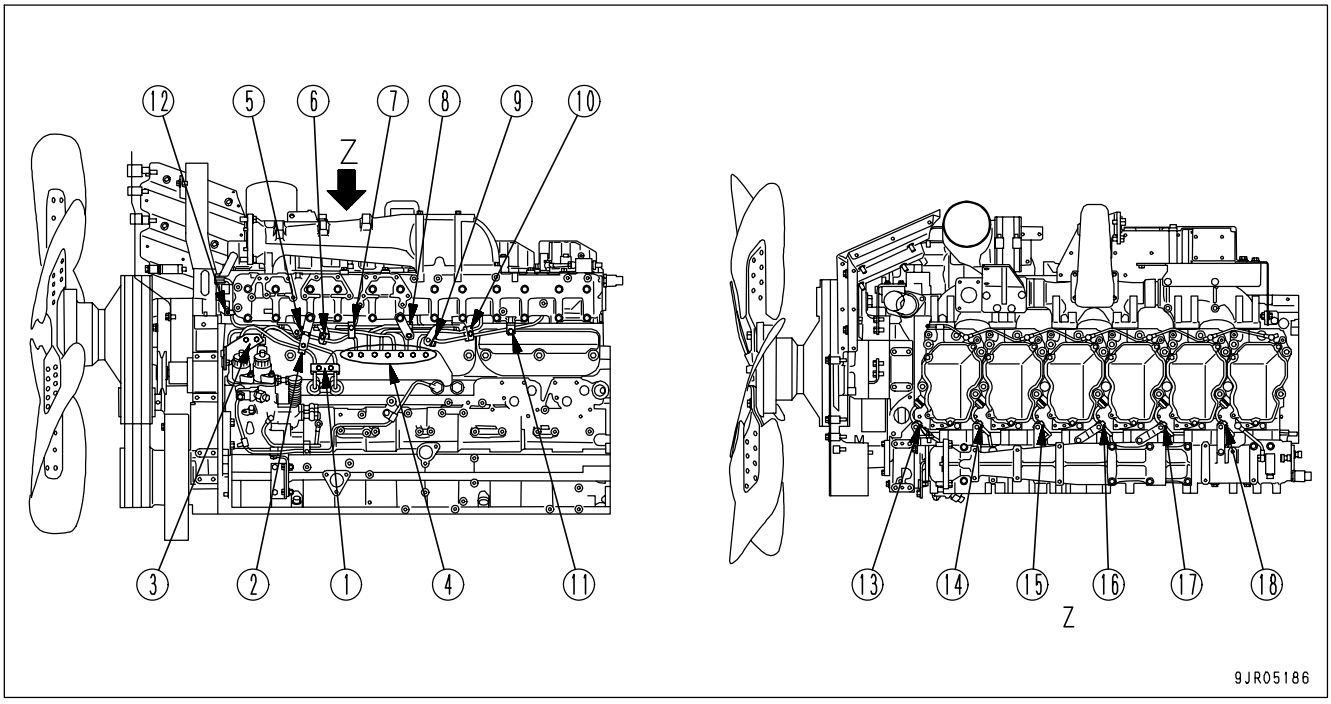
CHECK FAN PULLEY AND TENSION PULLEY

Check for play of the pulley and leakage of grease. If any problem is found, please contact your Komatsu distributor.

CHECK ACCUMULATOR

At 4000 hours or 2 years, whichever comes sooner, ask your Komatsu distributor to replace the accumulator parts.

CHECKING FOR LOOSENESS OF HIGH-PRESSURE CLAMP, HARDENING OF RUBBER



Check clamps (1) to (18) for loose bolts and hardening of the rubber parts. If there are any loose bolts or hardened rubber, please contact your Komatsu distributor for replacement.

(G) Adjusting headrest angle
Rotate the headrest to the front or rear.
Amount of adjustment:
Front tilt: 13 degrees
Rear tilt: 13 degrees

(H) Adjusting headrest height
Move the headrest up or down.
Amount of adjustment: 80 mm (3.2 in)

(I) Adjusting armrest angle
Rotate the knob (7) and adjust the angle of the armrest. (Left side only)
Amount of adjustment: 73 degrees (front: 54 degrees; rear: 19 degrees)
If the arm rest is turned, it will spring up. (Both left and right sides)

(J) Lumbar support
Operate switch (8) to give a suitable tension to the lower lumbar region.
Operate switch (9) to give a suitable tension to the upper lumbar region.
When + is pressed: Tension becomes stronger
When - is pressed: Tension becomes weaker

(K) Side support
Operate switch (10) to give a suitable tension to the left and right lumbar region.
When + is pressed: Tension becomes stronger
When - is pressed: Tension becomes weaker

METHOD OF USING ACCURATELY

1. Recorded payload data
   When the dump lever is operated from FLOAT to any position other than the FLOAT, the payload is recorded. The reason for this is the following two points.

   - To measure the payload that has actually been carried
     The payload can be measured more accurately by measuring the load that is actually dumped after subtracting the loss caused by spillage of the load during travel.
   - The measurement is carried out based on the pressure of each suspension, and after the machine has traveled, the variation of the friction force at each place has been evened out, so it is possible to measure accurately.

   When dumping the load, if the machine shakes and the payload display fluctuates, wait for the payload display to stabilize before dumping the load. (If the dump truck is stopped suddenly at the dumping point, it will take time for the payload display to stabilize.)

2. The payload display at the loading point (immediately after the loading) may be slightly less (1-5 tons) than the value displayed at the dumping point. This is caused by the differences in the friction force of the suspension, and it is impossible to remove this.
   Even if the displayed value at the measurement location is slightly different, it is not caused by any failure in the payload meter.

EXTERNAL DISPLAY LAMPS

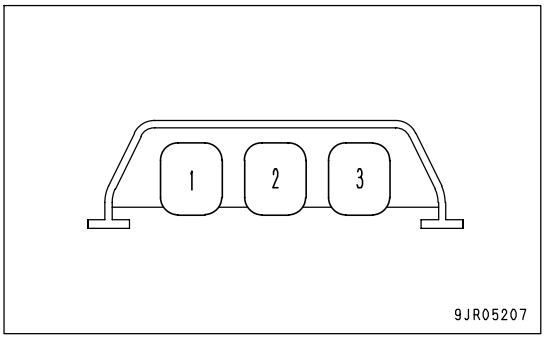
DISPLAY LEVEL FOR LAMPS

WARNING

If the red lamp lights up, the machine is overloaded. Do not haul a load under this condition. To prevent overloading, we recommend loading only up to a range where the yellow lamp lights up.

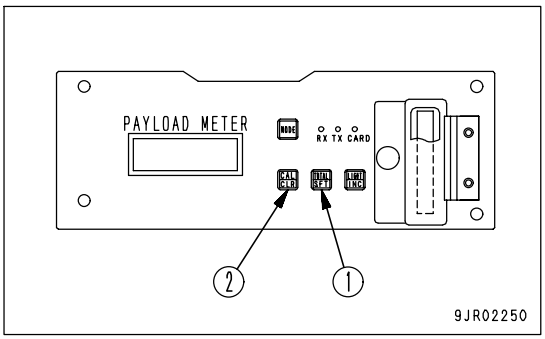
- The external lamps display the payload as follows.

	Color of lamp	HD325-7	HD405-7
1	Green	16.0 tons and up	20.0 tons and up
2	Yellow	28.8 tons and up	36.0 tons and up
3	Red	33.6 tons and up	40.0 tons and up



Method of clearing total payload and overall number of cycles

1. Press TOTAL/SFT switch (1) to display the total payload and overall number of cycles.
2. Keep CAL/CLR switch (2) pressed for at least 2 seconds.
   The total payload or overall number of cycles display will flash.
3. Keep CAL/CLR switch (2) pressed again for at least 2 seconds.
   After "0000" is displayed for 2 seconds, if the display returns to the normal operation display, the zero clear operation is completed.

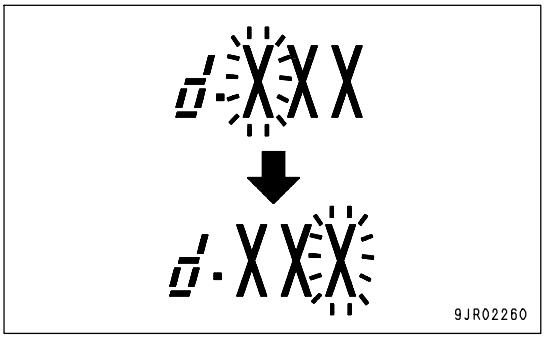


REMARK

- The zero clear operation for the total load and overall number of cycles is carried out at the same time.
  It is impossible to carry out the zero clear operation individually for only one of these items.
- The maximum limit for the total payload and overall number of cycles is as follows.
  Total payload: 999900.0 t
  Overall number of cycles: 9999 times
- If either the total payload or overall number of cycles goes above the set value, error code [H: FUL] is displayed.
- Carry out the zero clear operation for the total payload and overall number of cycles before error code [H:FUL] is displayed.
- If either the total payload or overall number of cycles exceeds the maximum limit, both values will be automatically cleared.
- Once error code [H:FUL] is displayed, it is impossible to forcibly clear the data or cancel the display until the value exceeds the limit and the data are automatically cleared.

4. If TOTAL/SFT switch (2) is pressed again, the flashing digit will return to the digit for the units and it becomes possible to correct the units again.

5. After completing the correction of the Machine ID, press MODE switch (3). The display will return to the normal operation display.
   If the number that has been input is not permitted, when MODE switch (3) is pressed, the display will return to Step 1.



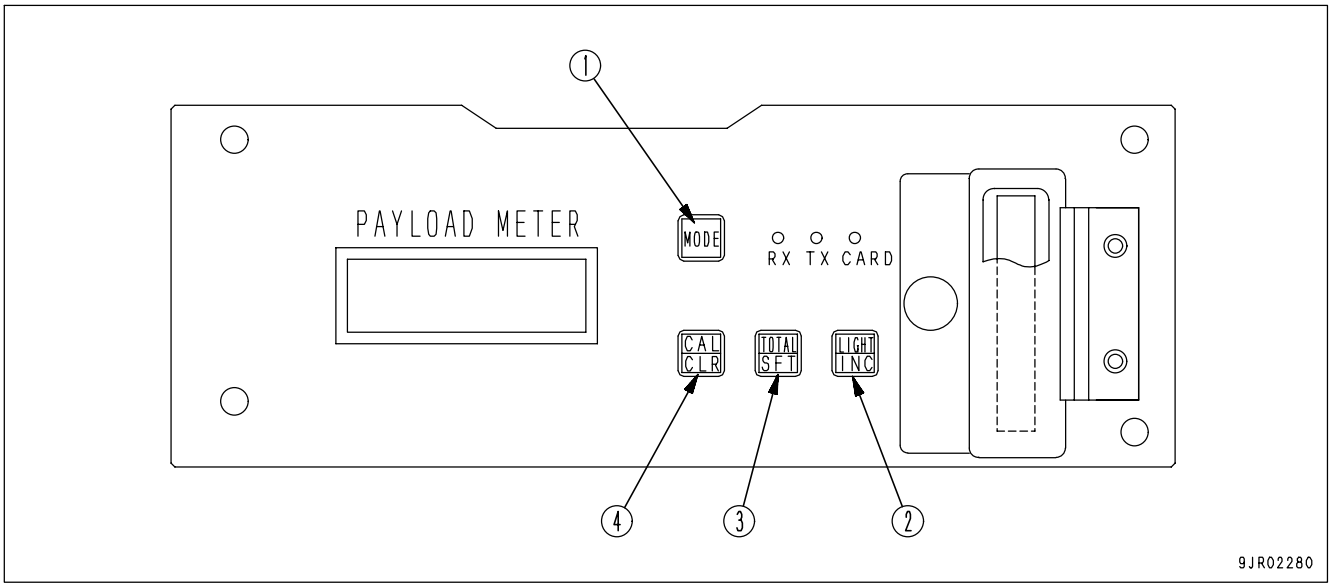
Priority of display	Content	Judgment standard	Content of error code display			Timing possible for display	Recording of problem and warning data (display code for personal computer software)	Remarks
			Panel display	External display lamps	Display canceled			
1	Dump lever not at FLOAT (except when dumping)	-	b-FL lights up	All flash	When problem is removed	Gearshift lever at N	-	-
			b-FL lights up	-	When problem is removed	Gearshift lever at position other than N	-	-
2	Memory card removed	-	Cd flashes	-	When problem is removed	Removal detection only for card dump	-	Detected only when card dump operation is run
3	Drop in backup battery voltage	Defective contact or voltage below 2.7V	F-09 flashes	-	When problem is removed	Except when loading	Record (000-009)	Rated voltage: 3.6V
4	Cycle data memory FULL	See (*1)	See (*1)	-	See (*1)	Except when loading	Record (000-011)	-
	Engine ON/OFF data memory FULL						(000-012)	
	Problem, warning data memory FULL						(000-013)	
	Total payload, overall number of cycles data memory FULL						(000-014)	
5	Disconnection at R terminal	Output with the engine running is less than 2V	F-18 flashes	All flash	When problem is removed	When engine is running	Record (000-018)	-
6	Problem in sensor power source (18V)	Output below 15V and power source voltage over 20V	F-20 flashes	All flash	When problem is removed	When normal	Record (000-020)	Calibration cannot be carried out when problem has occurred

CARRYING OUT FORCED INITIALIZATION

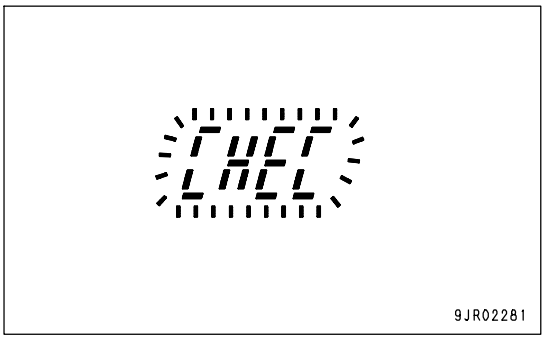
CAUTION

When this function is performed, all of the data recorded in the payload meter are deleted. Do not carry out this operation unless necessary.

Check the date and time before starting, and always be sure that the machine is empty. This operation is possible only when the power is ON.



1. In the normal display condition, keep MODE switch (1) and LIGHT/INC switch (2) pressed at the same time for at least 2 seconds.
   CHEC will flash on the payload meter display.



2. When CHEC is displayed, keep LIGHT/INC switch (2), TOTAL/SFT switch (3), and CAL/CLR switch (4) pressed at the same time for at least 2 seconds.
   00:00 will flash on the display.