

OPERATION MANUAL

IC45 CRAWLER CARRIER

SERIAL NUMBER:
CE000001 and up

IHI

IHI Construction Machinery Limited

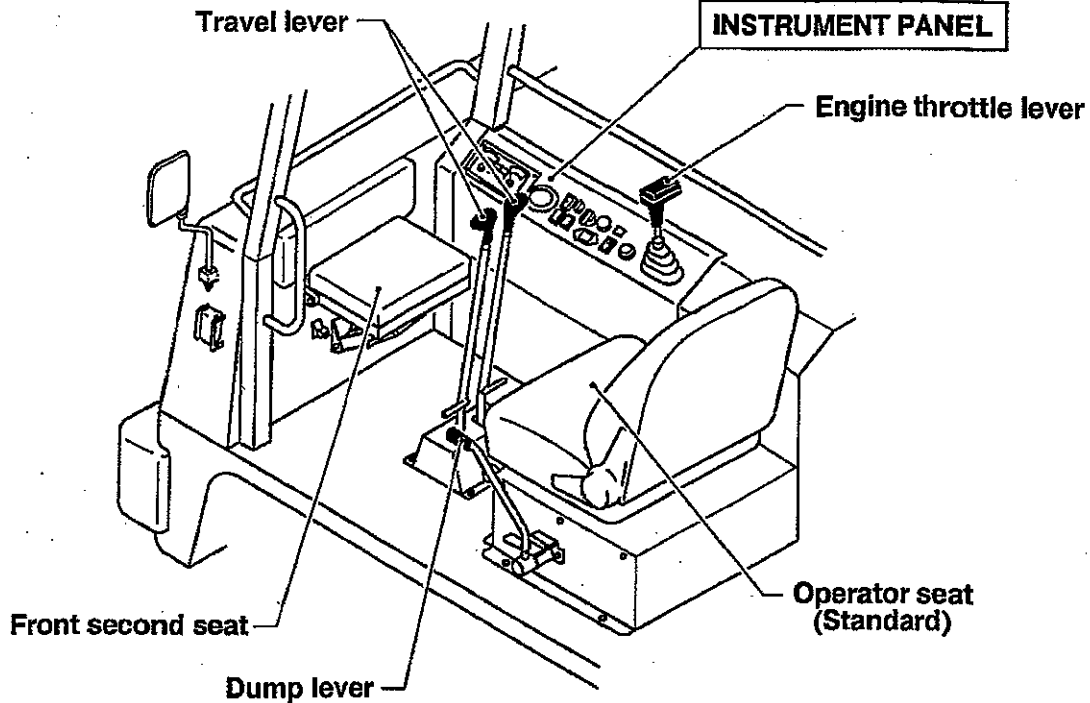
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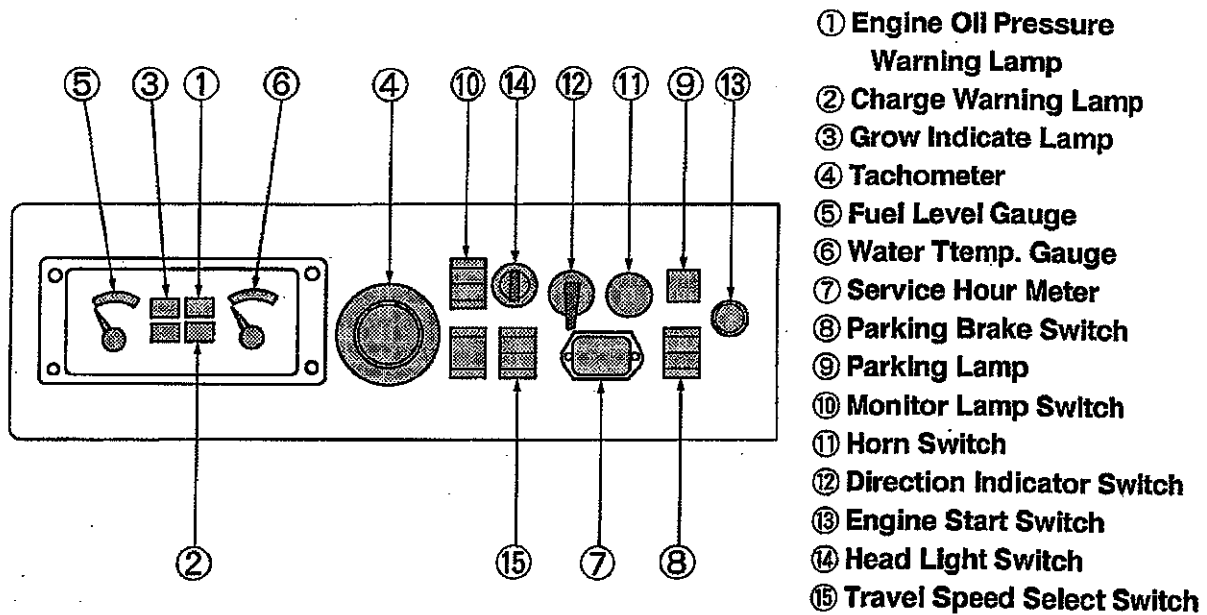
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CONTROLS AND INSTRUMENTS



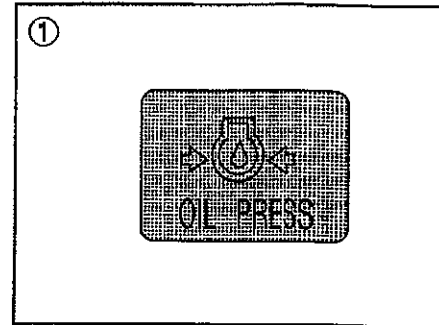
INSTRUMENTS PANEL



1. MONITOR

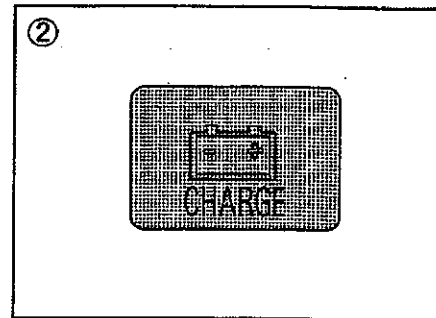
① Engine Oil Pressure Warning Lamp

This warning lamp indicates that engine oil pressure has fallen. If it lights and buzzer sounds during operation, stop the engine immediately and check the cause of engine oil pressure's falling.



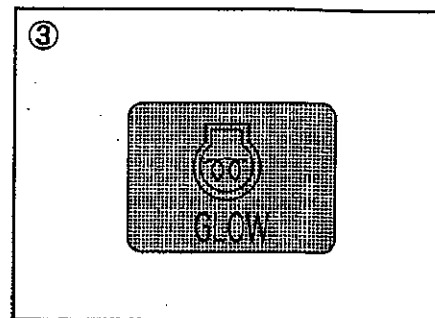
② Charge Warning Lamp

Illuminated lamp indicates abnormal condition in battery charging circuit. The charge indication light should turn OFF when engine is started. If the light remains ON, there is some trouble in the charging circuit.



③ Glow Indicate Lamp

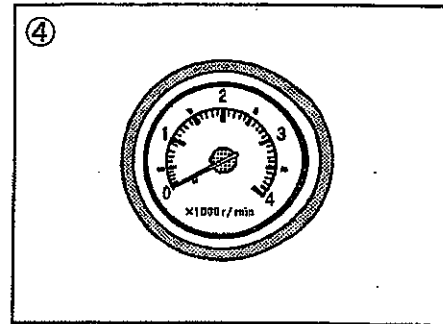
This lamp glows when the starter switch is set to the HEAT position. The glow lamp stays lit for 10 to 15 seconds.



2. METER

④ Tachometer

This meter shows the engine speed per one minute (in rpm).

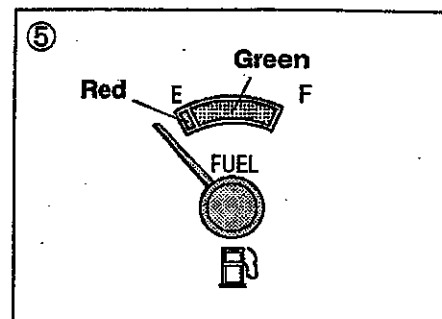


⑤ Fuel Level Gauge

It indicates the fuel level in the fuel tank.

F : The fuel tank is full.

E : Fuel level is too low. Add the fuel.



⑥ Water Temperature Gauge

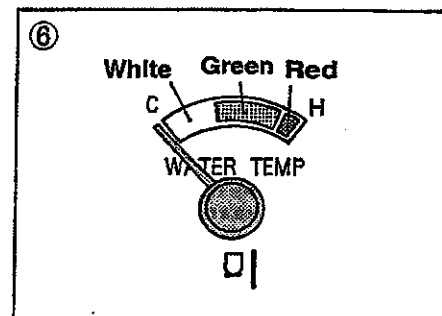
This indicates the engine water temperature.

Upon start-up, the lowest "White" range indicate.

While running the engine, with out load and low idling warming up.

Indicate the "Green" range, that the water temperature is in the normal operating temperature range.

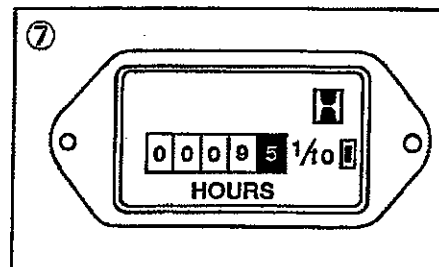
If the water temperature rise to an overheated situation, the "Red" range will indicate. If this situation arises, set the engine throttle at low idle until the engine temperature lowers. **SHUT** the engine **OFF**, check the radiator and determine the cause.



⑦ Service Hour Meter

Indicates the total service hours on the engine. Use it to determine the service intervals.

While the engine is running, the hour meter is operated.



3. SWITCH

⚠ CAUTION

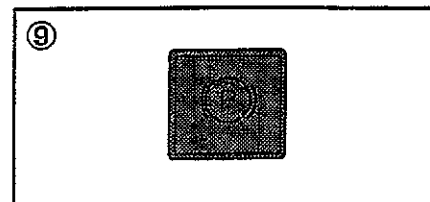
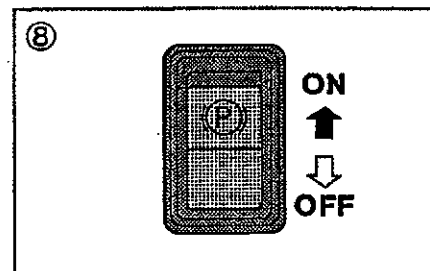
1. When leaving the operation seat, press the "P" side of switch and engage the parking brake.
2. You cannot travel the machine by the travel lever while the "P" side of switch is depressed.
3. Do not press the parking switch to stop the machine while travelling. Stop travelling without the parking brake first, then engage the parking brake.

⑧ Parking Brake Switch/⑨ Parking Lamp


- These are for the parking brake.
- Depress "P" side of the switch to engage the parking brake.

Then the parking brake lamp lights to indicate that the brake is engaged. Depress unmarked side to release the brake.

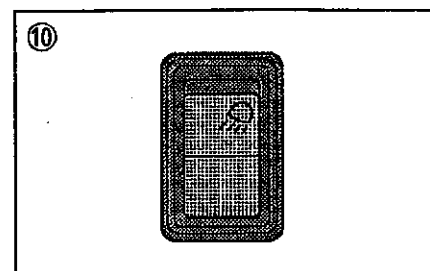
Then the goes off to indicate that the brake is released.



⑩ Monitor Lamp Switch

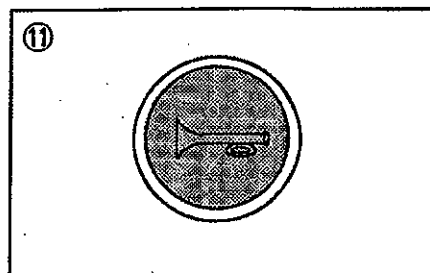
Depress the  mark with the starter switch set to ON position, to light up the OK monitor and tachometer lamp.

Depress the side of the switch without the mark, to turn off these lamps.



⑪ Horn Switch

Depress this switch sound horn.

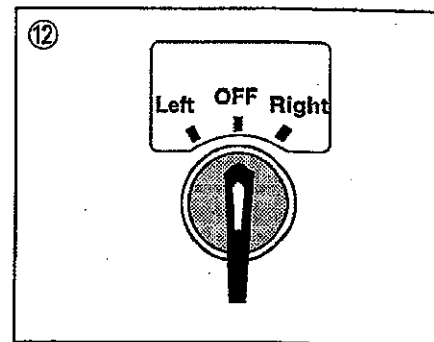


⑫ Direction Indicator Switch

Use with the starter switch set to ON.

Turn the lever left to light the left direction indicator.

Turn the lever right to light the right direction indicator.



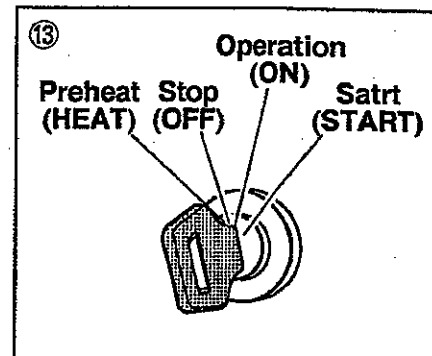
⑬ Engine Start Switch

A four position switch energizes the electrical circuits, cranks the engine and also heats the glow plugs for cold weather starting.

Turn key fully clockwise and hold in the start position to complete the electrical circuit between the start switch and engine starter.

For cold weather start-ups, turn key fully counterclockwise and hold for 10 seconds to allow heating of the glow plugs.

If the engine does not start, or is being restarted after shutdown, turn the key to **OFF** before returning it to **START**.

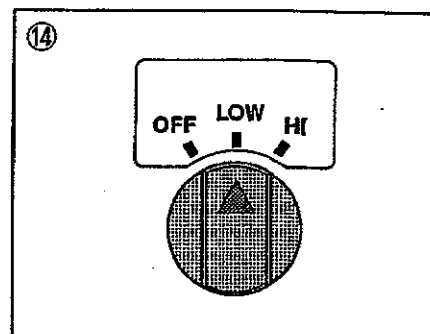


⚠ CAUTION

ALWAYS remove key when machine is not in use.

⑭ Head Light Switch

This switch turns on the front vehicle lights when the starter switch is set to ON. This switch is used to change the brightness and turn off the front lights.

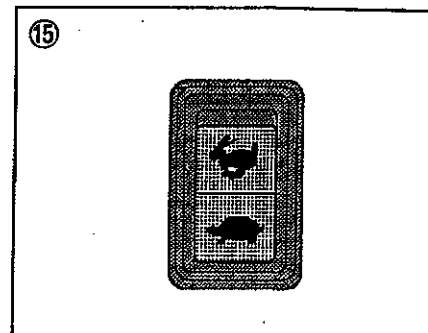


⑮ Travel Speed Select Switch

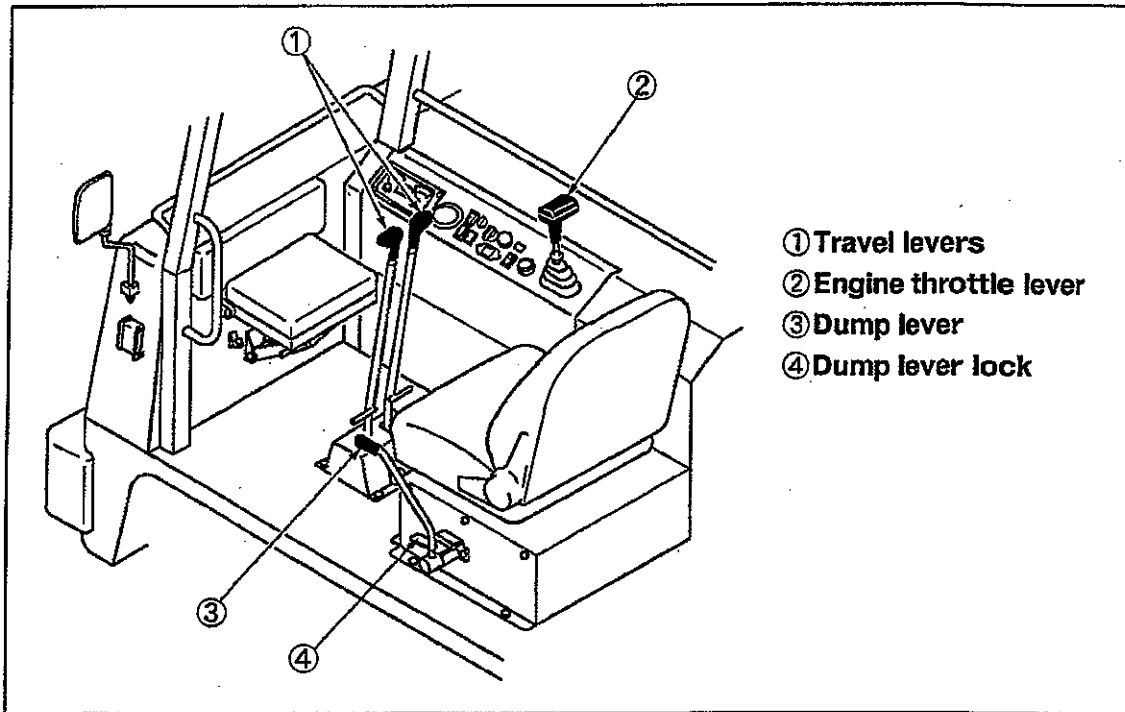
Low speedpress the  mark.

High speedpress the  mark.

NOTE : Stop the vehicle before attempting to switch speeds.



4. OPERATING LEVERS

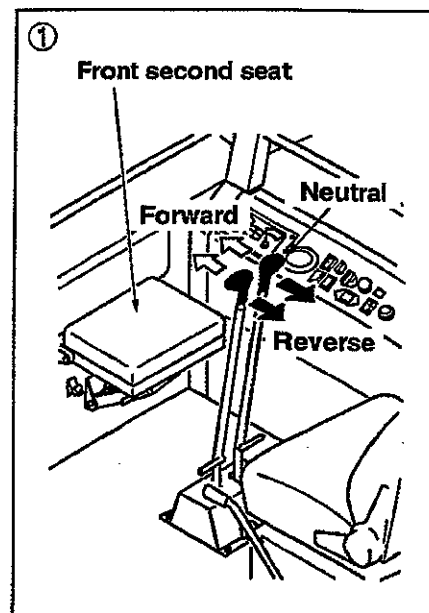


① Travel Levers(Left and right)

Control these levers to move the carrier forward or backward, stop the carrier, and control travel speed.

- To travel forward, move the levers toward the front of the machine.
- To travel backward, move the levers toward yourself.
- To stop travelling, set levers at neutral position.
- To control travel speed, change the stroke of levers.


The bigger stroke increases the speed.




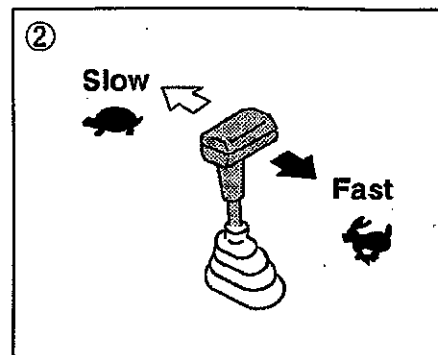
CAUTION

At the front second seat, you should turn the levers in the opposite directions to the above mentioned.

② Engine Throttle Lever

Slow :  Move the lever to this position to decrease the engine speed.

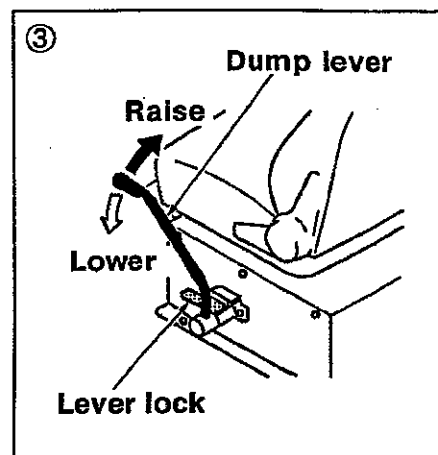
Fast :  Move the lever to the right and rear, to increase the engine speed. Use this position for maximum production work.



③ Dump Lever

⚠ CAUTION

When working underneath the body while it is raised, always place a safety bar at the body, stop the engine, and set the lever lock on the dump lever to lock position.



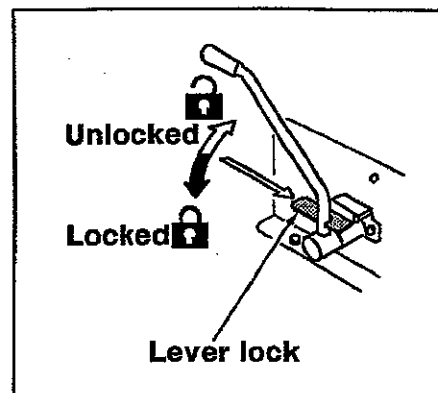
Control this lever to raise or lower the body.

- To raise the body, pull up the lever.
- To lower the body, push down the lever.

④ Dump Lever Lock

Locked : Push lever lock down and dump lever is inoperable.

Unlocked : Pull the lever lock up and dump lever is operable.



⑤ Operator Seat (Standard)

⚠ CAUTION

Do not adjust the operator seat while driving. Sudden seat movement can cause operating errors or unforeseen accidents.

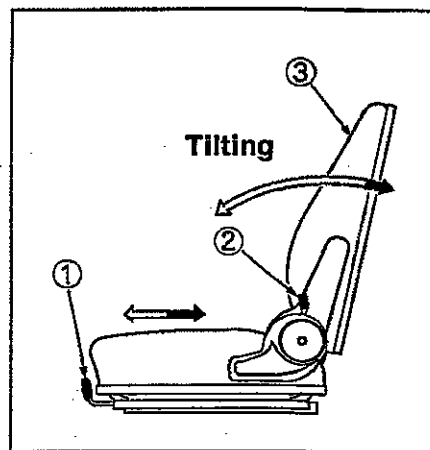
Seat Adjustment

NOTE : Adjust the seat at the beginning of each shift or when changing operators.

Adjust the seat to allow full travel of the levers when the operator is seated against the seat back.

To adjust seat forward or backward.
Push the slide lever ① to the operator's left, to allow moving the seat forward or backward.

To adjust seat back tilt
Pull the back tilt lever ② to the operator's rear, to allow moving the seat front or rear tilt.



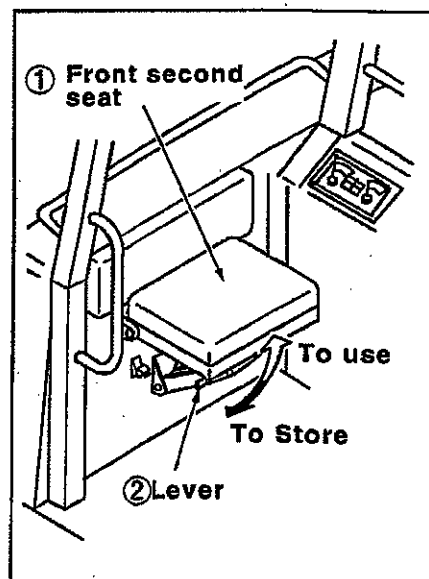
⑥ Front Second Seat

⚠ CAUTION

Do not use the front second seat in locations where the carrier will have a large tilt or when travelling on slopes.

To use
Pull the second seat ① up by hand and lower the lever ② to lock it in place.

To store
Raise the second seat ① a little and push lever ② inwards. The seat will fold back downwards.



PRE-START CHECKS

The following items should be checked each day before start-up or the start operations.

Inspect the operator's compartment for cleanliness. Keep it clean.

Inspect lights for broken bulbs and lenses. Replace if broken.

Inspect and remove any trash build up the engine compartment.

Inspect any cracks in body and gate hinges. Repair if it damaged.

Inspect the cooling system for leaks, faulty hoses and trash buildup. Correct any leaks and remove any trash from radiator.

Inspect the hydraulic system for leaks. Inspect the tank, hoses, tubes, plugs, joints and fittings. Correct any leaks.

Inspect the hydraulic level . Maintain the oil level. Add oil if necessary.

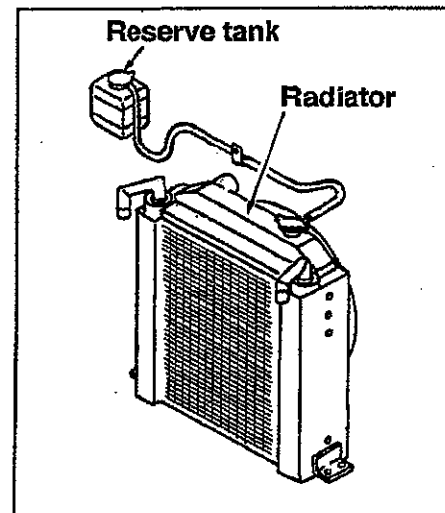
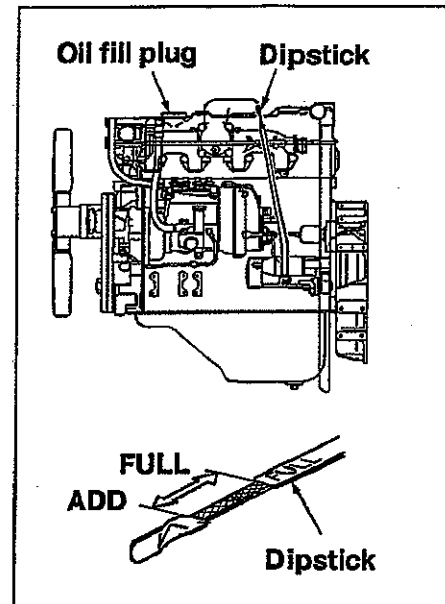
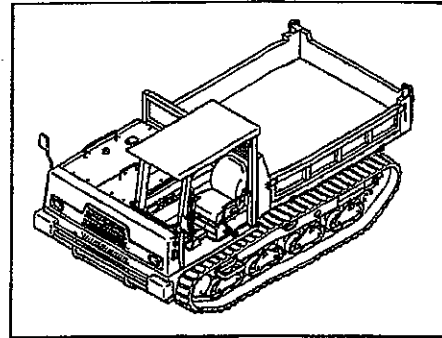
Check the engine oil level. Maintain the oil level. Add oil if necessary.

Check the coolant level on the collant reserve tank. Mainten the level. Add collant if necessary.

Check the air filter dust indicator. If the indicator is in the red zone, service the engine air filter. After servicing, push the reset button to reset the dust indicator.

Inspect and repair any travel reduction leaks. Check the oil level if leakage is noticed.

Refer to Daily Maintenance and Checks in the MaintenanceSection for more detailed information.



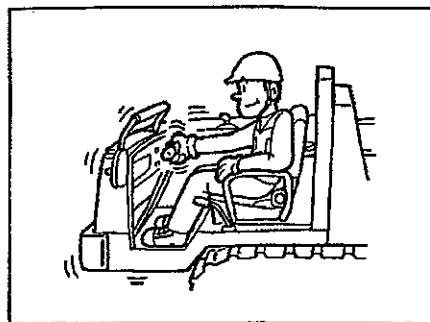
STARTING THE ENGINE

Once the pre-start inspection has been completed, the engine may be started.

1. Depress the Parking Brake switch to the parking position.
2. Set the operation levers to the neutral position.
3. Move the engine throttle lever ① above the **LOW IDLE** position (advance about one-third to one-half).
4. Turn the start switch ② to the **START** position.

NOTE : Under low temperature conditions, turn the start switch key to **PRE-HEAT** for about 15 seconds **BEFORE** turning to **START** position. The **GLOW** Indicate lamp ③ turns on during engine preheating.

5. Release the start switch key when the engine starts.



① Engine throttle lever



CAUTION

1. Do not engage the starter motor for more than 15 seconds at a time. Should the engine fail to start within 15 seconds, allow the starter motor to cool for 2 minutes, before attempting to start the engine again.

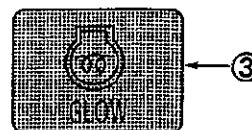
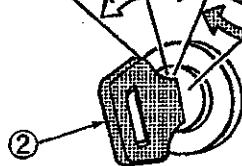
Turn the key to **OFF** before trying to restart the engine.

2. The "OK" warning monitor should be observed immediately after starting and during operations. If the display does not register normal readings, stop the engine and determine cause.
3. Allow the engine to warm up until operating temperature and required oil pressure are obtained.
4. Before attempting any working operations, warm up the hydraulic oil as described in "Preoperation Warm-Up"

DANGER

DO NOT USE ETHER FOR STARTING AID

Preheat (HEAT) Stop (OFF) Operation (ON) Start (START)



JUMPER CABLE STARTING

CAUTION

Battery gives off flammable fumes that can explode.

Improper jump procedures can cause an explosion resulting in personal injury.

The ground cable must be **ATTACHED LAST** and removed **FIRST** to prevent sparks from occurring near the battery, which could cause battery vapors to explode.

Attach the ground cable from the booster battery to a point away from and below the battery (Use starter groundpost of machine to be started).

To prevent possible personal injury, care must be used when removing the cables from the machine that has been started. Do not allow the cable ends to contact each other or the machine.

CAUTION

Jump only with a battery source and with the stalled voltage as the stalled machine.

Be sure the start switch is in the **OFF** position **BEFORE** attaching the jumper cables to the machine to be started.

Always connect battery **POSITIVE (+)** to battery **POSITIVE (+)** and **NEGATIVE (-)** to battery **NEGATIVE (-)**.

1. Attach one cable to under grounded **POSITIVE (+)** terminal of battery on machine to be started.

Attach opposite end of cable to **POSITIVE (+)** terminal of external starting source.

2. Attach second cable to **NEGATIVE (-)** terminal of starting source. Attach remaining cable end to the starter ground post of machine to be started.

3. Start engine.

4. After engine starts, **FISRT** remove cable attached to starter ground post of started machine. Remove opposite end of cable from starting source.

5. Remove cable from **POSITIVE (+)** terminal of battery on machine started. Remove opposite end of cable from starting source.

PRE-OPERATION WARM-UP

With any piece of hydraulically operated equipment, it is **EXTREMELY IMPORTANT** that the hydraulic fluid be thoroughly warmed fluid-up **BEFORE** any work is begun. A warm-up period is time well spent in preventive maintenance.

Practice the following warm-up procedure before attempting full load operations.

1. Perform the engine start - up procedure previously described and allow the engine to idle for 4-5 minutes at approximately 1000 rpm. (1000-1200 rpm in cold weather). Depending on the ambient temperatures, the following conditions may exist when the engine is first started:
2. The engine oil pressure warning lamp will come on. Within 10-15 seconds a minimum pressure should cause the light go out. If this pressure **DOES NOT** indicated within 10-15 seconds, **STOP** the engine and check the oil lubricating system.
3. When the necessary engine oil pressure has been obtained, gradually increase engine speed observing the "OK" monitor system to be sure all systems are normal.

Work up to maximum engine speed in manner.

4. Perform all machine motions in order to get movement of oil through all working units.
5. In cold weather, it may be necessary to heat the hydraulic oil by going over relief. To accomplish this, set engine speed at one-half to three-quarters throttle. Actuate dump lower function to direct pump flows over relief.
6. Repeat this over relief procedure in short 5 second attempts with 10-15 second pauses in between. Occasionally, go through all the hydraulic motions to move warmed oil to cylinders and cold oil back to reservoir.

Depending on the ambient temperature, the above procedure should warm hydraulic oil to within its specified temperature range for full load operation in 15-30 minutes.

Be sure to perform the pre-operation warm - up procedure whenever the hydraulic oil temperature is lower than 20 °C at start-up

"BREAK-IN" OPERATION

In case of the new machine, as the severe operation from the beginning will have a bad influence upon the machine life, perform the enough break-in operation as described the right table.

Hour meter	Load
Up to 10 hours	About 60% load
Up to 50 hours	About 80% load
After 50 hours	Full load

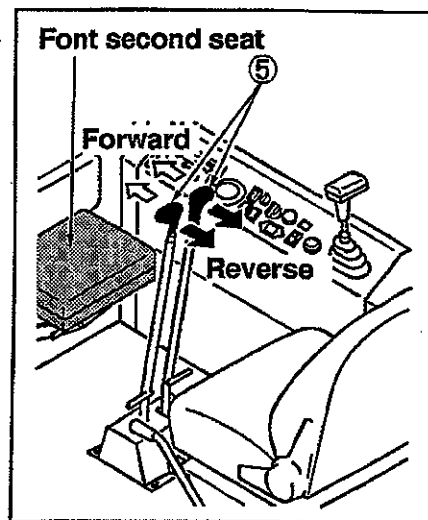
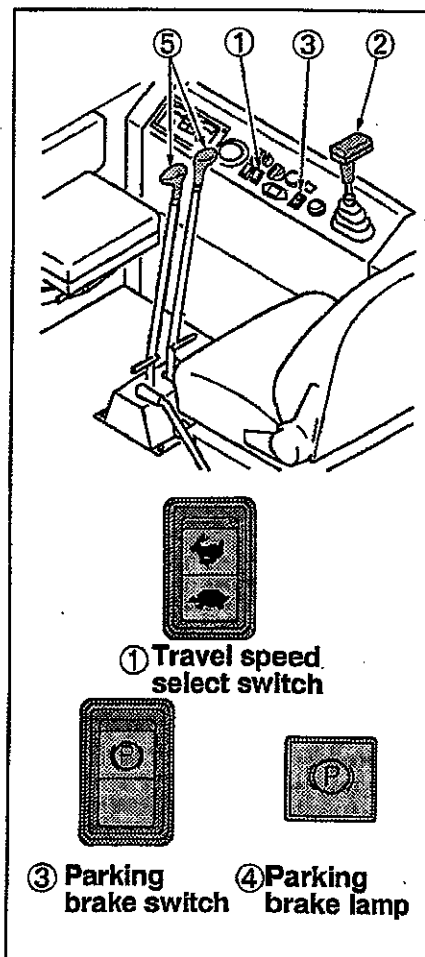
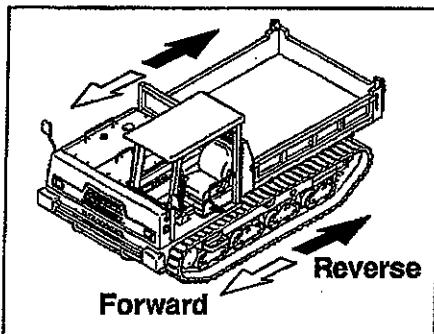
TRAVELING THE MACHINE

STRAIGHT TRAVEL

⚠ WARNING

- * Before attempting any travel operations, **BE SURE** all personnel are standing clear of the machine.
- * Keep the machine under control at all times to prevent injury.
- * Travel the carrier only after body has been completely lowered.
- * Make sure the rear gate and left & right side gates are securely locked.
- * When sitting in the front second seat, the seat and the instrument panel will face in different directions.
- * Do not use the front second seat in locations where the carrier will have a large tilt or when travelling on slopes.
- * Use the horn as a warning signal.

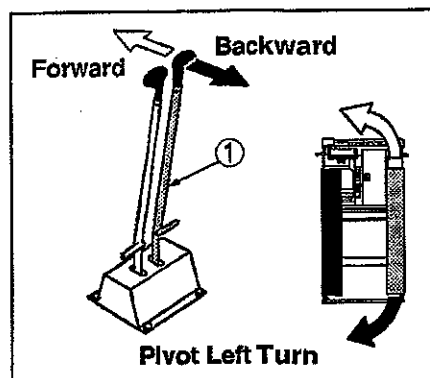
1. Set the travel speed select switch ① to match the speed range you need.
2. Move engine throttle lever ② best method of speed control.
3. Press the "no mark" side of the parking brake switch ③ to release the parking brake.
Check that the parking brake lamp ④ is now off.
4. Control right and left travel levers ⑤ as follows.
 - Forward Direction Travel
Push the both travel levers ⑤ forward to move the machine forward.
 - Revers Direction Travel
Pull the both travel levers ⑤ rear to move the machine reverse.
5. Stop
Move the travel levers to neutral, which engages the hydraulic brake automatically and stops travel.



STREERING CONTROL

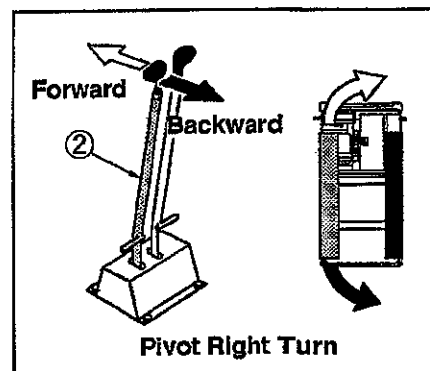
Pivot Left Turn

Move the right travel lever ① forward , allowing the machine to turn to the left, pivoting on the left track.



Pivot right Turn

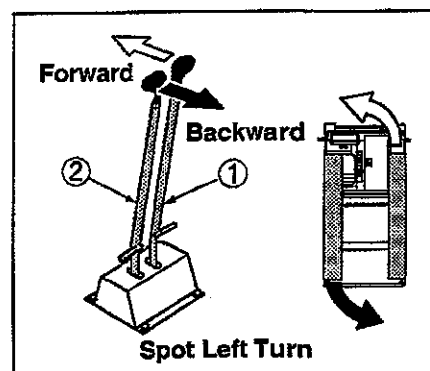
Move the left travel lever ② forward , allowing the machine to turn to the right, pivoting on the right track.



Spot Left Turn

Move the right travel lever ① forward and move the left travel lever ② backward at the same time .

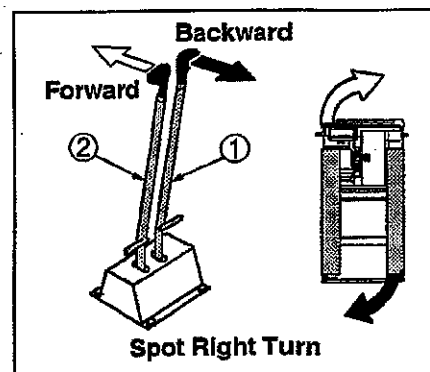
This allows a quick left turn (counter track rotation).



Spot right Turn

Move the right travel lever ① backward and move the left travel lever ② forward at the same time .

This allows a quick right turn (counter track rotation).



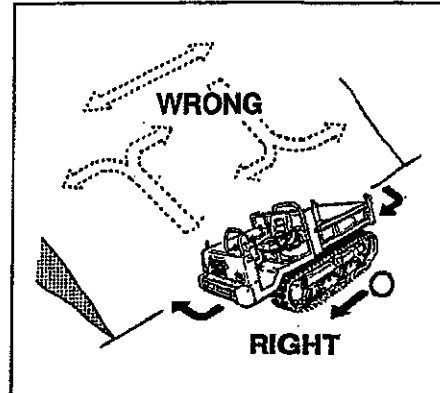
NOTE:

If the engine stall when changing directions while the engine speed (rpm) is low or the travel select switch is set to high . Restart the engine, increase the engine speed (rpm) and set the travel select switch is set to low. Control the travel levers stroke while traveling.

CAUTION ON TRAVEL ON THE GRADE

⚠ WARNING

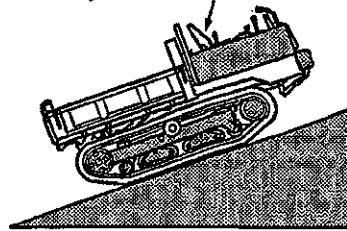
- Be sure no one is working on or near the machine to prevent injury. Keep the machine under control at all times to prevent injury.
- Reduce engine speed when maneuvering in tight quarters or when breaking over a rise.
- Select the travel speed range necessary before starting downgrade. Do not change travel speed ranges while going downhill.
- A good practice is to use the same travel speed range going downgrade that would be used to go up the grade.



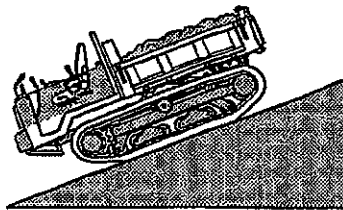
1. Travelling on slopes with an unloaded Vehicle.
 - Set travel speed select lever to the LOW range.
 - Travel so the operator's seat faces up to the slope. The center of gravity of the machine is under the operator's seat so this will maintain stability.
2. Travelling on slopes with unloaded Vehicle.
 - Set travel speed select lever to the LOW range.
 - Travel so the body with the load faces up to the slope. The center of gravity of the machine is now under the body so this will maintain stability.
 - Avoid sudden change in speed or quickly speeding up and slow down.
3. Braking on slopes
 - When braking on slopes, move the travel lever to neutral and braking will take place automatically.

Travelling on slope with an unloaded vehicle.

Operator's seat



Travelling on slope with a loaded vehicle.



NOTE: If the engine stalls when travelling while the engine speed (rpm) is low or the travel select lever is set to H (high) range. Restart the engine, increase the engine speed (rpm) and set the travel select lever is set to L (standard) range.

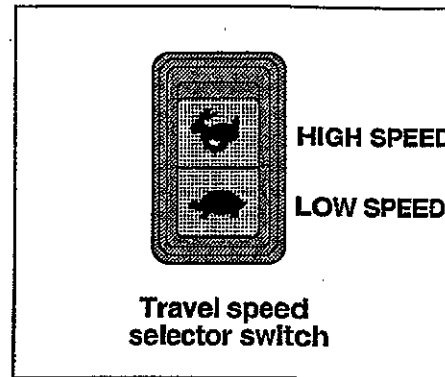
Avoid the engine stall to control the travel levers stroke while travelling.

CHANGING SPEEDS

Change the travel speed range as needed.

NOTE : 1. Switch the range as needed according to the carrier load or the current road surface.

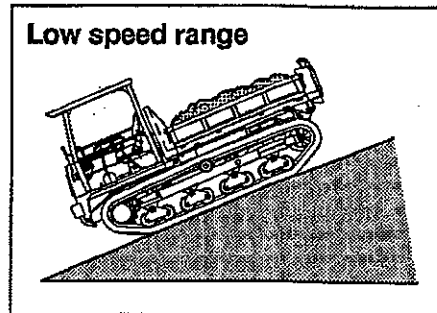
2. Switch the speed range while the carrier is stopped.



■ Changing speed range to match travelling conditions

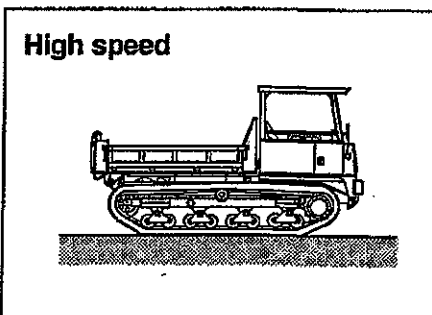
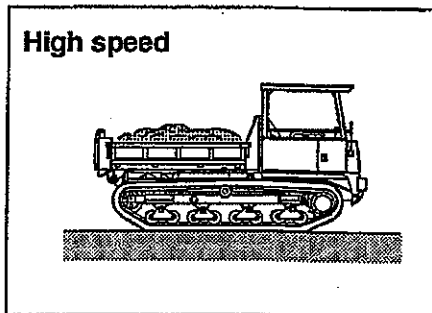
• Low speed () range :

1. Use low speed range when going up and down slopes or uneven terrain where lots of travel power is needed.
2. Low speed range should also be used when travelling down slopes as well as when climbing slopes.



• High speed () range :

1. Use high speed when travelling on flat terrain while carrying a load. Switch the speed range as needed according to load and the current road surface.
2. Use high speed when travelling on flat terrain with no load.



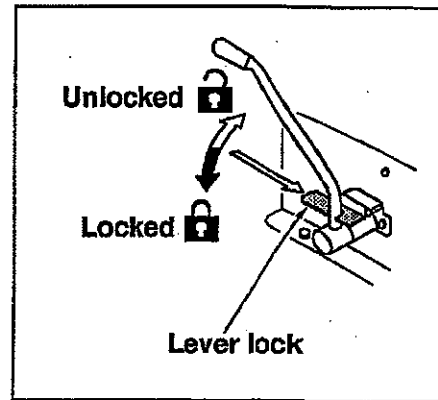
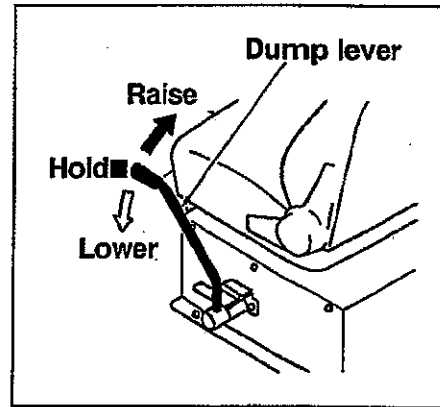
DUMP OPERATION

■ Dump operation

1. Stop the carrier and confirm safety of a dumping place.
2. Move the dump lever to raise or lower the body.
 - **Dump** – Pull the lever back, to raise the body.
 - **Lower** – Push the lever lower, to lower the body.
 - **Hold** – When released, the lever will return to hold (center position)
3. Run the engine at a higher speed to increase the dumping speed, and at a lower speed to decrease it.
4. The rear gate of body automatically opens or closes as the body rises or lowers.

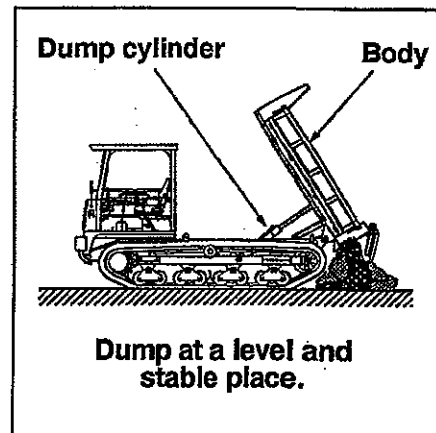
⚠ CAUTION

1. When dumping the load, use the lever to gradually raise the body. Do not try to dump the load quickly.
2. Reduce the engine speed when lowering the body and let it down slowly.
3. Place the lever lock in lock position when no dumping is needed.



■ Precautions on dump operation

1. Dumping on sloping, rough, or soft ground may overturn the machine when the center of gravity moves. Perform dump operation on even and stable ground where the machine is kept as level as possible.
2. Avoid dumping to a place such as cliff or ditch, which may cause downfall. If not avoidable, set chocks or place a signal person and obey his/her signals.
3. When dumping bigger stones, operate dumping slowly. If there is a too big object to be dumped through the rear gate, remove the gate in advance.
4. Confirm that the body is completely lowered before starting travel.
5. Do not travel while the body is raised. ALWAYS travel keeping the body lowered.



■ Emergency Lowering the body (Lowering the Body with Engine Stopped)

⚠ CAUTION

- Only lower the body using the stop valve when trouble occurs.
- Releasing the stop valve applies the parking brake and the carrier stops.
- Be sure to always completely close the stop valve once the trouble has been repaired.

If the stop valve is not completely closed, the parking brake will not fully release, causing lower travel power and early brake wear due to constant application of the brake.

This is also related to pump damage.

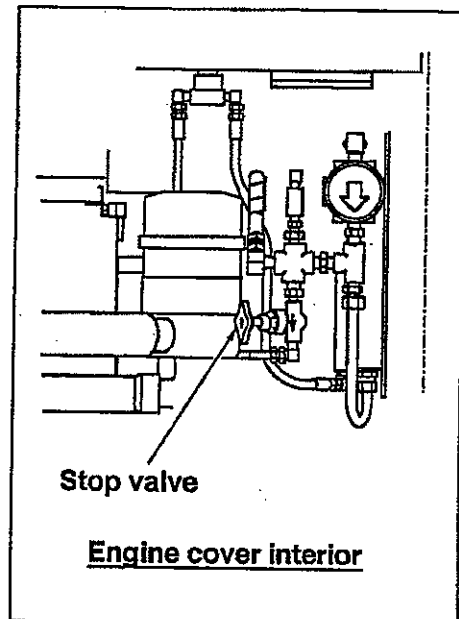
⚠ WARNING

Lowering the body with the engine stopped could cause personal injury or death.

Keep all personnel away from the body drop area when lowering the body with the engine stopped.

If trouble occurs in the engine or pump while the body is still raised and the engine stalls, you will be unable to lower the body. In such cases, open the stop valve which is located at the inside the engine cover at the rear. With the stop lever open, the body can now be lowered.

1. Keep all personnel away from the body drop area.
2. Open the engine cover.
3. Turn the stop valve handle counter-clockwise to open the valve.
4. Lower the dump lever down to lower the body.
5. Once the body is completely lowered, turn the stop valve clockwise and tighten it securely.



TOWING

⚠ WARNING

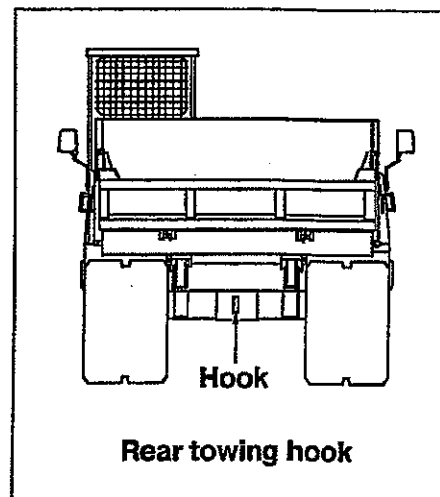
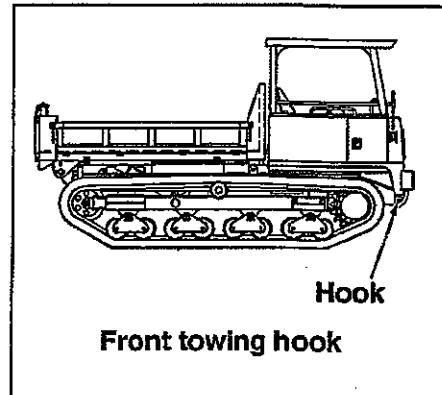
- * Personal injury or death could result when towing a disabled machine incorrectly.
- * Follow the recommendations below, to properly perform the towing procedure.
- * During towing operation, **NEVER** allow anyone between the towing machine and the towed machine.
- * Quick machine movement could overload the tow line or bar and cause it to break. Gradual and smooth machine movement will work better.
- * Keep the tow line angle to a minimum. Do not exceed a 30° angle from the straight ahead position.

■ Towing the carrier

When the carrier gets stuck for instance in mud and cannot escape under its own power it must be towed by another vehicle. In such cases attach a shackle to a wire rope and attach this to the front or rear hook. The carrier can now be towed.

1. Start the engine.
2. Press the unmarked side of the parking brake switch to release the parking brake.
3. Steer the travel lever in the direction you are being towed in.

NOTE : When the engine is broken and will not start, the parking brake will not release. The parking brake will prevent the crawler belt from rotating so the carrier cannot be towed.

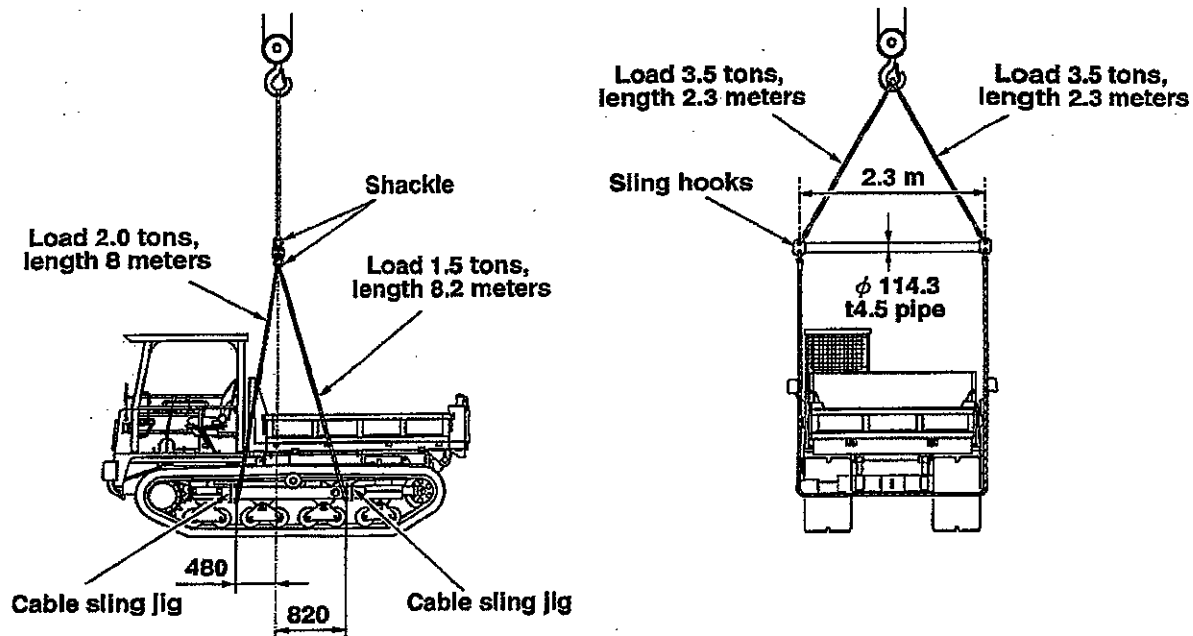


LIFTING THE MACHINE

⚠ WARNING

Personal injury or death can result, if the following is not observed.

- * **ALWAYS** lift the machine on the level ground.
- * **NEVER** lift the machine loaded with any personnel.
- * Make sure the lifting cables and other lifting devices are strong enough to support the machine.
- * Use a crane whose lifting capacity meets the weight of the machine.
- * Use guide or tag lines to prevent the machine from swinging or turning.



1. Prepare a wire rope, shackle and sling hooks of sufficient strength to handle the loads shown in the above figure.
2. Lower the body completely and stop the engine.
3. Install the wire rope to the crawler frame as shown in the figure.
4. Install the wire rope to the sling hooks with the shackle.
5. Install the wire rope to the crane hooks and lift upward so the crawler is a little bit above the ground, then stop lifting. Check the machine balance.
6. If the balance is good continue slowing lifting the machine.

Total operation weight (kg)	5800
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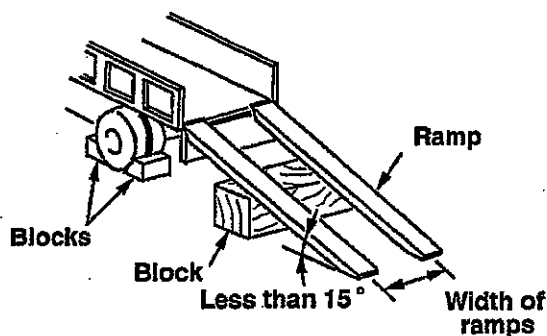
LOADING AND UNLOADING THE MACHINE

⚠ WARNING

- * Use a ramp that has sufficient strength, width, length, and thickness.
- * Load and unload the machine on a level and firm ground. Keep a distance from a shoulder.
- * Remove mud from the shoe so that the machine will not skid down. Clean the truck deck and ramp by getting rid of grease, oil, or ice.
- * Perform warm-up before loading and unloading under cold weather.
- * **NEVER** make a turn on a ramp. To make a turn, get off the machine from the ramp first.

ALWAYS use the ramps for loading and unloading the machine by following the next procedures.

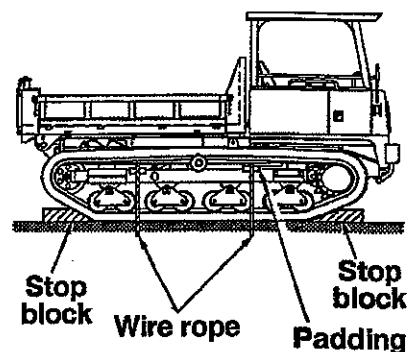
1. Block the truck wheels before loading the machine.
2. Fix ramps to the truck securely.
Set the ramps angle less than 15° . Set the width between ramps according to the width of crawlers.
3. Lower the engine speed by the engine throttle lever.
4. Set the travel speed selector switch to low speed (🐢) range.
5. Lower the body completely and set so that the operator's seat is facing towards the truck.
6. Place the machine in such a manner that the center of the machine and the truck body aligns with that of the shoe and the ramps.
7. Travel as slowly as possible.
8. Properly set the machine on a designated place.



FIXATION AT TRANSPORTATION

Securely fix the machine to the truck body with wire.

1. Stop the engine.
2. Engage the stop block in front and back of the crawler.
3. Fix the crawler to the truck body with chain or wire rope.



PRECAUTION ON USE OF RUBBER CRAWLER SHOE

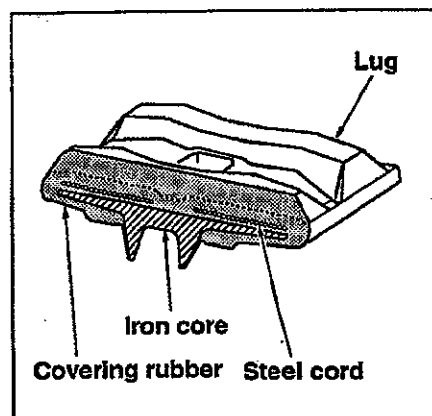
CAUTION

The rubber crawler shoe may be damaged or worn faster depending on working conditions. Perform working operation properly according to working site conditions and machine operation.

■ Structure of Rubber Crawler Shoe

The structure of rubber crawler shoe. It consists of steel cord to sustain tension, iron core to support it, and covering rubber to them.

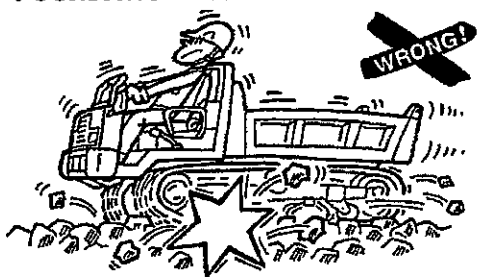
NOTE : If a crack reaches the steel cord, it may be rusted and cut off by moisture. When any crack is detected, immediate repair is essential. Please contact your local IHI distributor.



■ Cautions while working and travelling

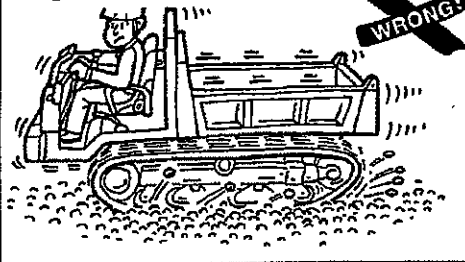
Avoid the following while travelling.

① DO NOT TRAVEL OR WORK ON STONE FOUNDATIONS OR SHARP ROCKS



This wears down the lug and causes the steel cord to break.

② DO NOT TRAVEL OR WORK ON SURFACES WITH MANY STONES SUCH AS RIVER BEDS



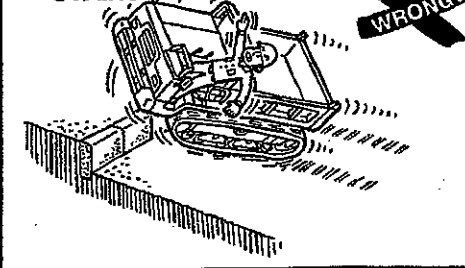
This causes damage or wear on the rubber crawler and they may slip off.

③ DO NOT TRAVEL OR WORK ON STEEL OR SCRAP MATERIAL



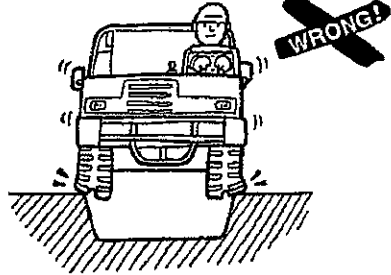
This wears down the lug and causes the steel cord to break.

④ DO NOT TRAVEL OR WORK ON LARGE STEPS SUCH AS STONE STAIRS



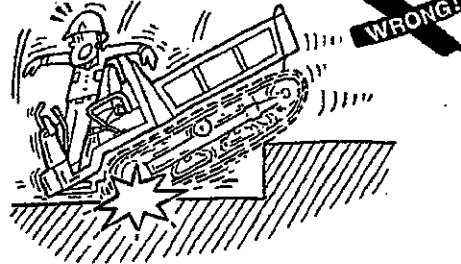
- Move slowly directly up steps.
- While moving up the steps avoid places where the road surface changes.

⑤ DO NOT TRAVEL OR WORK WHILE SPANNING A DITCH ETC.



- This wears down the lug and breaks the iron core.
- The carrier might fall or topple over.

⑥ AVOID LOCATIONS WHERE THE CARRIER MIGHT FALL



Do not let the carrier fall from locations like large stone steps. This might damage or break the iron core.

⑦ AVOID TRAVELLING OVER LARGE RUTS OR PROTRUSIONS ON THE ROAD



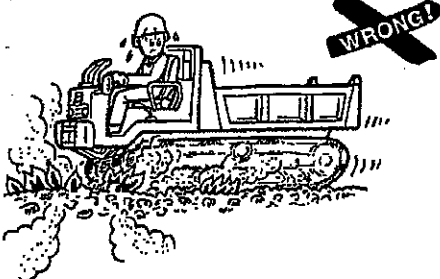
- Travel slowly and take care not to let the crawlers come off the rollers.
- Do not change directions when the crawlers may have lost tension at the high and low parts of ruts and protrusions. This may cause the crawlers to come off.

⑧ AVOID SUDDEN CHANGES IN DIRECTION WHEN STEERING



- Make direction changes in several smaller steering movements.
- Avoid sudden changes in direction. This causes early wear on the lug and may cause the crawlers to slip off.

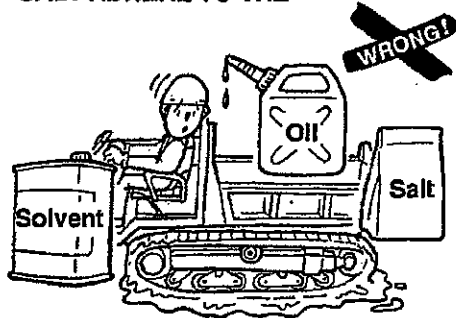
⑨ DO NOT TRAVEL OVER HIGH HEAT LOCATIONS.



Do not try to travel over place subjected to high heat such as steel plate that was placed in bonfires or under scorching heat, asphalt or floorboards etc. This causes serious abrasion or damage and breakage of the lug.

■ OTHER ITEMS FOR CAUTION

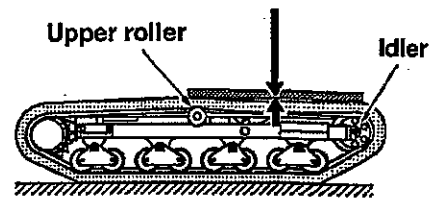
① DO NOT LET OIL – SOLVENTS OR SALT ADHERE TO THE



- If fuel, transmission fluid or paint should adhere to the rubber crawlers wipe it away quickly.
- Wash away with water after working in locations with a large salt content. Salt can cause the iron core to rust or peel.

② ALWAYS USE CORRECT TENSION ON THE SHOE

Correct tension with application of 60 kg is 20 to 30 mm.



Attempting to change directions on terrain with different levels or steps while the rubber crawler is still slack may damage the rubber crawlers or cause them to come off the rollers.

PARKING THE MACHINE

At the end of a day's work, following steps should be observed as the established machine shut-down procedure:

Stopping the Machine

Move the machine to a safe location on level ground. **ALWAYS** lower the body.

Freezing Conditions

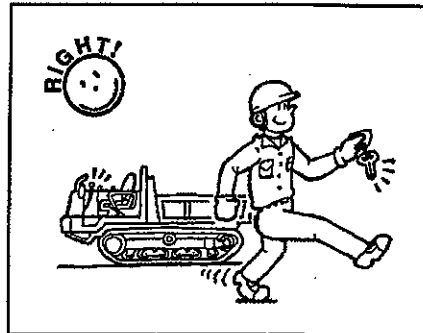
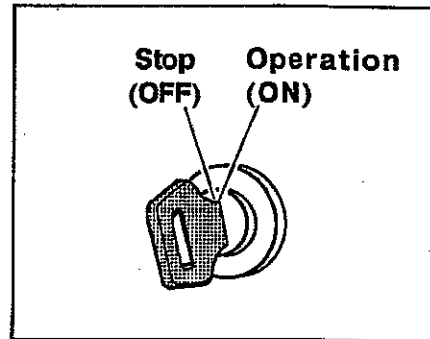
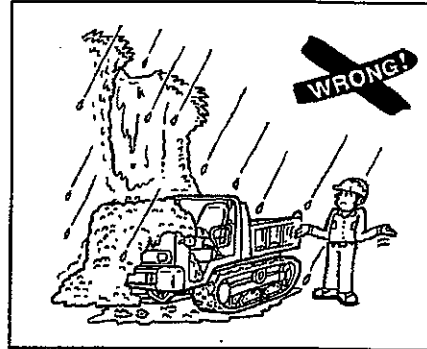
If freezing temperature are expected, each crawler frame should be cleaned of mud and dirt and the machine parked on wood planks.

Stopping the Engine

1. Operate the engine at **LOW IDLE** for five minutes. This gives the engine a chance to cool off gradually before they are stopped.
2. Turn the start switch counterclockwise to **OFF** position. Stopping the engine.

Leaving the Machine

1. **REMOVE THE START SWITCH KEY.**
2. **INSPECT THE ENTIRE MACHINE** for leaks, loose connections, signs of wear, crack etc. Report any signs of trouble discovered during this inspection.
3. Lock the cab door.
4. Close and lock the upper structure access doors.



EMERGENCY ENGINE STOP

To stop the engine in emergency, turn the starter switch to "OFF" position.