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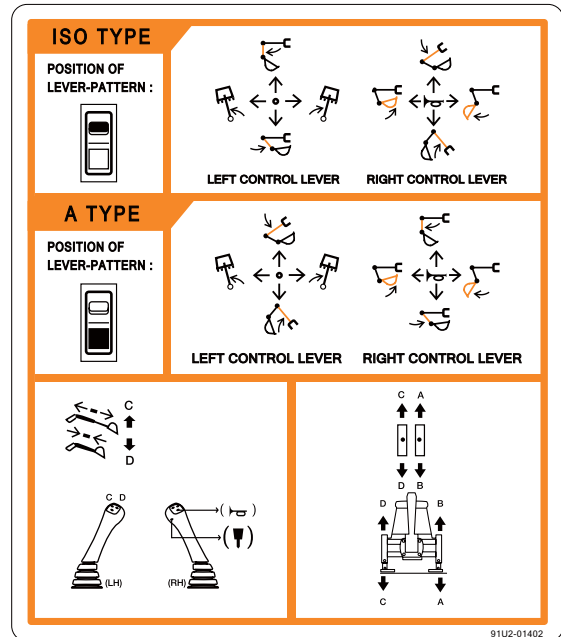
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3) MACHINE CONTROL PATTERN (item 4)

This warning label is positioned in the right window of the cab.

- ⚠ Check the machine control pattern for conformance to pattern on this label. If not, change label to match pattern before operating machine.
- ⚠ Failure to do so could result in injury or death.

Refer to the page 3-24 for details.

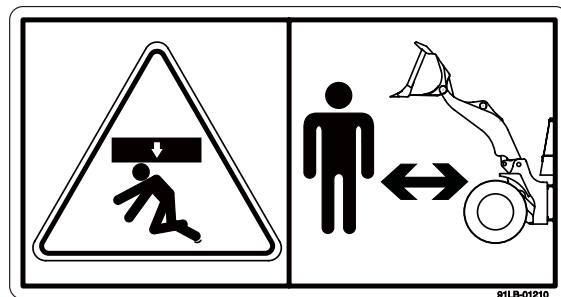


H940S4WS0FW05

4) BUCKET STOPPER (item 5)

These warning labels are positioned on the both sides of the boom.

- ⚠ When working under or around the bucket or linkage, with bucket raised, proper support must be provided for the bucket and/or the linkage.

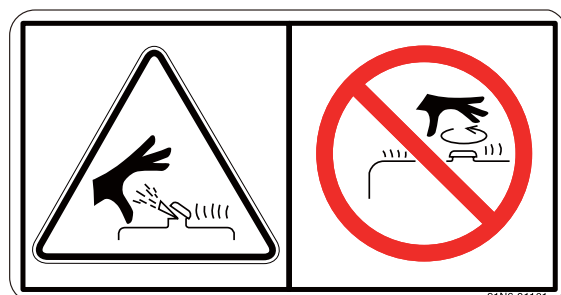


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5) RADIATOR CAP (item 6)

This warning label is positioned on the engine hood.

- ⚠ Never open the filler cap while engine running or at high coolant temperature.



H940C0FW08

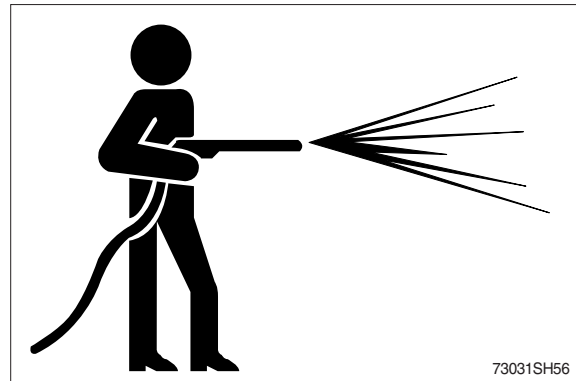
KEEP THE MACHINE CLEAN

Spilled oil or grease, or scattered tools or broken pieces are dangerous because they may cause you to slip or trip.

Always keep your machine clean and tidy.

If water gets into the electrical system, there is danger that the machine may not move or may move unexpectedly.

Do not use water or steam to clean the sensors, connectors, or the inside of the operator's compartment.



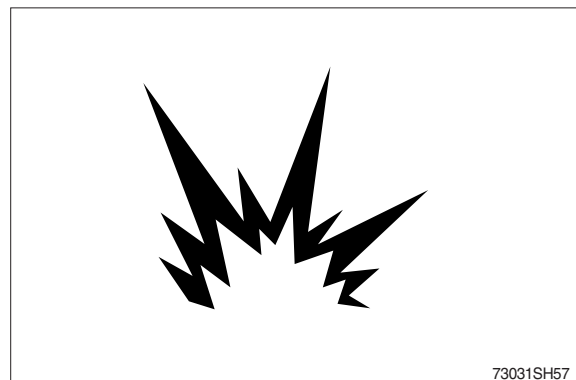
HANDLING TIRES

If tires are not used under the specified condition, they may overheat and burst or be cut and burst by sharp stones on rough road surfaces.

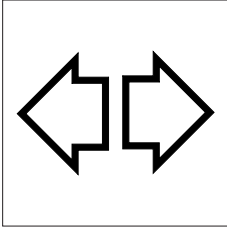
This may lead to serious injury or damage.

To maintain safety, always keep to the suitable conditions.

▲ Disassembly, reassembly, replacement and repair of tire requires special skills and equipment. Contact a tire repair shop.

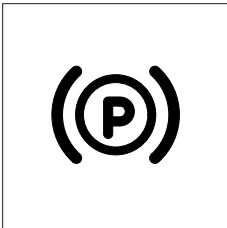


② Direction indicators

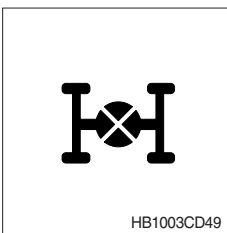


This lamp flashes when the signal indicator lever is moved.

Parking indicator

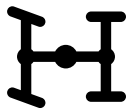


Differential lock indicator



⑤ 4 Wheel drive indicator

- When the 4 wheel drive is actuated, the lamp lights ON.



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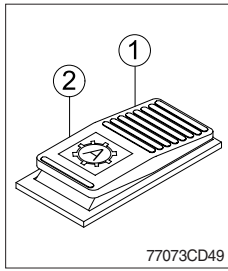
(2) Speedometer (option)



① Indicates the road speed in miles per hour (MPH) and/or kilometers per hours (km/h).

② Also, shows total traveling mileage of the machine.

(8) Transmission auto select switch

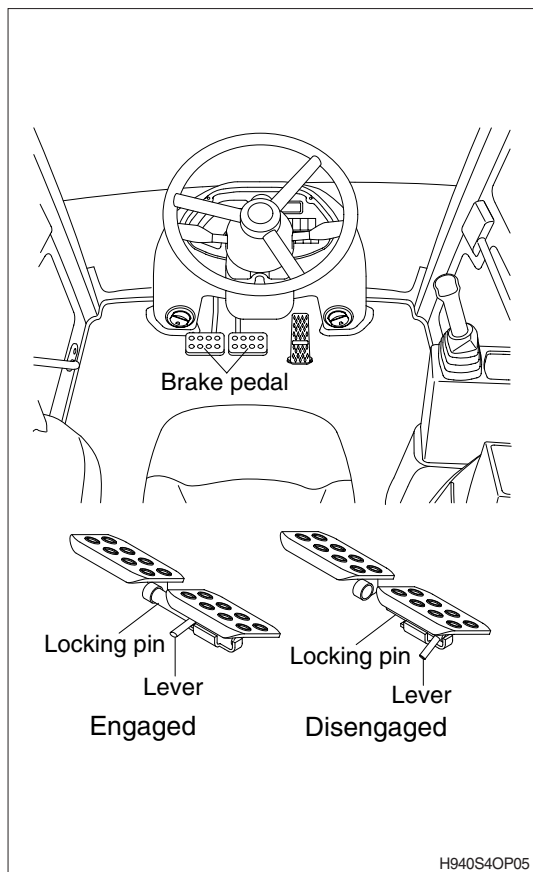


① Manual mode (①)

Press the top of the switch for the manual mode of the autoshift function. The operator selects the desired speed and the desired direction in the manual mode with the gear selector lever.

② Automatic mode (②)

Press the bottom of the switch for the autoshift function in the automatic mode. Press the bottom of the switch prior to shifting the transmission into forward or reverse in order to activate the autoshift function.



7) BRAKE PEDALS

(1) Left brake pedal

By pushing this pedal, the left brake is operated.

(2) Right brake pedal

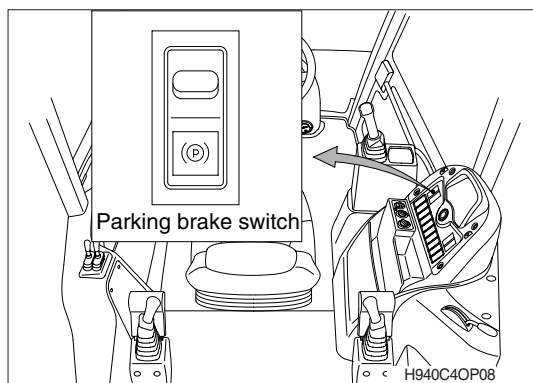
By pushing this pedal, the right brake is operated.

▲ Always lock the pedals together when driving on the road in any gear or when you operate the machine 3rd, 4th or 5th gear. If not, you and others can be killed or injured.

※ The stop lights should come on when the brakes are applied.

(3) Lock and unlock

- **Lock** : Move the lever up and slide the locking pin to right into the lock engaged position.
- **Unlock** : Move the lever up and slide the locking pin to left into the lock disengaged position.



8) PARKING BRAKE SWITCH

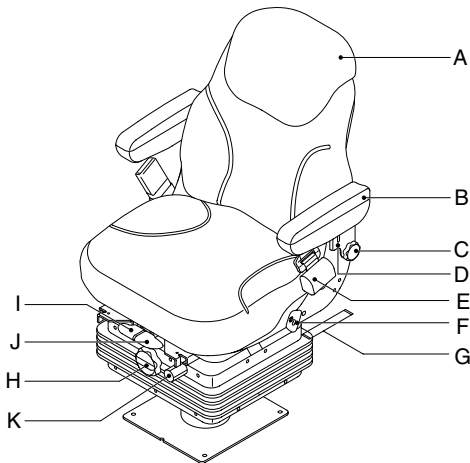
(1) This switch is pressed, the parking brake will start to operate and the gauge panel warning lamp will come ON.

※ When operating the gear selector switch, be sure to release the parking brake. If the machine is operated with the parking brake engaged, the brake will overheat and may cause the brake system to go out of order.

8. SEAT CONTROLS

1) SEAT

This seat is adjustable to fit the comforts of the operator's body. It will reduce operator fatigue due to long work hours and enhance work efficiency.



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(1) Adjustable headrest (A)

Apply force upward or downward force to adjust height.

(2) Flip-up armrest (B)

The arm will "flip-up" out of the way for easy egress and entry.

(3) Armrest angle adjust (C)

The angle of the armrest can be adjusted by rotating the knob.

(4) Armrest adjustment (D)

The location of the armrest can be modified by loosening the bolts and relocating the armrest.

(5) Seat belt (E)

Retractable seat belt.

(6) Backrest angle control (F)

The recliner is spring loaded and will move forward when released it can easily be relined with a slight amount of force (back tilt adjust 21° forward and 33° rearward from the standard position).

(7) Tether straps (G)

The tether straps are to be mounted to the cab floor.

(8) Weight adjust (H)

The handle can be turned to adjust the suspension for different weight operators.

(9) Swivel control (I)

Lifting up the handle will allow the seat to rotate 180 degrees.

(10) Slide control (J)

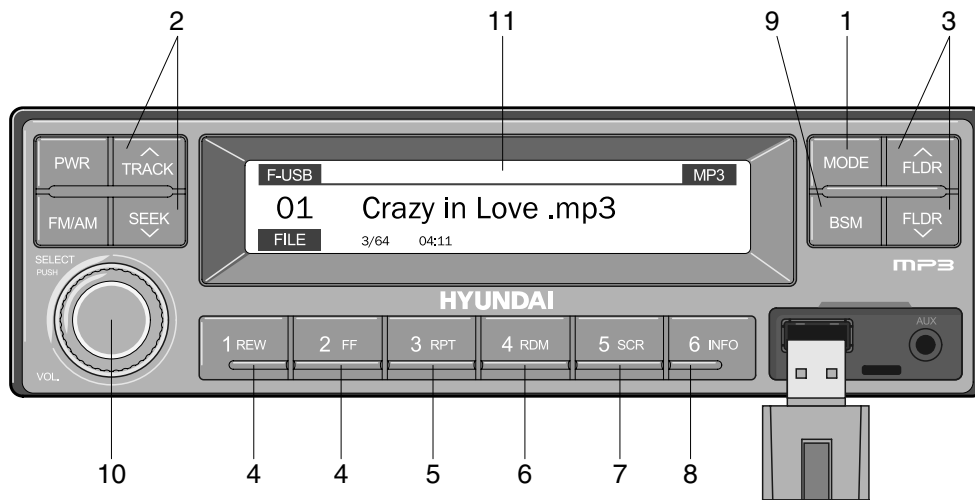
Lifting the handle will allow the seat to slide forward and backward the can be done at the same time as the seat is being rotated.

(forward-backward total adjustment 152 mm).

(11) Height adjust (K)

The handle can be turned to upward or downward to adjust height.

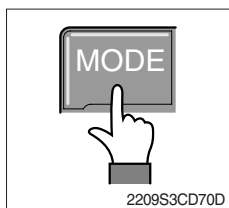
■ USB CONNECTION



2209S3CD72

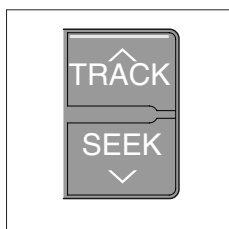
- Operates only when a USB is connected. Connecting a USB to the audio will automatically convert to USB mode.
- Connecting the USB when the starting switch is in ON state will turn the power on and automatically play the songs within the USB.

(1) USB selection button



- ① While playing a different mode, press the MODE button to convert to USB mode. Connecting a USB to the audio will automatically convert to USB mode even if another mode is playing and automatically play the songs within the USB.
- ② If the USB is connected to both the front USB and handfree, then MODE is converted in the following order.
RADIO → USB(front) → USB(handfree)

(2) TRACK UP/SEEK DOWN button



While playing USB, press the TRACK \wedge button to play the beginning of the next song.
Press the SEEK \vee button to return to the beginning of the current song. Press the button again to play the beginning of the previous song.

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8) COLD WEATHER ENGINE START

※ Sound horn to warn surroundings after checking if there are obstacles in the area.

※ Replace the engine oil and fuel referring to recommended oils at page 6-8.

(1) Fill the anti-freeze solution to the coolant as required.

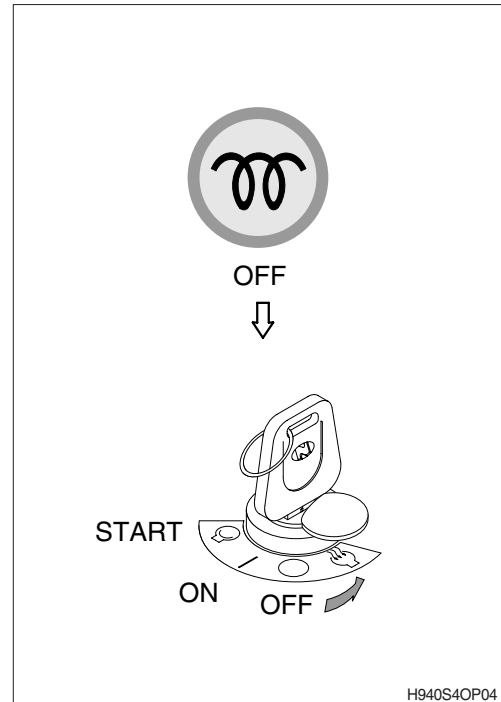
(2) Turn the starting switch counter clockwise from OFF position, and hold about 6 seconds.

※ When the air heater working lamp is turned ON, the preheating function is actuated in accordance with coolant temperature.

(3) Start the engine by turning the starting switch to START position after the glow warning lamp OFF.

(4) Release starting switch immediately after starting engine. The starting switch will automatically return to the ON position.

※ After engine started, the preheating function is actuated to reduce the white smoke.



9) INSPECTION AFTER ENGINE START

Inspect and confirm the following after engine starts.

(1) Is the level gauge of hydraulic oil tank in the normal level?

(2) Are there leakages of oil or water?

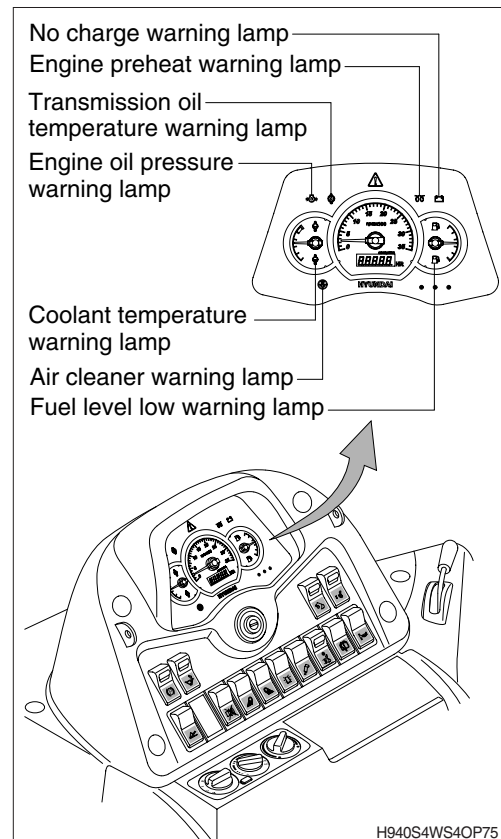
(3) Are all the warning lamps turned OFF?

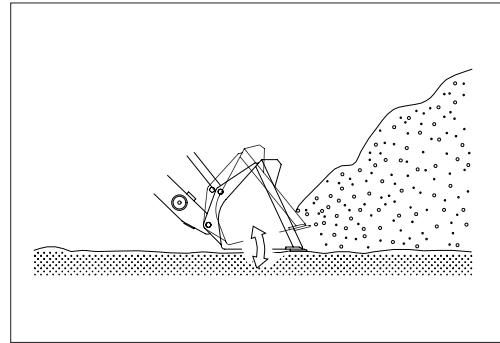
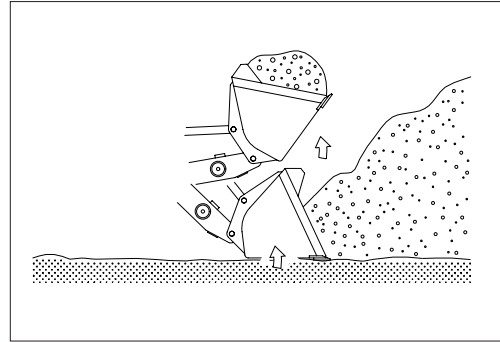
(4) Are the engine sound and the color of exhaust gas normal?

(5) Are the sound and vibration normal?

※ Do not increase engine speed quickly after starting, it can damage engine and/or turbo-charger.

※ If there are problems in the cluster, stop the engine immediately and correct problems as required.





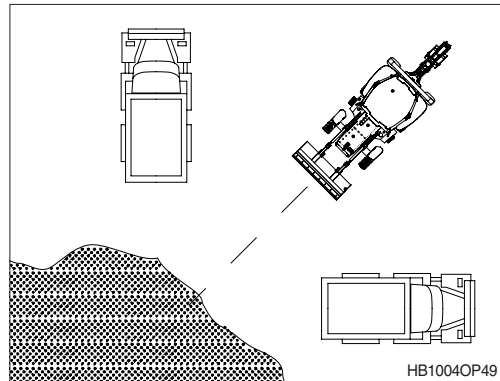
(3) Job layout

Set up the work cycle as short as possible. Truck positioning is very important for fast cycles.

Spend a few minutes leveling off the work area, if necessary. Smooth runways for the machine and a level parking area for trucks will speed up the job.

- ▲ Operating a loader with a full bucket on a hillside can cause the machine to roll over. If possible, avoid turning the machine and always move forward up the hill and back down. Always keep the load low. If you do not follow these instructions, you can be injured or killed.

- ▲ When you operate the machine, keep the loader bucket as low as possible. This low position gives better balance and permits you to see more clearly. If the bucket is full and you move the machine over ground that is rough or surfaces that can cause the machine to slide, always operate at slow speed. If you do not use this procedure, the machine can go out of control and roll-over.



8. TOWING THE MACHINE

▲ Personal injury or death can result when you tow a disabled machine incorrectly.

Read the following recommendations.

Towing the backhoe loader is not recommended.

- ※ If your machine is disabled, you must make a judgement if the machine can be moved without damage. If possible, repair the machine at the job site.

The towing machine must have power, steering and braking ability to stop both machines. The speed at which the disabled machine is moved, must not exceed 10 km per hour (6 mph).

The machines must be attached as closely as possible.

The disabled machine must be moved only far enough to reach a safe repair location or onto a trailer.

Before moving a disabled machine you must be able to answer these questions :

Does the towing machine have braking and steering capacity for both machines?

Does the towing hardware, chains, cables, have the proper capacity to move the machine safely?

Will the disabled machine have steering and braking capability?

Will moving the machine cause damage to drivetrain or moving parts that lack lubrication?

Additional considerations :

Be certain that all personal involved are shielded in the event that towing apparatus might break.

An operator may only be allowed on the towed vehicle if the has steering and braking capability.

Always block the disabled machines wheels before releasing the brakes or drivetrain component.

- ※ The backhoe loader engine may not be started by towing the machine. The drivetrain components will be damaged.

1) ENGINE RUNNING

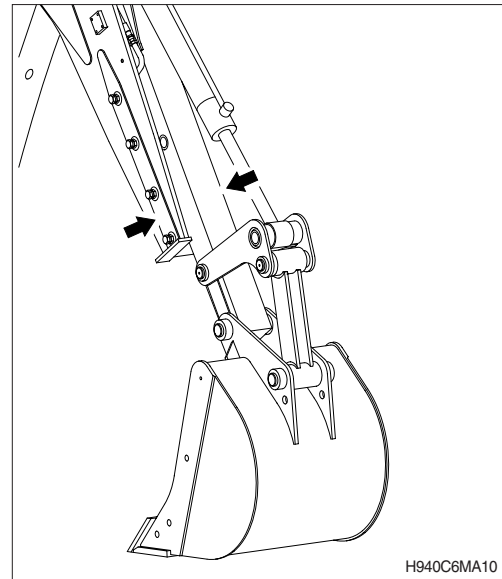
- (1) Engage the parking brake.
- (2) Block the wheels with wheel chocks.
- (3) Place the FNR lever in neutral.
- (4) Place the 4 wheel drive select switch in off position.
- (5) Raise all tools and attachments off the ground.
- (6) Attach a rigid drawbar to the machine. Make sure the towing machine has enough power and braking ability to move and stop both machines.
- (7) Remove wheel chocks.
- (8) Release the parking brake.
- (9) No riders - keep all other persons completely out of the area.
- (10) Tow the disabled machine at a maximum speed of 10 km (6 mph). Do not exceed this speed.

5) TIGHTENING TORQUE OF MAJOR COMPONENT

No.	Descriptions	Bolt size	Torque		
			kgf · m	lbf · ft	
1	Engine	Engine mounting bolt, nut (bracket-frame)	M16×2.0	29.7±4.4	215±31.8
2		Engine mounting bolt (engine-bracket)	M20×2.5	57.9±8.7	419±63.0
3		Fan mounting bolt	M10×1.5	6.9±1.4	49.9±10.1
4		Radiator mounting bolt	M12×1.75	12.8±3.0	92.6±21.7
5		Fuel tank mounting bolt	M16×2.0	29.7±4.5	215±32.5
6		Air cleaner mounting bolt	M 8×1.25	2.5±0.5	18.1±3.6
7	Hydraulic system	Main pump housing mounting bolt	M12×1.75	12.8±3.0	92.6±21.7
8		Main control valve mounting bolt	M10×1.5	6.9±1.4	49.9±10.1
9		Steering unit mounting bolt	M10×1.5	6.9±1.4	49.9±10.1
10		Brake valve mounting bolt	M 8×1.25	2.5±0.5	18.1±3.6
11		Remote control lever mounting bolt	M 6×1.0	1.1±0.2	8.0±1.4
12		Pilot supply unit mounting bolt	M10×1.5	6.9±1.4	49.9±10.1
13		Hydraulic oil tank mounting bolt	M16×2.0	29.7±4.5	215±32.5
14	Power train system	Transmission mounting bolt	M10×1.5	6.9±1.3	49.9±9.4
16		Torque converter mounting bolt	M10×1.5	6.3±1.3	45.6±9.4
17		Rear axle mounting bolt, nut	M20×1.5	57.9±8.7	419±63.0
18		Tire mounting nut	M22×1.5	79±2.5	570±18.1
19		Drive shaft joint mounting bolt	5/16-24UNF	3.43±0.6	24.8±4.3
20	Others	Operator's seat mounting bolt	M12×1.75	12.3±2.5	89.0±18.1
21		ROPS cab mounting bolt (4EA)	M16×2.0	29.7±4.5	215±32.5
22		Counterweight mounting bolt	M24×3.0	100±15	723±108

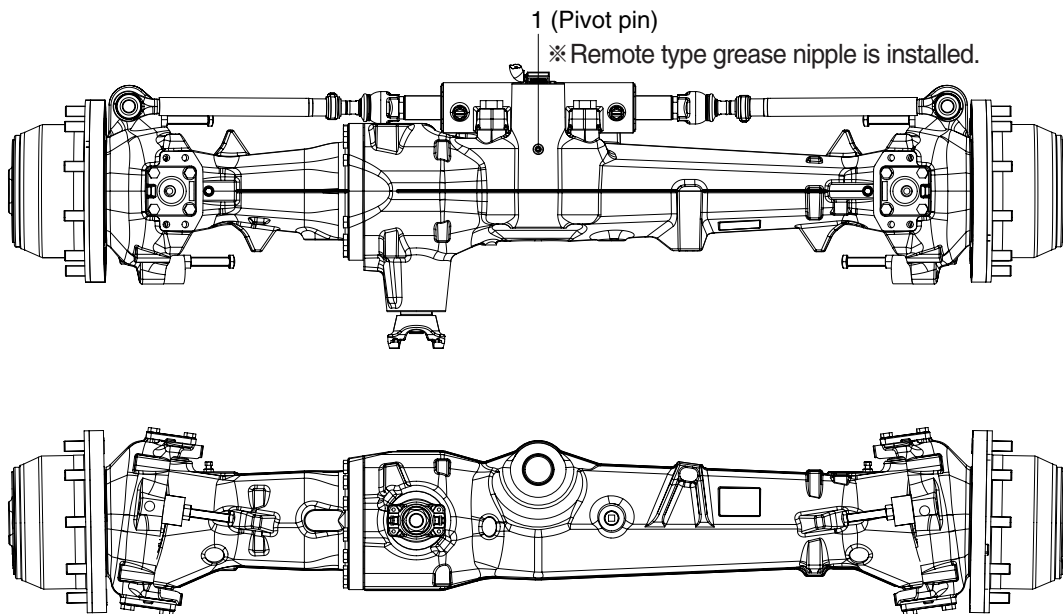
3) EXTENDING DIPPER

- ※ Extending dipper slides
Grease : Shell Retinax HDX2



4) FRONT AXLE

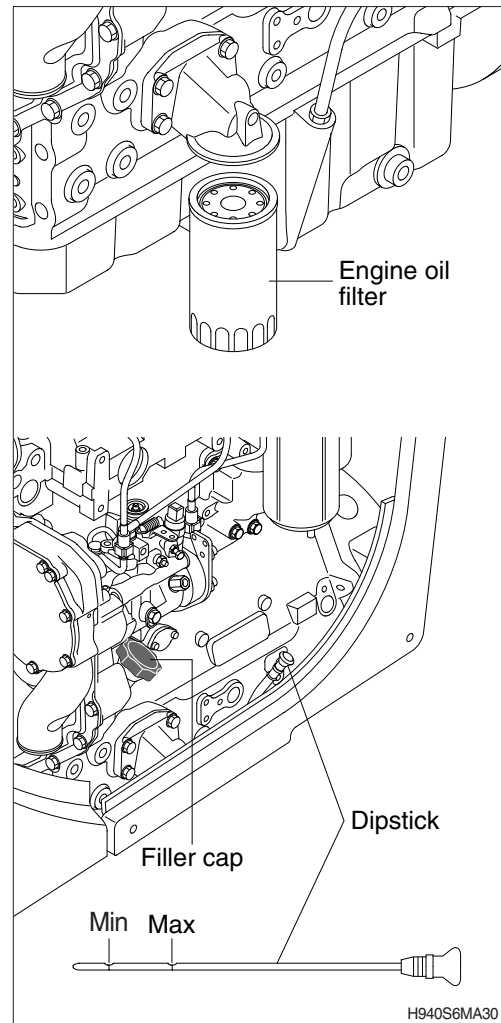
- ※ 1 Grease points



H940S4WS6MA62

- (6) Clean the area around the oil filter head.
- (7) Remove the oil filter, use a filter wrench if necessary.
- (8) Clean the seal face of the filter head.
- (9) Fit new filter.
 - ① Smear the seal on the new filter with clean engine oil.
 - ② Screw the filter on until it just contacts the filter head.
 - ③ Turn the filter at least a further 3/4 of a turn.
- △ **Do not fill the oil filters with oil before installing them. This oil would not be filtered and could be contaminated. Contaminated oil can cause accelerated wear to engine components.**
- ▲ **Do not overtighten the oil filter.**
- (10) Through filler point, fill the engine oil to the MAX mark on the dipstick. Wipe off any split oil, refit the filler cap and make sure it is secure.
- (11) Operate the engine at low idle and inspect for leaks at the filter and the drain plug. Shut the engine off and check oil level with dipstick. Allow 15 minutes for oil to drain down before checking.

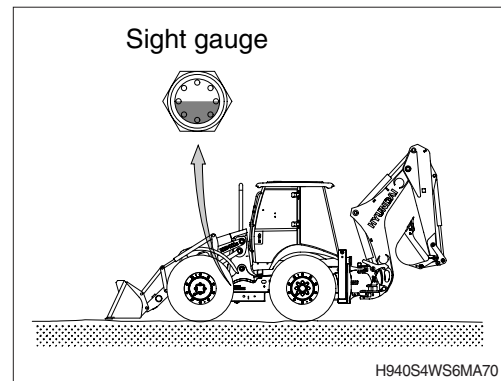
▲ **Do not overfill the engine with oil.**



13. HYDRAULIC SYSTEM

1) HYDRAULIC OIL CHECK

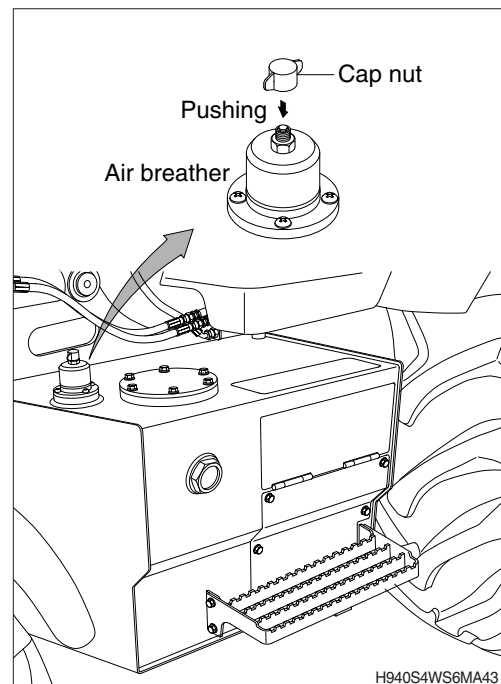
- (1) Lower the bucket on the ground at a flat location as in the illustration.
Stop the engine and then leave for about 5 minutes.
 - (2) Check the oil level at the sight gauge. The sight gauge is located on the left side of the hydraulic oil tank.
 - (3) The sight gauge should indicate the middle position.
- ※ Add hydraulic oil, If necessary.



2) FILLING HYDRAULIC OIL

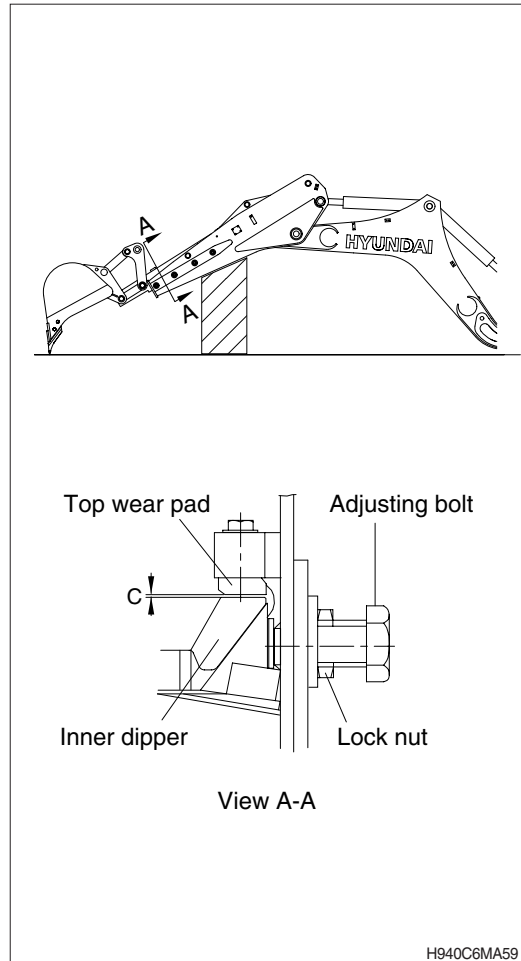
▲ Escaping fluid under pressure can penetrate the skin causing serious injury.

- (1) Stop the engine to the position of level check.
- (2) Rotate the cap nut counter-clockwise by hand and push the rod to release the air pressure.
- (3) Remove the breather on the top of oil tank and fill the oil to the specified level.
- (4) Start engine after filling and operate the work equipment several times.
- (5) Check the oil level at the level check position after engine stops.



(2) Adjustment of the bottom wear pads

- ① Park the machine on flat surface.
- ② Engage the parking brake and put the FNR lever in neutral.
- ③ Clean the slippery side of the inner dipper with adequate solvent.
- ④ Start the engine, retract the dipper, and place a support block as shown in the figure.
- ⑤ Stop the engine and remove the key.
- ⑥ Measure the gap (C) between the inner dipper and the top wear pad.
 - Spec : less than 1.5 mm
- ⑦ When the gap exceeds 1.5 mm, then use adjusting bolt to adjust both sides.
 - ※ If the gap exceeds 1.5 mm even after the adjustment with adjusting bolt, then replace the top and bottom wear pads as a set at a same time.
 - ※ When the adjustment is completed, then lubricate the sliding side of the inner dipper with Grease HDX2 (Shell Retinax).



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