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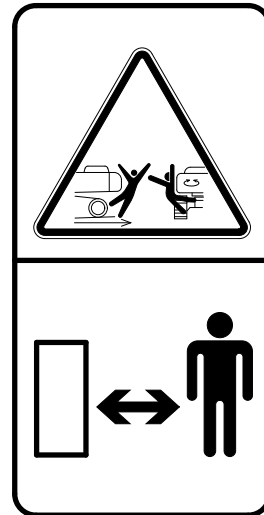
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11) **SIDE KEEP CLEAR** (item 13)

This warning label is positioned on the both side of counterweight.

- ▲ To prevent serious personal injury or death keep clear of machine swing radius.
- ▲ Do not deface or remove this label from the machine.

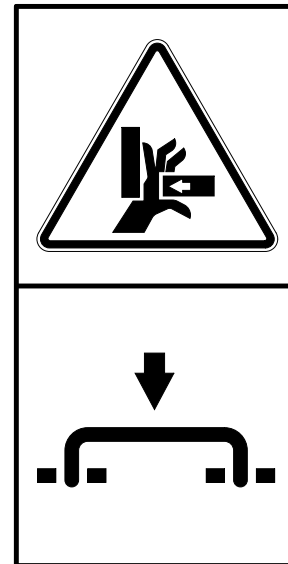


21070FW13

12) **STAY FIX** (item 14)

This warning label is positioned on the side cover.

- ▲ Be sure to support the stay when the door needs to be opened.
- ▲ Be careful that the opened door may be closed by the external or natural force like strong wind.

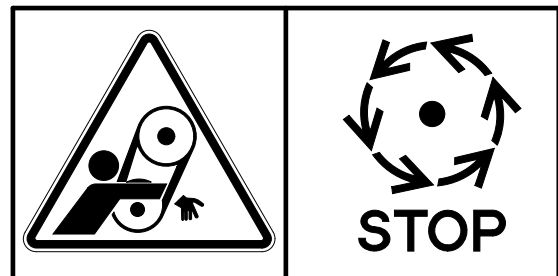


21070FW14

13) **SHEARING-ENGINE HOOD** (item 15)

This warning label is positioned on the engine hood.

- ▲ Don't open the engine hood during the engine's running.
- ▲ Don't touch exhaust pipe or it may cause severe burn.

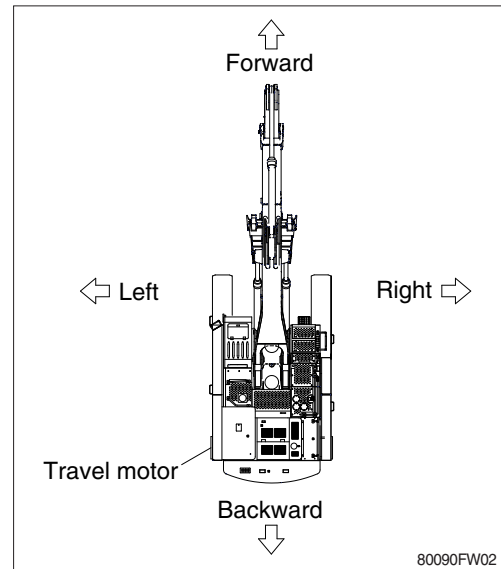


21070FW15

GUIDE

1. DIRECTION

The direction of this manual indicate forward, backward, right and left on the standard of operator when the travel motor is in the rear and machine is on the traveling direction.

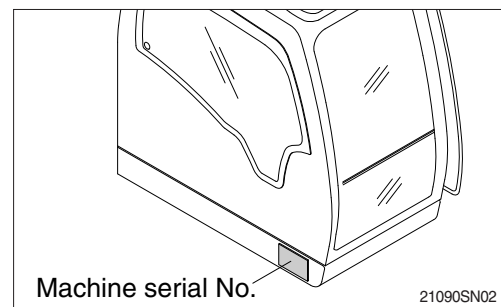


2. SERIAL NUMBER

Inform following when you order parts or the machine is out of order.

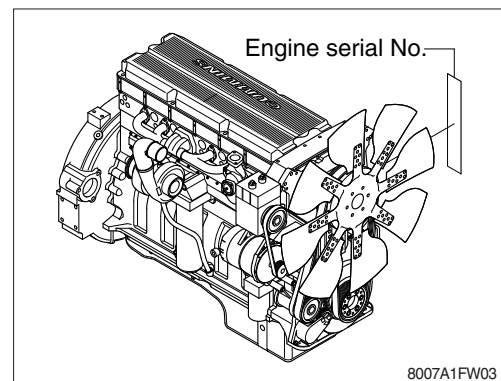
1) MACHINE SERIAL NUMBER

The numbers are located below the right window of the operator's cab.



2) ENGINE SERIAL NUMBER

The numbers are located on the engine name plate.



3. INTENDED USE

This machine is designed to be used mainly for the following work.

- Digging work
- Loading work
- Smoothing work
- Ditching work

※ Please refer to the section 4 (efficient working method) further details.

4. SYMBOLS

▲ Important safety hint.

△ It indicates matters which can cause the great loss on the machine or the surroundings.

※ It indicates the useful information for operator.

Lines, Tubes, and Hoses

Do not bend high-pressure lines. Do not strike high-pressure lines. Do not install any lines that are bent or damaged. Use the appropriate backup wrenches in order to tighten all connections to the recommended torque.

Check lines, tubes, and hoses carefully. Wear Personal Protection Equipment (PPE) in order to check for leaks. Always use a board or cardboard when you check for a leak. Leaking fluid that is under pressure can penetrate body tissue. Fluid penetration can cause serious injury and possible death. A pin hole leak can cause severe injury. If fluid is injected into your skin, you must get treatment immediately. Seek treatment from a doctor that is familiar with this type of injury.

Replace the affected parts if any of the following conditions are present :

- End fittings are damaged or leaking.
- Outer coverings are chafed or cut.
- Wires are exposed.
- Outer coverings are swelling or ballooning.
- Flexible parts of the hoses are kinked.
- Outer covers have exposed embedded armoring.
- End fittings are displaced.

Make sure that all clamps, guards, and heat shields are installed correctly. During machine operation, this action will help to prevent vibration, rubbing against other parts, excessive heat, and failure of lines, tubes, and hoses.

Do not operate a machine when a fire hazard exists. Repair any lines that are corroded, loose, or damaged. Leaks may provide fuel for fires. Consult your Hyundai Heavy Industries dealer for repair or for replacement parts.

Ether

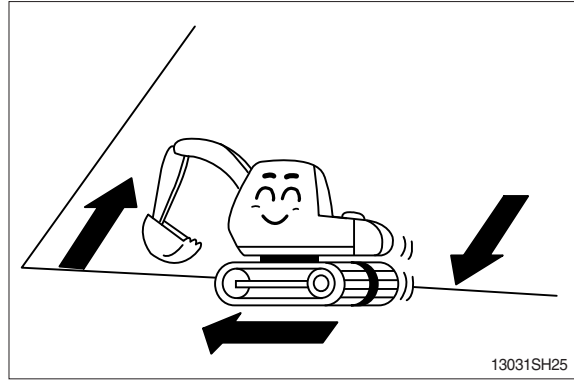
Ether (if equipped) is commonly used in cold weather applications. Ether is flammable and poisonous.

Do not spray ether manually into an engine if the machine is equipped with a thermal starting aid for cold weather starting.

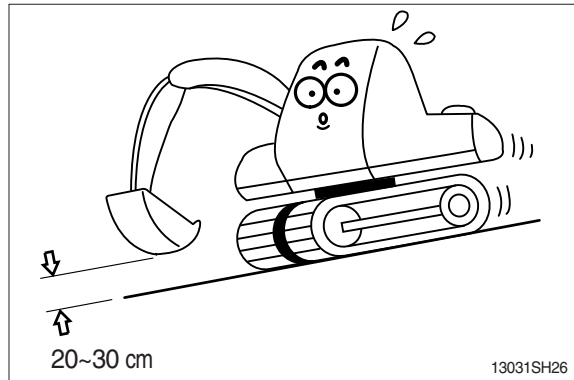
Use ether in ventilated areas. Do not smoke while you are replacing an ether cylinder or while you are using an ether spray.

Do not store ether cylinders in living areas or in the operator compartment of a machine. Do not store ether cylinders in direct sunlight or in temperatures above 49°C(120.2 °F). Keep ether cylinders away from unauthorized personnel.

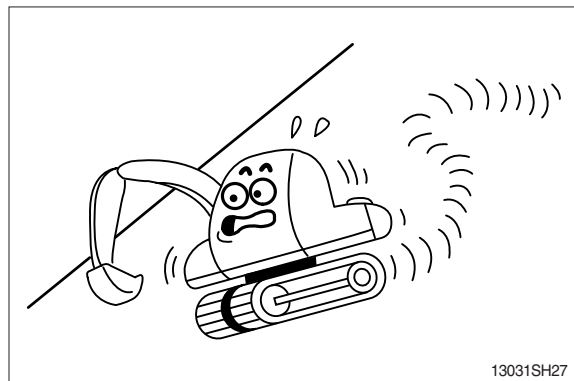
Avoid traveling in a cross direction on a slope as it can cause the danger of rolling over and sliding.



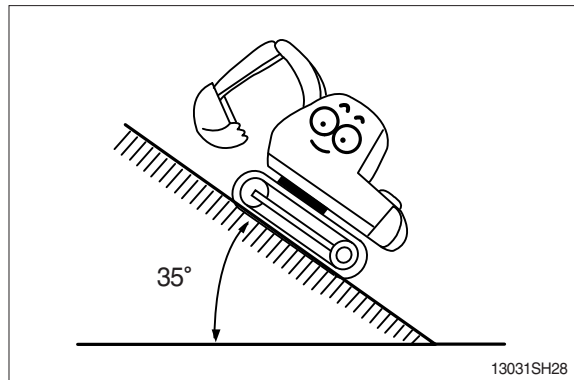
Traveling on a slope is dangerous. Be sure to operate slowly when traveling down a slope and maintain the bucket at a height of 20~30 cm (1 ft) above the ground so that it can be used as brake in an emergency.



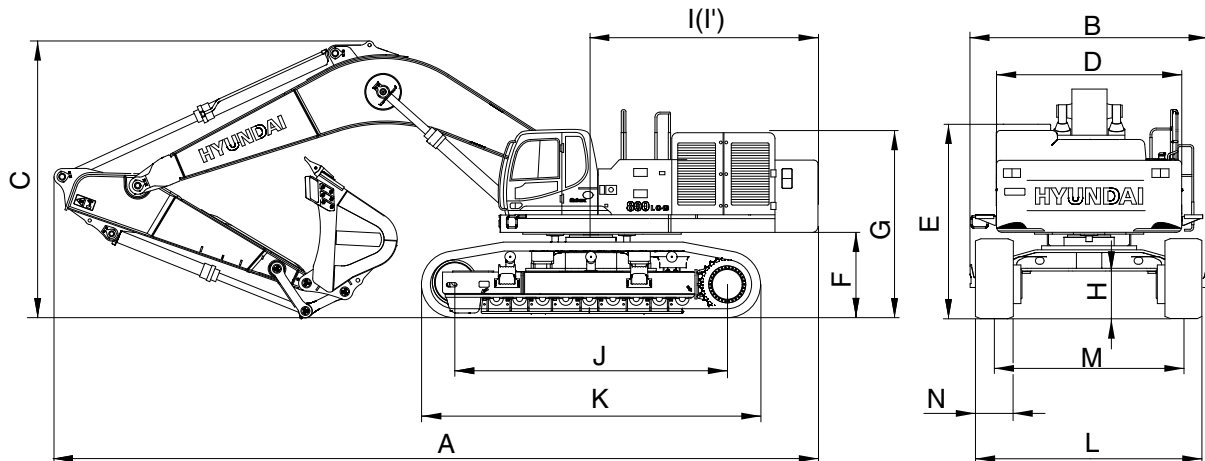
Steering of the machine while traveling on a slope is dangerous. When an inevitable turning of direction is required, turn on the flat and solid ground.



The engine angularity limits are 35 degree. Do not operate by more than the engine limits in any case.





















· 8.20 m (26' 11") BOOM, 3.60 m (11' 10") ARM



80092SP02

Description		Unit	Specification
Operating weight		kg (lb)	84300 (185850)
Bucket capacity (SAE heaped), standard		m ³ (yd ³)	3.40 (4.45)
Overall length	A	mm (ft-in)	14110 (46' 4")
Overall width, with 700 mm shoe (Transport position/Working position)	B		3675/4395 (12' 1"/14' 5")
Overall height	C		5390 (17' 8")
Superstructure width	D		3420 (11' 3")
Overall height of cab	E		3580 (11' 9")
Ground clearance of counterweight	F		1570 (5' 2")
Engine cover height	G		3480 (11' 5")
Minimum ground clearance	H		928 (3' 1")
Rear-end distance	I		4200 (13' 9")
Rear-end swing radius	I'		4315 (14' 2")
Distance between tumblers	J		5030 (16' 6")
Undercarriage length	K		6335 (20' 9")
Undercarriage width (Transport position/Working position)	L		3480/4200 (11' 5"/13' 9")
Track gauge (Transport position/Working position)	M		2780/3500 (9' 1"/11' 6")
Track shoe width, standard	N	700 (28")	
Travel speed (Low/high)		km/hr (mph)	2.6/4.0 (1.6/2.5)
Swing speed		rpm	6.3
Gradeability		Degree (%)	35 (70)
Ground pressure(700 mm shoe)		kgf/cm ² (psi)	1.10 (15.64)
Max traction force		kg (lb)	59300 (130730)

4) 10.5 m (34' 5") boom, 6.50 m (21' 4") arm equipped with 2.56 m³ (SAE heaped) bucket, 700 mm (28") double grouser shoe and 15,500 kg (34,170 lb) counterweight.

Load point height		Load radius														At max. reach					
		3.0 m (10.0 ft)		4.5 m (15.0 ft)		6.0 m (20.0 ft)		7.5 m (25.0 ft)		9.0 m (30.0 ft)		10.5 m (35.0 ft)		12.0 m (40.0 ft)		Capacity		Reach			
																				m (ft)	
12.0 m (40.0 ft)	kg																		*6740	*6740	15.14
	lb																		*14860	*14860	(49.7)
10.5 m (35.0 ft)	kg																		*6540	6250	16.01
	lb																		*14420	13780	(52.5)
9.0 m (30.0 ft)	kg																		*6440	5550	16.68
	lb																		*14200	12240	(54.7)
7.5 m (25.0 ft)	kg																		*6320	5040	17.19
	lb																		*13930	11110	(56.4)
6.0 m (20.0 ft)	kg															*8800	*8800		*6240	4670	17.54
	lb															*19400	*19400		*13760	10300	(57.5)
4.5 m (15.0 ft)	kg									*12460	*12460	*10610	*10610	*9270	*9270				*6180	4410	17.74
	lb									*27470	*27470	*23390	*23390	*20440	*20440				*13620	9720	(58.2)
3.0 m (10.0 ft)	kg					*22220	*22220	*16780	*16780	*13490	*13490	*11300	*11300	*9730	9500				*6130	4250	17.81
	lb					*48990	*48990	*36990	*36990	*29740	*29740	*24910	*24910	*21450	20940				*13510	9370	(58.4)
1.5 m (5.0 ft)	kg					*23920	*23920	*18000	*18000	*14340	14310	*11880	11230	*10120	8980				*6080	4180	17.74
	lb					*52730	*52730	*39680	*39680	*31610	31550	*26190	24760	*22310	19800				*13400	9220	(58.2)
Ground Line	kg			*12960	*12960	*21520	*21520	*18680	17660	*14890	13460	*12280	10610	*10390	8530				*6030	4210	17.53
	lb			*28570	*28570	*47440	*47440	*41180	38930	*32830	29670	*27070	23390	*22910	18810				*13290	9280	(57.5)
-1.5 m (-5.0 ft)	kg	*11860	*11860	*15180	*15180	*22180	*22180	*18800	16930	*15080	12850	*12440	10130	*10480	8170				*5940	4340	17.17
	lb	*26150	*26150	*33470	*33470	*48900	*48900	*41450	37320	*33250	28330	*27430	22330	*23100	18010				*13100	9570	(56.3)
-3.0 m (-10.0 ft)	kg	*14720	*14720	*17880	*17880	*23250	*23250	*18390	16520	*14890	12470	*12310	9810	*10340	7920				*5820	4590	16.66
	lb	*32450	*32450	*39420	*39420	*51260	*51260	*40540	36420	*32830	27490	*27140	21630	*22800	17460				*12830	10120	(54.7)
-4.5 m (-15.0 ft)	kg	*17670	*17670	*20980	*20980	*21760	*21760	*17490	16380	*14300	12280	*11860	9640	*9920	7790				*5610	4990	15.99
	lb	*38960	*38960	*46250	*46250	*47970	*47970	*38560	36110	*31530	27070	*26150	21250	*21870	17170				*12370	11000	(52.5)
-6.0 m (-20.0 ft)	kg	*20850	*20850	*24540	*24540	*19720	*19720	*16090	*16090	*13260	12270	*11010	9620	*9110	7780				*5280	*5280	15.11
	lb	*45970	*45970	*54100	*54100	*43480	*43480	*35470	*35470	*29230	27050	*24270	21210	*20080	17150				*11640	*11640	(49.6)

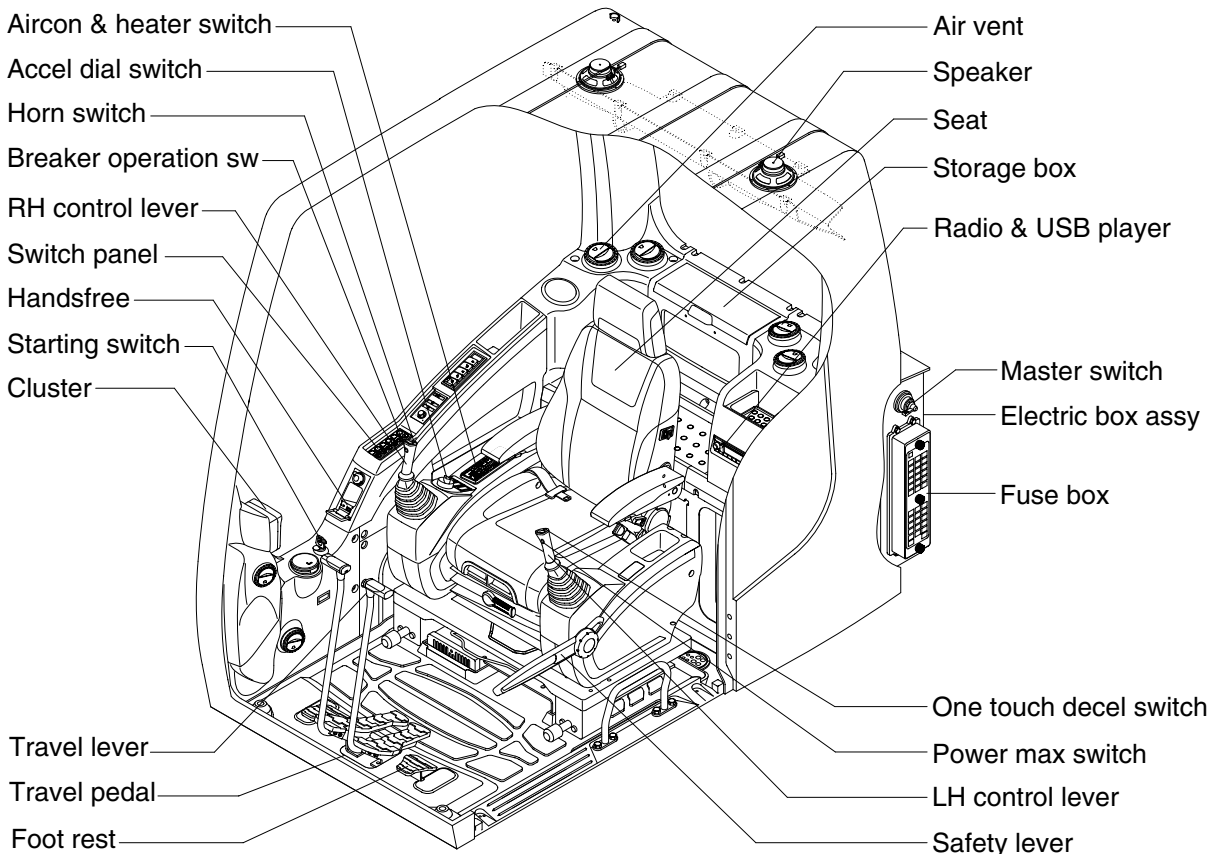
CONTROL DEVICES

1. CAB DEVICES

1) The ergonomically designed console box and suspension type seat provide the operator with comfort.

2) ELECTRONIC MONITOR SYSTEM

- (1) The centralized electronic monitor system allows the status and conditions of the machine to be monitored at a glance.
- (2) It is equipped with a safety warning system for early detection of machine malfunction.








80093CD01

6) MAIN MENU

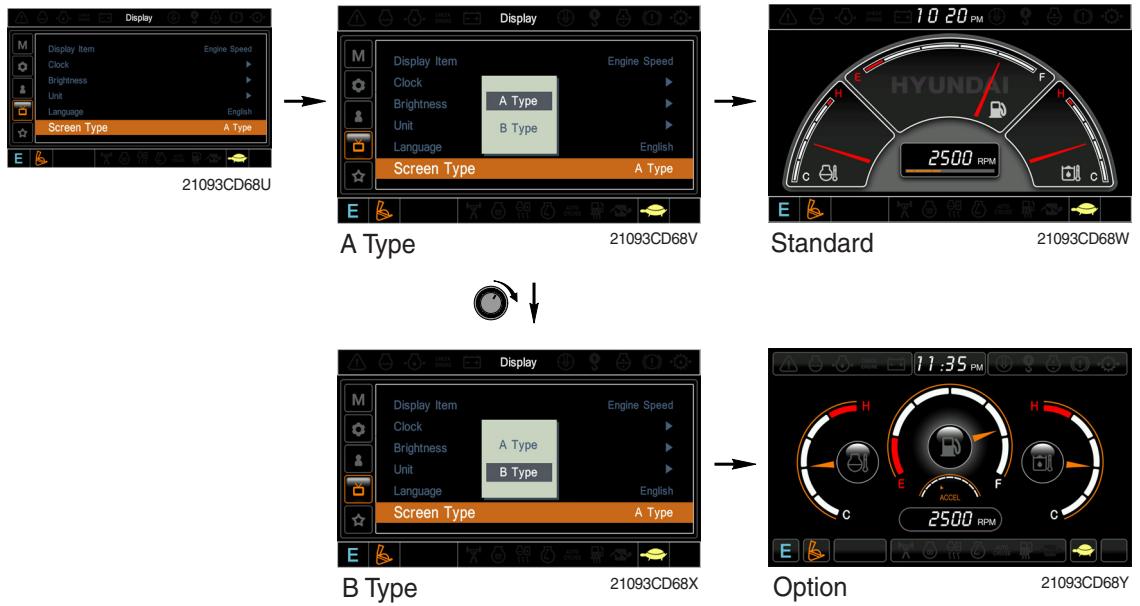


※ Please refer to select switch, page 3-10 for selection and change of menu and input value.

(1) Structure

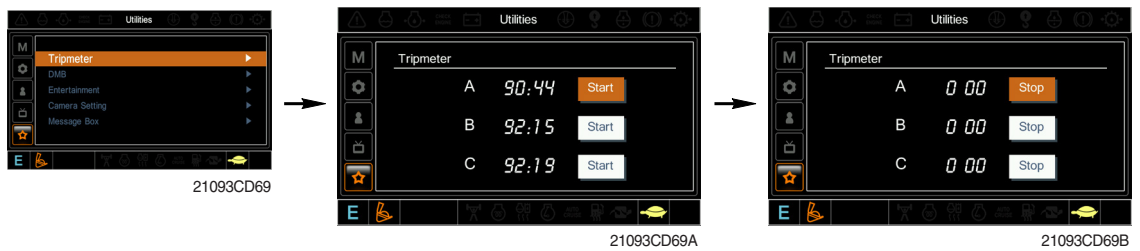
No	Main menu	Sub menu	Description
1	 Mode 21093CD64D	Work tool U mode power Boom/Arm speed Auto power boost Initial mode Cluster switch (back up)	Breaker, Crusher, Not installed User mode only Boom speed, Arm speed Enable, Disable Default, U mode Switch function
2	 Monitoring 21093CD64E	Active fault Logged fault Delete logged fault Monitoring (analog) Monitoring (digital) Operating hours	MCU, Engine ECM MCU, Engine ECM All logged fault delete, Initialization canceled Machine information Switch status, Output status Operating hours for each mode
3	 Management 21093CD64F	Maintenance information Machine security Machine Information A/S phone number Service menu	Replacement, Change interval oils and filters ESL mode setting, Password change Cluster, MCU, Engine, Machine A/S phone number, A/S phone number change Power shift, Hourmeter start, Replacement history, Update
4	 Display 21093CD64G	Display item Clock Brightness Unit Language Screen type	Engine speed, Tripmeter A, Tripmeter B, Tripmeter C Clock Manual, Auto Temperature, Pressure, Flow, Date format Korean, English, Chinese A type, B type
5	 Utilities 21093CD64H	Tripmeter DMB Entertainment Camera setting Message box	3 kinds (A, B, C) DMB select, DAB select, Channel scan, Exit Play MP4, codec. Basic direction, Display switching, Full screen Record for fault, attachment etc.

⑥ Screen type



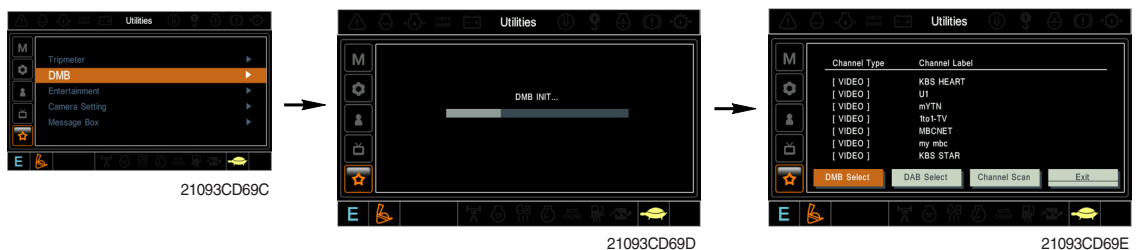
(6) Utilities

① Tripmeter



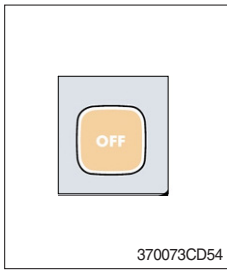
- Maximum 3 kinds of tripmeters can be used at the same time.
- Each tripmeter can be turned on by choosing "Start" while it also can be turned off by choosing "Stop".
- If the tripmeter icon is activated in the operation screen, it can be controlled directly there.

② DMB



- DMB select : TV channel can be selected by this menu.
- DAB select : Audio channel can be selected by this menu.
- Channel scan : This menu can be used other region for TV/Audio.
- Exit : Exit DMB menu

1) POWER OFF SWITCH

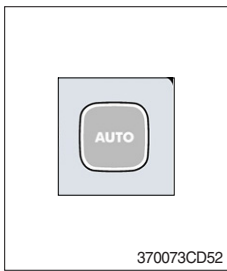


- (1) This switch makes the system and the LED OFF.
Just before the power OFF, set values are stored.

(2) Default setting values

Function	Air conditioner	c	LCD	Temperature	Mode
Value	OFF	Inlet	OFF	Previous sw OFF	Previous sw OFF

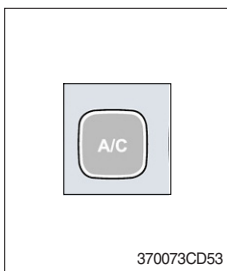
2) AUTO SWITCH



- (1) Turn the starting switch to ON position, LCD lights ON.
Auto air conditioner and heater system automatically keeps the optimum condition in accordance with operator's temperature configuration sensing ambient and cabin inside temperature.

- (2) This switch can restart system after system OFF.

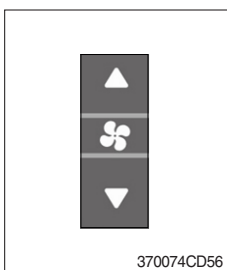
3) AIR CONDITIONER SWITCH (compressor switch)



- (1) This switch turns the compressor and the LCD ON.
- (2) In accordance with the temperature sensed by duct (evaporator) sensor, compressor turns ON or OFF automatically.
- ※ **Air conditioner operates to remove vapor and drains water through a drain hose. Water can be sprayed into the cab in case that the drain cock at the ending point of drain hose has a problem.**

In this case, exchange the drain cock.

4) FAN SPEED SWITCH



- (1) Fan speed is controlled automatically by set temperature.
- (2) This switch controls fan speed manually.
- There are 8 up/down steps to control fan speed.
 - The maximum step or the minimum step beeps 5 times.
- (3) This switch makes the system ON.

(4) Handsfree MIC





- ① This MIC transfers user voice to receiver of the call when making a call by handsfree.

(5) Seek button



If this button pressed, the radio automatically stops at the next frequency of broadcasting for your listening.

Press  to turn a station of a higher frequency or  to a lower frequency.

(6) Mute button

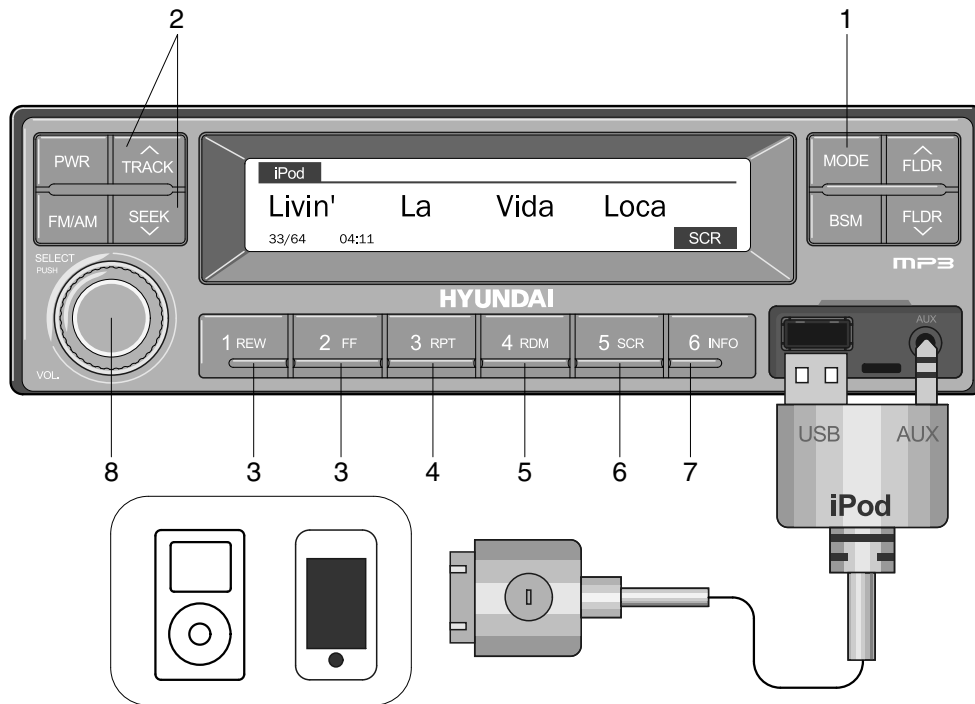


(7) Mode button



The LCD displayed each mode.

■ IPOD CONNECTION

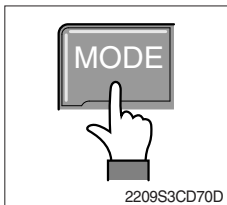


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- | | |
|-----------------------------|--|
| 1 iPod selection button | 5 Random play (RDM) button |
| 2 TRACK UP/SEEK DOWN button | 6 Scroll (SCR) button |
| 3 FF/REW button | 7 View music info (INFO) button |
| 4 Repeat (RPT) button | 8 Finding and playing file (SELECT) button |

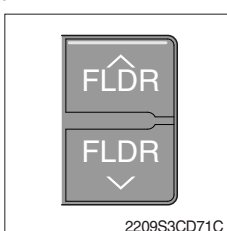
- Operates only when an iPod is connected. Connecting an iPod to the audio will automatically convert to iPod mode. Connecting the USB when the starting switch is in ON state will turn the power on and automatically play the songs within the iPod.
- The iPod cable is supplied separately.

(1) iPod selection button



- ① While playing a different mode, press the MODE button to convert to iPod mode. Connecting an iPod to the audio will automatically convert to iPod mode even if another mode is playing and automatically play the songs within the iPod.

(2) TRACK UP/SEEK DOWN button



- ① While playing music, press the TRACK ^ button to play the beginning of the next song. Press the SEEK v 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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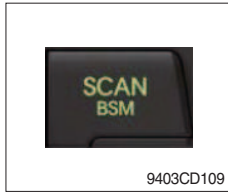
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(5) Preset scan (PS) / Best station memory (BSM) button



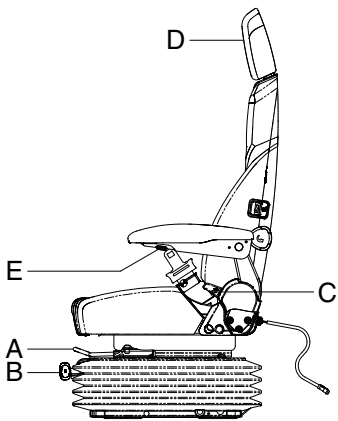
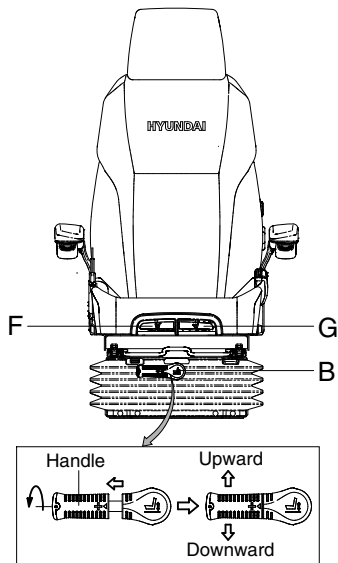
① Press BSM button (12) momentarily to scan the 6 preset stations stored in the selected band. When you hear your desired station, press it again to listen to it.

Press BSM button (12) for longer than 2 seconds to activate the Best Station Memory feature which will automatically scan and enter each station into memory.

※ **If you have already set the preset memories to your favorite stations, activating the BSM tuning feature will erase those stations and enter into the new ones. This BSM feature is most useful when travelling in a new area where you are not familiar with the local stations.**

5) SEAT

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



21093CD55

(1) Forward/Backward adjustment (A)

- ① Pull lever A to adjust seat forward or backward.
- ② The seat can be moved forward and backward over 140 mm (5.5") in 13 steps.

(2) Height/weight adjustment (B)

- ① Turn the handle to adjust seat upward or downward
 - Turn to clockwise, the seat is moved to upward and the weight is increased.
 - If it is turned to counterclockwise, the seat is moved to downward and the weight is decreased.

② Method of changing direction (up/down)

- First, pull the handle to outside.
- Second, rotate 180° and release the handle.

(3) Reclining adjustment (C)

Pull lever C to adjust seat back rest.

(4) Arm rest adjustment (E)

This can be adjusted by pushing the button E to right and left.

(5) Head rest adjustment (D)

This is adjustable vertically to fit operator's requirements over 60 mm (2.4").

(6) Seat cushion tilt adjustment (F)

Pull lever F to adjust seat cushion tilting angle.

(7) Seat cushion length adjustment (G)

▲ Pull lever G to adjust seat cushion forward or backward.

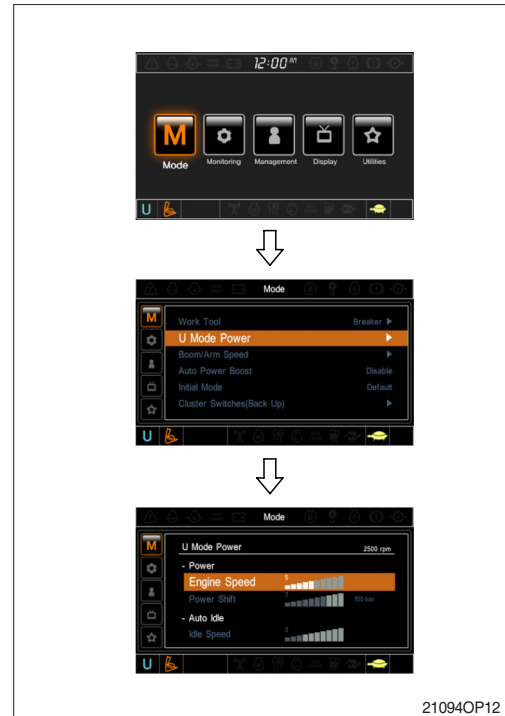
▲ Always check the condition of the seat belt and mounting hardware before operating the machine. Replace the seat belt at least once every three years, regardless of appearance.

- High idle rpm, auto idle rpm and EPPR pressure can be adjusted and memorized in the U-mode.

※ Refer to the page 3-12 for setting the user mode (available on U mode only).

· LCD segment vs parameter setting


Step (■)	Engine speed (rpm)	Idle speed (rpm)	Power shift (bar)
1	1300	700	0
2	1400	One touch decel low idle (800)	3
3	1500	900	6
4	1550	950	9
5	1600	1000	12
6	1650	1050	16
7	1700	1100	20
8	1750	Auto decel rpm (1150)	26
9	1800	1200	32
10	1850	1250	38



21094OP12

(4) Travel mode

 : Low speed traveling.

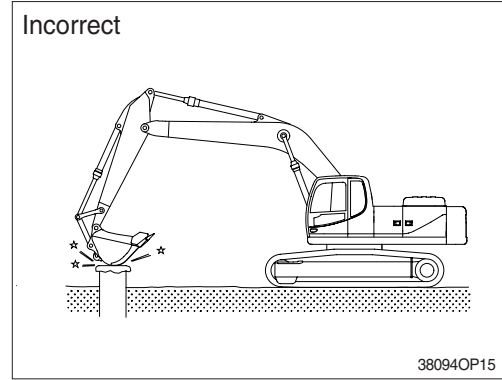
 : High speed traveling.

(5) Auto idle mode

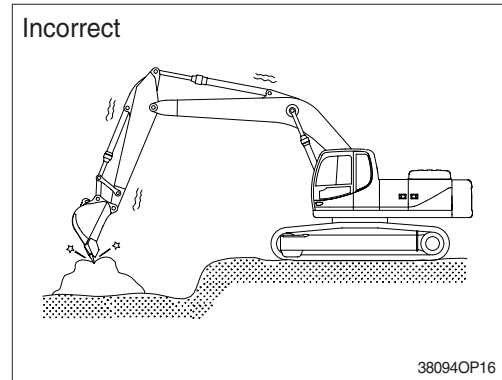
Pilot lamp ON : Auto idle function is activated.

Pilot lamp OFF : Auto idle function is canceled.

- 9) Do not use the dropping force of the work equipment for digging.
The machine can be damaged by the impact.



- 10) Do not use the bucket to crack hard objects like concrete or rocks.
This may break a tooth or pin, or bend boom.



11) NEVER CARRY OUT EXCESSIVE OPERATIONS

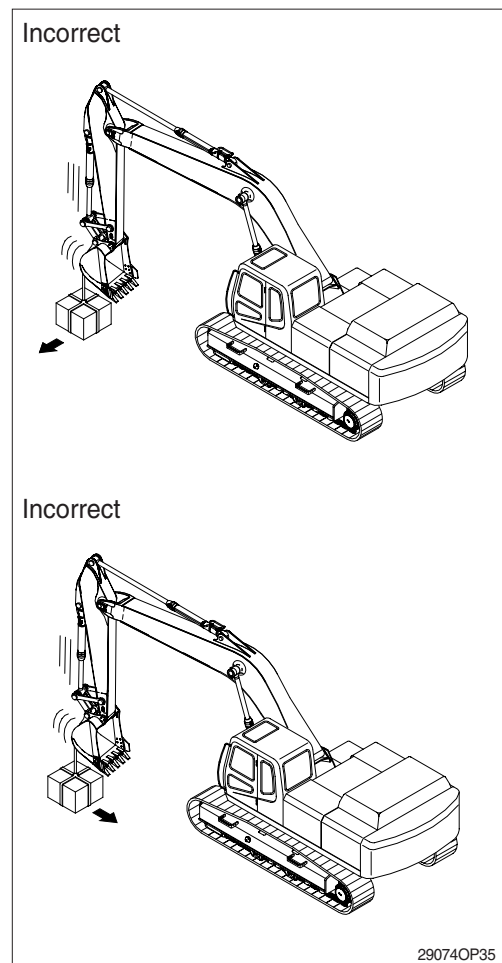
Operation exceeding machine performance may result in accident or failure.

Carry out lifting operation within specified load limit.

Never carry out operations which may damage the machine such as overload or over-impact-load.

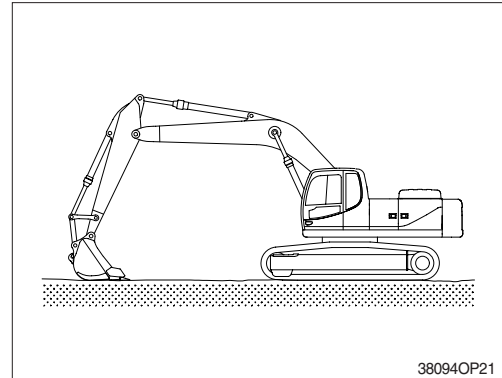
Never travel while carrying a load.

In case you need installing over load warning device for object handling procedure, please contact Hyundai distributor.



13. SWITCHING HYDRAULIC ATTACHMENT CIRCUIT

- 1) The combined hydraulic attachment circuit is capable of providing single action or double action.
- 2) The position of 3 way valve selects the single action hydraulic attachment circuit or the double action hydraulic attachment circuit.
- 3) Before you change the flow mode of hydraulic attachment circuit, place the machine in the servicing position as shown. Stop the engine.



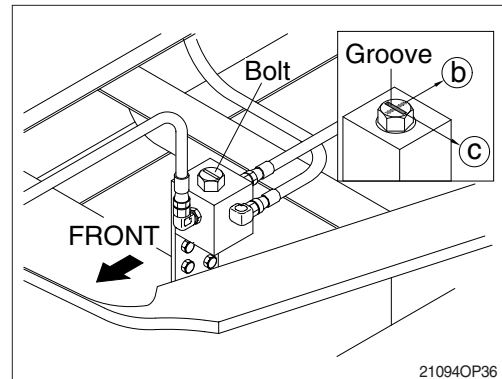
- 4) Use the spanner to turn the bolt of 3 way valve. Make sure that you turn the bolt between (b) and (c).

(1) One way flow (hydraulic breaker)

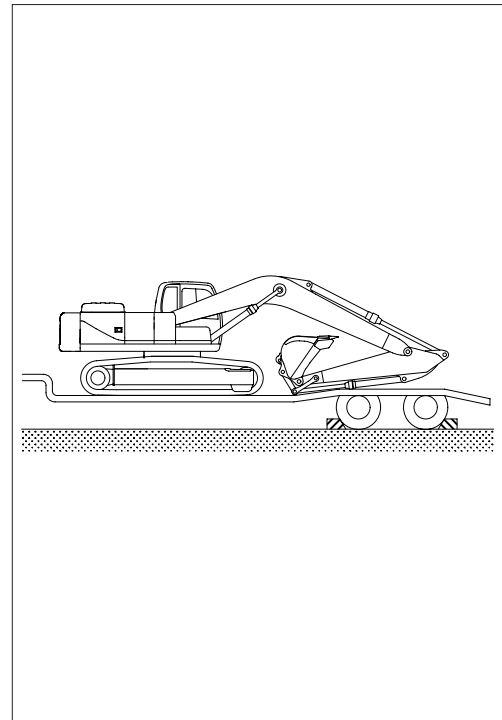
Position the groove parallel to the piping (b).

(2) Two way flow (clamshell or shear)

Position the groove perpendicular to the piping (c).



- (3) Lower the working equipment gently after the location is determined.
- ※ Place rectangular timber under the bucket cylinder to prevent the damage of it during transportation.
 - ▲ Be sure to keep the travel speed switch on the LOW (turtle mark) while loading and unloading the machine.
 - ▲ Avoid using the working equipment for loading and unloading since it will be very dangerous.
 - ▲ Do not operate any other device when loading.
 - ▲ Be careful on the boundary place of loading plate or trailer as the balance of machine will abruptly be changed on the point.



2) PIPE AND HOSE (FLARE type)

Thread size (PF)	Width across flat (mm)	kgf · m	lbf · ft
1/4"	19	4	28.9
3/8"	22	5	36.2
1/2"	27	9.5	68.7
3/4"	36	18	130
1"	41	21	152
1-1/4"	50	35	253

3) PIPE AND HOSE (ORFS type)

Thread size (UNF)	Width across flat (mm)	kgf · m	lbf · ft
9/16-18	19	4	28.9
11/16-16	22	5	36.2
13/16-16	27	9.5	68.7
1-3/16-12	36	18	130
1-7/16-12	41	21	152
1-11/16-12	50	35	253

4) FITTING

Thread size	Width across flat (mm)	kgf · m	lbf · ft
1/4"	19	4	28.9
3/8"	22	5	36.2
1/2"	27	9.5	68.7
3/4"	36	18	130
1"	41	21	152
1-1/4"	50	35	253

Service interval	No.	Description	Service action	Oil symbol	Capacity ℓ (U.S.gal)	Service points No.
10 Hours or daily	1	Hydraulic oil level	Check, Add	HO	450 (119)	1
	2	Engine oil level	Check, Add	EO	43.5 (11.5)	1
	4	Radiator coolant	Check, Add	C	65 (17)	1
	5	Fan belt tension and damage	Check, Adjust	-	-	1
	22	Prefilter (water, element)	Check, Clean	-	-	1
50 Hours or weekly	7	Bucket linkage pin	Check, Add	PGL	-	6
	8	Fuel tank (water, sediment)	Check, Clean	-	940 (248.3)	1
	9	Swing bearing grease	Check, Add	PGL	-	4
	10	Swing reduction gear case	Check, Add	GO	8.0 (2.1)	2
	13	Track tension	Check, Adjust	PGL	-	2
250 Hours	2	Engine oil	Change	EO	43.5 (11.5)	1
	3	Engine oil filter	Replace	-	-	1
	6	Attachment pins & bushing	Check, Add	PGL	-	11
	14	Battery (voltage)	Check, Clean	-	-	1
	17	Air breather element	Replace	-	-	1
	20	Aircon and heater fresh air filter	Check, Clean	-	-	1
500 Hours	21	Air cleaner element (primary)	Check, Clean	-	-	1
	22	Prefilter	Replace	-	-	1
	23	Fuel filter element	Replace	-	-	1
	24	Radiator, oil cooler, charge air cooler	Check, Clean	-	-	3
	25	Coolant filter (corrosion resister)	Replace	-	-	1
	25	Coolant test (DCA4 concentration)	Test, Add	DCA4	-	1
1000 Hours	5	Fan belt tensioner	Check, Replace	-	-	1
	10	Swing reduction gear case	Change	GO	8.0 (2.1)	2
	11	Swing reduction gear grease	Check, Add	PGL	1.6 (0.4)	2
	12	Swing gear and pinion grease	Change	PGL	16.9 kg (37.3 lb)	1
	15	Hydraulic oil return filter	Replace	-	-	3
	16	Drain filter cartridge	Replace	-	-	2
	19	Pilot line filter element	Replace	-	-	1
	25	Coolant filter (corrosion resistor)	Replace	-	-	1
	26	Travel reduction gear case	Change	GO	20 (5.3)	2
2000 Hours	1	Hydraulic oil * ¹	Change	HO	450 (119)	1
	4	Radiator coolant	Change	C	65 (17)	1
	18	Hydraulic oil suction strainer	Check, Clean	-	-	1
	-	Hoses, fittings, clamps (fuel, coolant, hydraulic)	Check, Retighten, Replace	-	-	-
5000 Hours	1	Hydraulic oil * ²	Change	HO	450 (119)	1
As required	20	Aircon & heater fresh filter	Replace	-	-	1
	20	Aircon & heater recirculation filter	Clean, Replace	-	-	1
	21	Air cleaner element (primary, safety)	Replace	-	-	2
	28	Central grease pump	Add, Lubricate	PGL	15 kg (33 lb)	1

*¹ Conventional hydraulic oil *² Hyundai genuine long life hydraulic oil

※ Oil symbol

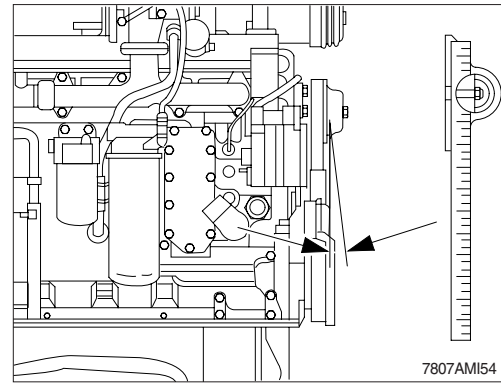
Please refer to the recommended lubricants for specification.

DF : Diesel fuel GO : Gear oil HO : Hydraulic oil
C : Coolant PGL : Grease EO : Engine oil

(5) A worn tensioner that has play in it or a belt that talks off its pulley possibly indicates pulley misalignment.

※ **Maximum pulley misalignment is three degrees. This measurement can be taken with a straightedge and an inclinometer.**

(6) Install the belt.



8) INSPECTION OF COOLING FAN

▲ **Personal injury can result from a fan blade failure. Never pull or pry on the fan. This can damage the fan blade and cause fan failure.**

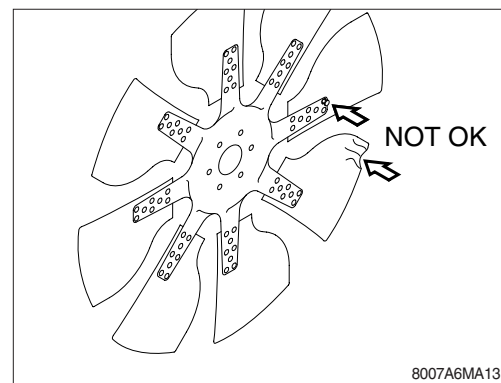
※ **Rotate the crankshaft by using the engine barring gear.**

※ **A visual inspection of the cooling fan is required daily.**

Check for cracks, loose rivets, and bent or loose blades.

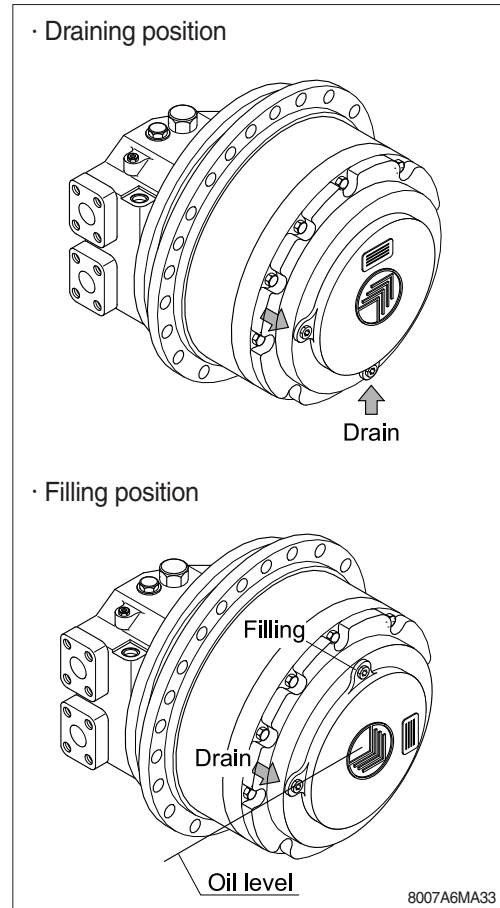
Check the fan to make sure it is securely mounted. Tighten the capscrews if necessary.

Replace any fan that is damaged.



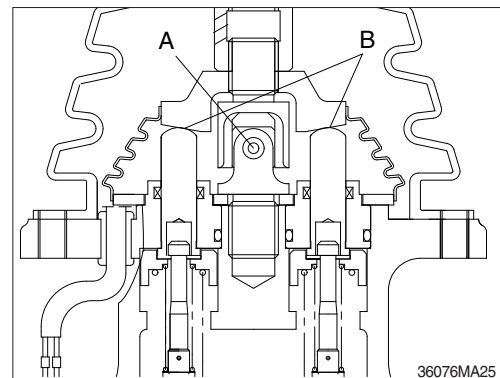
30) CHANGE THE TRAVEL REDUCTION GEAR OIL

- (1) Raise the temperature of the oil by traveling machine first.
- (2) Stop when the position of the drain plug is down.
- (3) Loosen the level plug and then the drain plug.
- (4) Drain the oil to adequate container.
- (5) Tighten the drain plug and fill specified amount of oil at filling port.
- (6) Tighten the level plug and travel slowly to check if there is any leakage of oil.

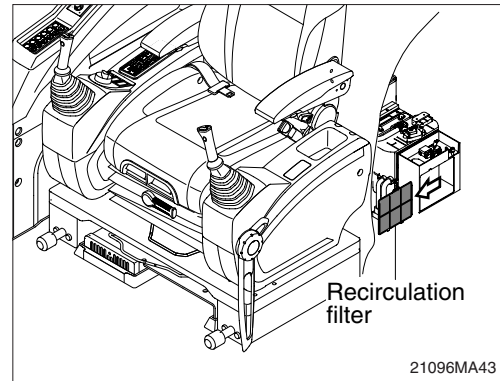


31) LUBRICATE RCV LEVER

Remove the bellows and with a grease gun grease the joint part(A) and sliding parts(B).



(2) Remove recirculation filter.

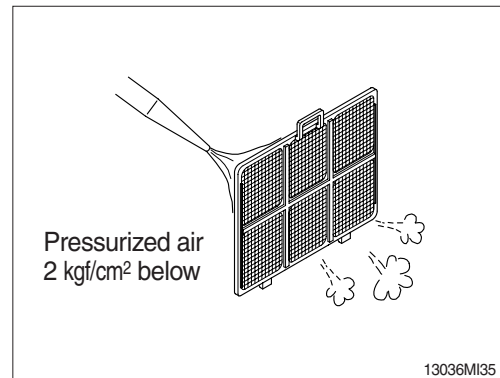


(3) Clean the recirculation filter using a pressurized air (below 2 kgf/cm², 28 psi) or washing with water.

△ When using pressurized air, be sure to wear safety glasses.

※ Dry off after washing with water.

(4) Inspect the filter after cleaning. If it is damaged or badly contaminated, use a new filter.



3) PRECAUTIONS FOR USING AIR CONDITIONER

(1) When using the air conditioner for a long time, open the window once every one hour.

(2) Be careful not to overcool the cab.

(3) The cab is properly cooled if the operator feels cool when entering there from outside (about 5°C lower than the outside temperature).

(4) When cooling, change air occasionally.

4) CHECK DURING SEASON

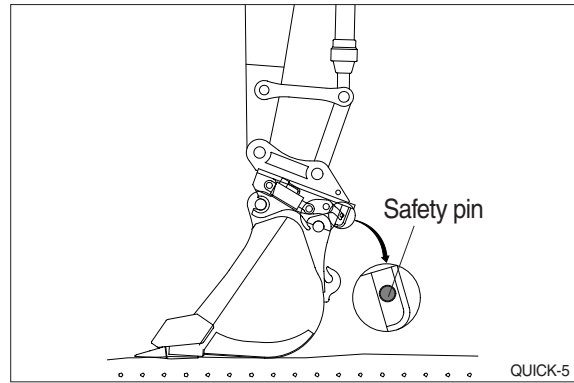
Ask the service center for replenishment of refrigerant or other maintenance service so that the cooling performance is not damaged.

5) CHECK DURING OFF-SEASON

Operate the air conditioner 2 or 3 times a month (each for a few minutes) to avoid loss of oil film in the compressor.

6) Refrigerant (R134-a) amount : 1000 ± 20 g

- (6) After checking the connection status between bucket pins and hooks of quick clamp, insert safety pin of moving hook to lock position.



2) REMOVE BUCKET FROM QUICK CLAMP

Removing procedure is reverse of fixing.

3) PRECAUTION OF USING QUICK CLAMP

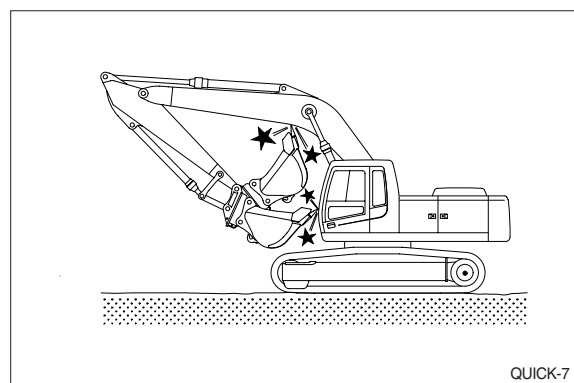
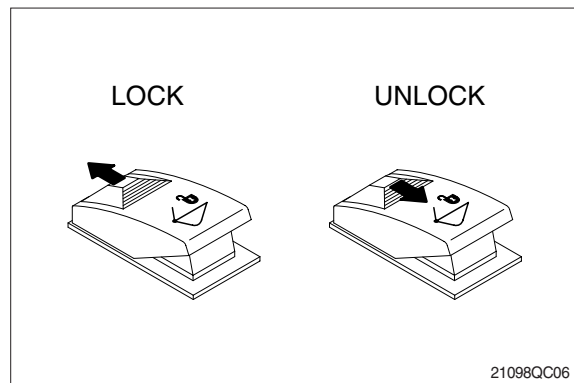
- ⚠ When operating the machine with quick clamp, confirm that the quick clamp switch is lock position and safety pin of moving hook is inserted.

Operating the machine with quick clamp switch unlocked and without safety pin of moving hook can cause the bucket to drop off and bring about the accident.

- ⚠ Serious injury or death can result from this accident.

- ⚠ Be careful to operate the machine equipped with quick clamp. The bucket may hit cab, boom and boom cylinders when it reaches vicinity of them.

HYUNDAI will not be responsible for any injury or damage in case that safety pin is not installed properly.



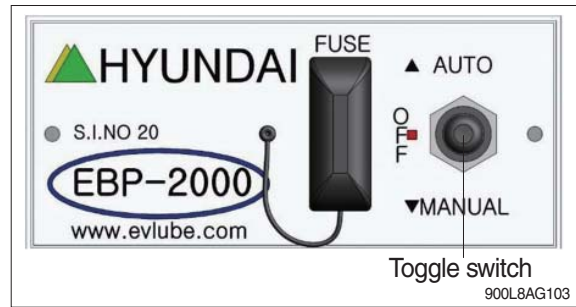
4) OPERATIONS

(1) Pump

① Change mode

Change mode with toggle switch at front of pump.

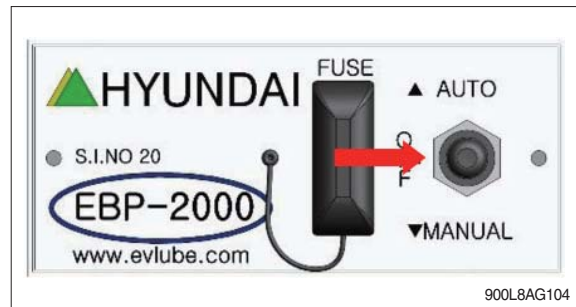
- a. AUTO – Automatic mode
- b. MANUAL – Manual mode
- c. OFF – Power off



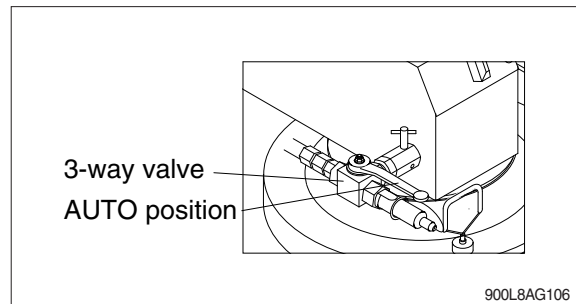
② Exchange of AUTO mode

Please follow the following process to change auto mode.

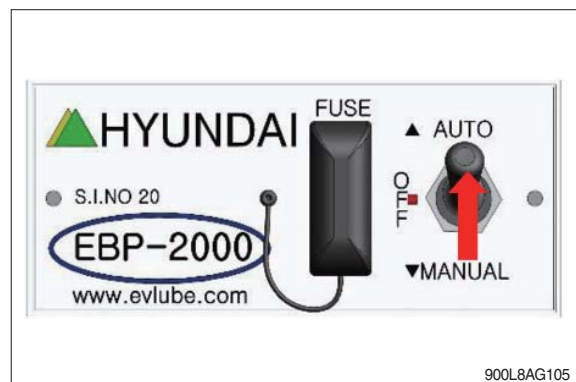
- a. Change toggle switch to OFF mode.



- b. Change 3-way valve to AUTO position.



- c. Change toggle switch to AUTO mode.



6) TROUBLESHOOTING

(1) Pump

Trouble	Reason	Service
1. Pump does not working	1) Power off 2) Pump motor broken	1) Check fuse and toggle switch 2) Replace the motor assy
2. Grease doesn't discharge although pump is operating	1) Grease low level 2) Pump element broken 3) Piston assy broken 4) Relief valve broken 5) Filter blocked 6) Air inside pump	1) Replace grease canister 2) Replace the cylinder assy 3) Replace the pump piston assy 4) Replace distributor assy 5) Check filter and clean 6) Remove air using air vent. ※ Refer to page 9-25, (5) How to remove air pocket.
3. Could not either pump high pressure or accurate grease volume	1) Relief valve broken 2) Seal inside of pump broken 3) Filter blocked 4) Air inside pump	1) Relief valve readjust or replace distributor assy 2) Replace the cylinder assy 3) Check filter and clean 4) Remove air using air vent ※ Refer to page 9-25, (5) How to remove air pocket.
4. Reduced pump speed	1) High pressure in the lube line 2) Low ambient temperature	1) Check the lube line and points 2) Change grease with low NLGI grade
5. When pumping pressure will be gone up too higher	1) Lube line/point blocked 2) Relief valve broken	1) Check lube line/point and repair 2) Relief valve readjust or replace the distributor assy
6. Other trouble	Contact Hyundai or Hyundai distributor	

(2) System

Trouble	Reason	Service
1. Certain lube point not delivered grease	1) Lube line broken 2) Distributor blocked	1) Change lube line 2) Change distributor
2. Cycle error	1) Pump out of order or grease empty 2) Lube point blocked 3) Lube line blocked 4) Main lube line blocked/broken/leakage	1) Please refer to this page, (1) Pump. 2) Check lube point 3) Change lube line 4) Check main lube line and change it
3. Noise at certain point	1) Lack of grease 2) Blocked lube point 3) Lube line broken or blocked	1) Adjust lube on cycle (Refer to page 9-19, (2) Controller.) 2) Check Lube point 3) Check lube line and change it
6. Other trouble	Contact Hyundai or Hyundai distributor.	

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