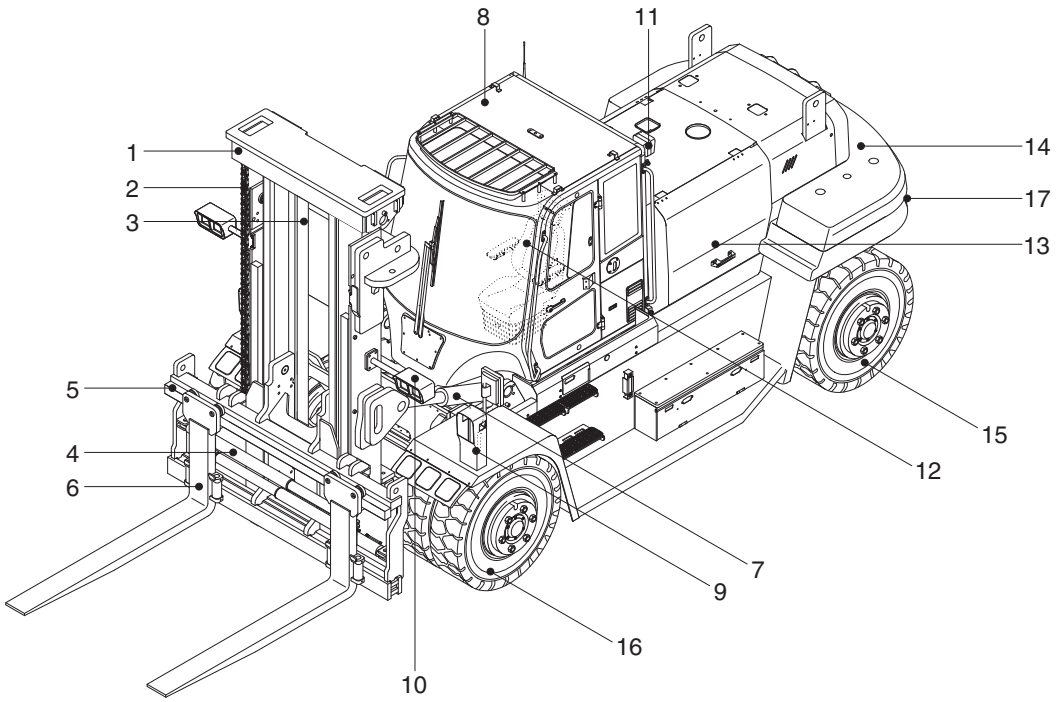
1. GENERAL LOCATIONS

1) 180D-9

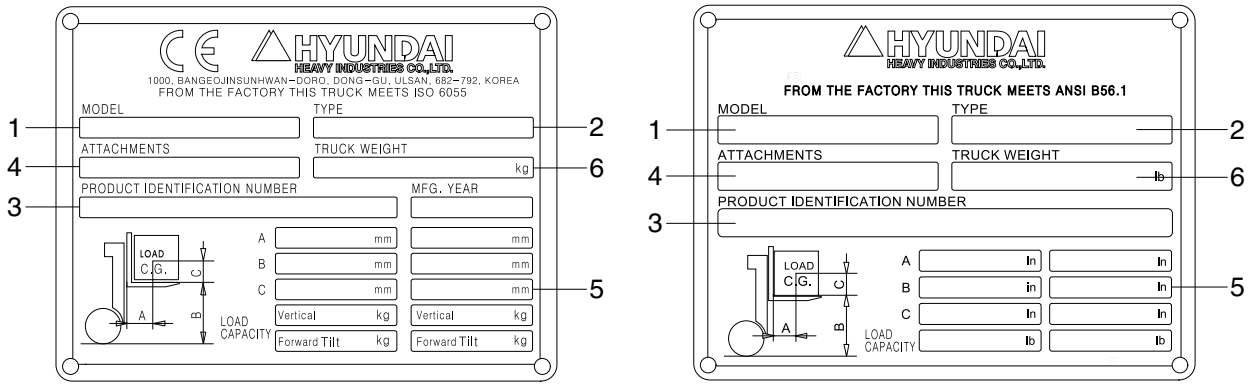


180D9OM54

1	Mast	7	Tilt cylinder	13	Bonnet
2	Lift chain	8	Cabin	14	Counterweight
3	Lift cylinder	9	Head light-fender	15	Rear wheel
4	Fork positioner cylinder	10	Work lamp-mast	16	Front wheel
5	Carriage	11	Work lamp-cabin rear	17	Rear combination lamp
6	Forks	12	Operator's seat		

2. DATA/SAFETY PLATES AND DECALS

1) TRUCK DATA AND CAPACITY PLATE



50D7EOM56

(1) Truck model number or registered name

(2) The type is represented a kind of truck such as diesel.

(3) Truck serial number

An identification number assigned to this particular truck and should be used when requesting information or ordering service parts for this truck from your authorized HYUNDAI dealer. The serial number is also stamped on the frame.

(4) Attachment description (If any installed)

The user must see that the truck is marked to identify the attachment (s), including the weight of the truck/attachment combination and truck capacity with the attachment.

(5) Capacity rating, load center, and lifting height data

Shows the maximum load capacity of this truck with relation to load centers and fork heights (See diagram on plate). Personal injury and damage to the truck can occur if these capacities are exceeded.

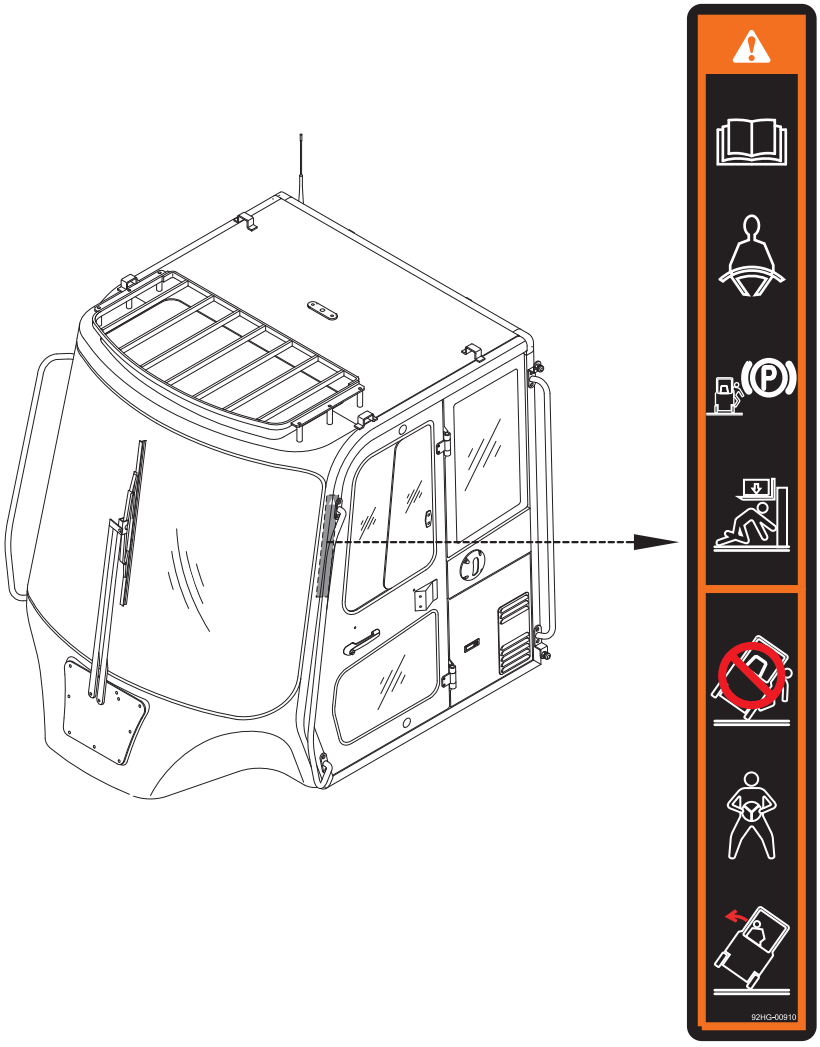
Do not exceed the maximum capacity specified.

(6) Truck weight

The approximate weight of the truck without a load on the forks. This weight plus the weight of the load must be considered when operating on elevators, elevated floors, etc. to be sure they are safe.

⚠ Before modifications that affect the stability of safety systems are made written approval from HYUNDAI. Contact your authorized HYUNDAI dealer for a new nameplate showing the revised capacity.

2) OPERATOR SAFETY WARNING DECAL



250D9OM59

⚠ **Safety and warning decals are placed in conspicuous locations on the truck to remind you of essential procedures or to prevent you from making an error that could damage the truck or possibly cause personal injury. You should know, understand, and follow these instructions. Safety and warning decals. Should be replaced immediately if missing or defaced (Damaged or illegible). Refer to the page 0-3 for the location of all decals.**

⚠ **Operator/Tip-over warning decal**

This decal is located on cabin's upper-left side frame. Its purpose is to remind the operator that staying in the seat provides the best chance of avoiding injury in the event of a truck-tipping or driving off a dock mishap.

Lift trucks can be tipped over if operated improperly. Experience with lift truck accidents has shown that the driver cannot react quickly enough to jump clear of the truck and cabin as the truck tips. To protect operators from severe injury or death in the event of a tip over, it is best to be held securely in the seat. So, please, always buckle up when driving your lift truck.

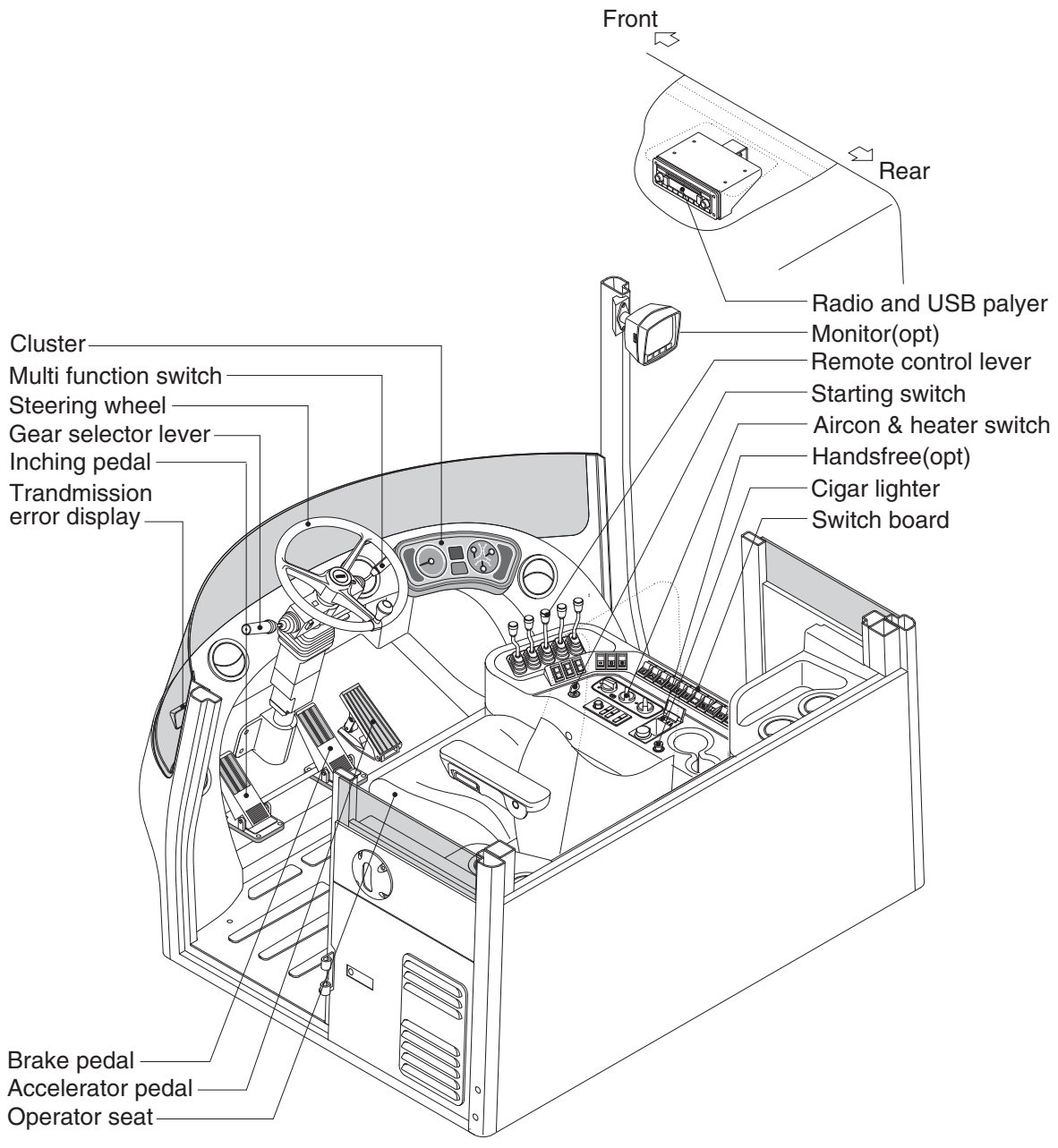
3. CAB DEVICES

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 truck to be monitored at a glance.

(2) It is equipped with a safety warning system for early detection of truck malfunction.



180D9CD01

4. CLUSTER

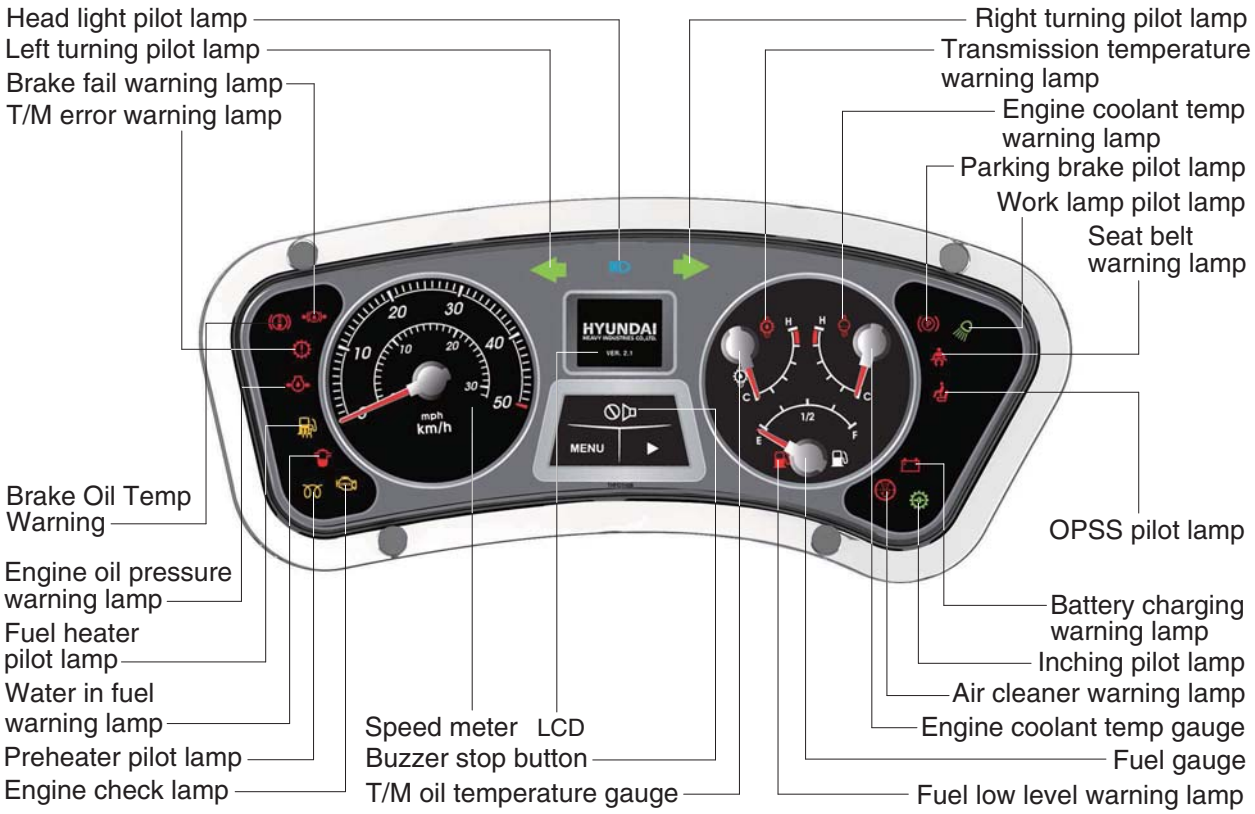
1) STRUCTURE

The gauges panel consists of gauges and monitors as shown below, to warn the operator in case of abnormal truck operation or conditions for the appropriate operation and inspection.

- Gauges : Indicate operating status of the truck.
- Warning lamp : Indicate abnormality of the truck.
- Pilot lamp : Indicate operating status of the truck.

※ **The monitor installed on this truck does not entirely guarantee the condition of the truck. Daily inspection should be performed according to chapter 7. PLANNED MAINTENANCE AND LUBRICATION.**

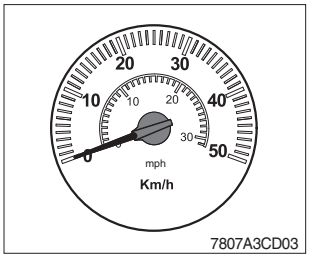
※ **When the monitor provides a warning immediately check the problem, and perform the required action.**



160D7ECD02

2) GAUGE

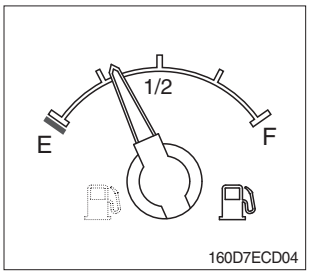
(1) Speed meter



7807A3CD03

① The speed meter displays the speed of truck in mph and km/h.

(2) Fuel gauge

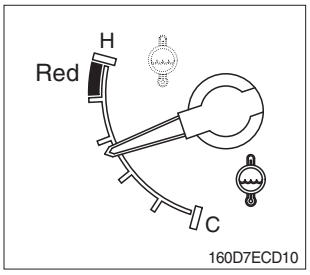


① This gauge indicates the amount of fuel in the fuel tank.

② Fill the fuel when the indicator moves **E** point, refuel as soon as possible to avoid running out of fuel.

※ **If the gauge indicates below E point even though the truck is on the normal condition, check the electric device as that can be caused by the poor connection of electricity or sensor.**

(3) Engine coolant temperature gauge

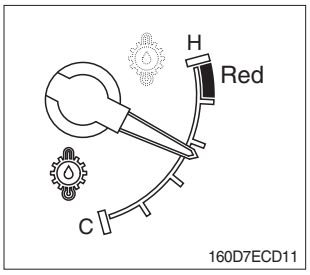


① This indicates the temperature of coolant.
- Red range : Above 104°C (219°F)

② Keep idling engine at low speed until the indicator is in the operating range.

③ If the indicator is in the red range, turn OFF the engine, check the radiator and engine.

(4) Transmission oil temperature gauge



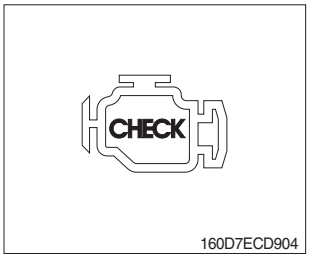
① This range indicates the temperature of transmission oil.
- Red range : Above 107°C (225°F)

② Keep idling engine at low speed until the indicator is in the operating range.

③ If the indicator is in the red range, it means the transmission is overheated. Be careful that the indicator does not move into the red range.

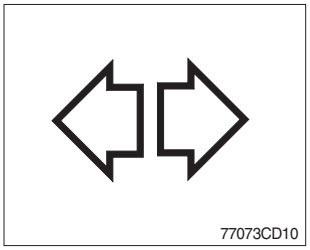
3) WARNING AND PILOT LAMP

(1) Engine check lamp



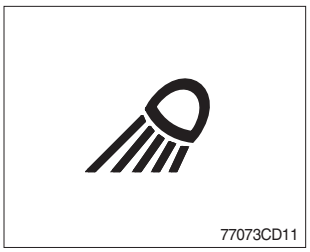
① This lamp lights ON during a nonfatal engine system error. The engine can still be run, but the fault should be corrected as soon as possible.

(2) Direction pilot lamp



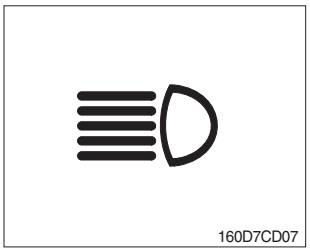
① This lamp flashes when the signal indicator lever is moved.

(3) Work lamp pilot lamp (front / rear)



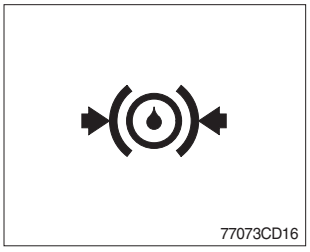
① This lamp lights ON when cabin work lamp switch is pressed.

(4) Head light pilot lamp



① This lamp comes ON when the main light switch is operated to 2nd step.

(5) Brake fail warning lamp

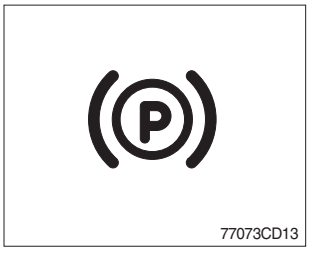


① The lamp lights ON when the oil pressure of service brake drops below the normal range.

② When the lamp is ON, stop the engine and check for its cause.

※ **Do not operate until the problems are corrected.**

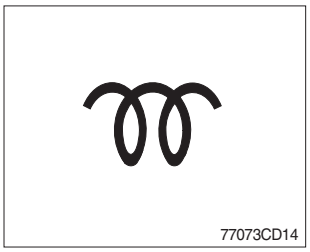
(6) Parking brake pilot lamp



① When the parking brake is actuated, the lamp lights ON.

※ **Check the lamp is OFF before driving.**

(7) Preheater pilot lamp



① This lamp lights ON when start switch is turned clockwise to the ON position. Light will turn off after approximately 15~45 seconds, depending on engine coolant temperature, indicating that preheating is completed.

② When the lamp goes out the operator should start cranking the engine.

※ **Refer to page 5-12.**

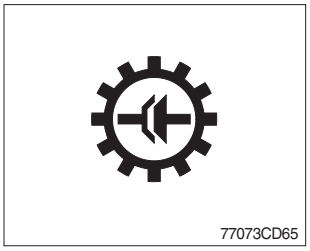
(8) OPSS pilot lamp (option)

① This signal lamp lights ON when the operator leaves the seat.

② Powered travel movement of the truck shall be possible only if the operator is in the normal operating position. Transmission will automatically shift to neutral upon the exiting of the operator.

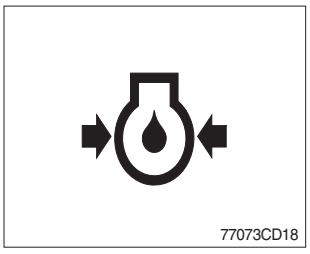
③ The forward/reverse lever must be cycled through neutral with the operator in the normal operating position to regain powered direction control.

(9) Inching pilot lamp



① When the inching switch is pressed, the lamp lights ON.

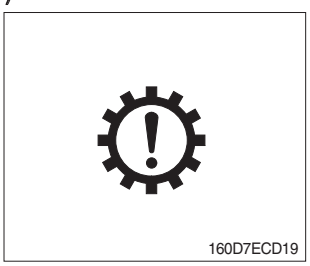
(10) Engine oil pressure warning lamp



① This lamp comes ON for a while after starting the engine because of the low oil pressure.

② If the lamp comes ON during engine operation, shut OFF engine immediately. Check oil level.

(11) Transmission error warning lamp



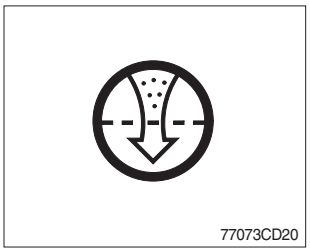
① This lamp lights ON and the T/M message display shows the error codes when an error occurs in the transmission.

② Immediately pull the truck to a convenient stop. Stop the engine. Investigate the cause.

※ **Consult a HYUNDAI dealer to investigate the cause.**

※ **Do not operate until the cause has been corrected.**

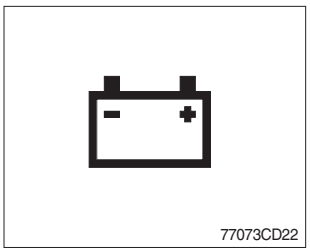
(12) Air cleaner warning lamp



① This lamp operates by the vacuum caused inside when the filter of air cleaner is clogged.

② Check the filter and clean or replace it when the lamp is ON.

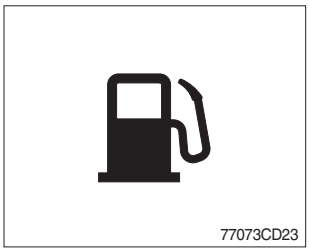
(13) Battery charging warning lamp



① This lamp is ON after key switch is turned ON.

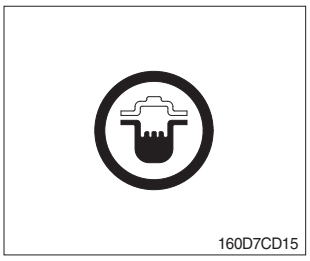
② Check the battery charging circuit when this lamp comes ON during engine operation.

(14) Fuel low level warning lamp



① Fill the fuel immediately when the lamp is turned ON.

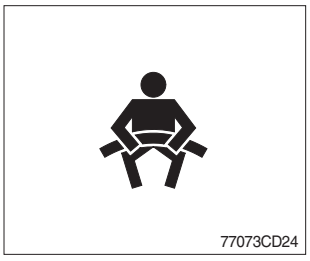
(15) Water in fuel warning lamp



① This lamp lights up when the water separators full of water or malfunctioning.

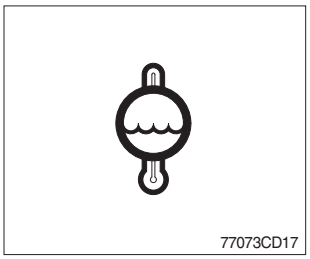
※ **When this lamp lights up, stop the truck and spill water out of the separator.**

(16) Seat belt warning lamp



① This lamp lights ON for the first five seconds after starting the truck.

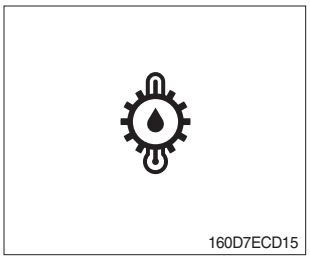
(17) Engine coolant temperature warning lamp



① This lamp is turned ON when the temperature of cooling water is over the normal temperature(104°C, 219°F).

② Check the cooling system when the lamp is ON.

(18) Transmission oil temperature warning lamp

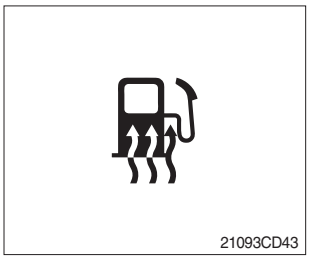


① This lamp informs the operator that transmission oil is above the specified temperature.

- Transmission oil temperature warning lamp ON : Abnormal
- Transmission oil temperature warning lamp OFF : Normal

※ **When this lamp lights up during operation, stop the engine and check the machine.**

(19) Fuel heater pilot lamp

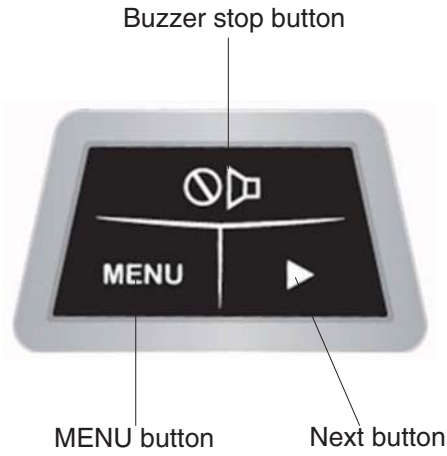


① This lamp is turned ON when the coolant temperature is below 10°C (50°F) or the hydraulic oil temperature 20°C (68°F).

② The automatic fuel warming is cancelled when the engine coolant temperature is above 60°C, or the hydraulic oil temperature is above 45°C since the start switch was ON position.

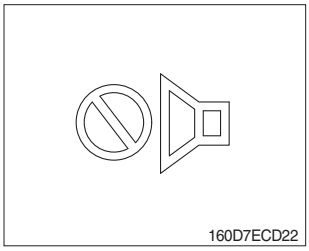
4) Cluster button

Each button has the following function.



160D7ECD121E

(1) Buzzer stop button

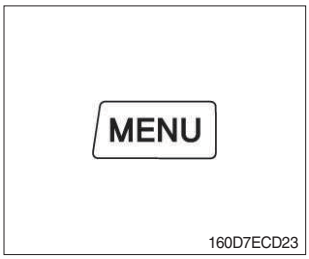


160D7ECD22

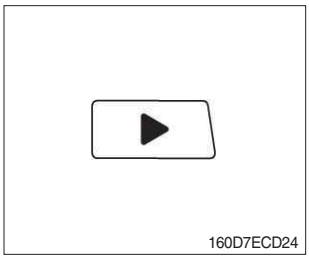
① This switch is used to stop the buzzer sound.

② Stop the buzzer when the switch is pressed.

(2) Menu and next button



160D7ECD23



160D7ECD24

① This switches are used to choose the model or display the engine error on the LCD.

② Model select mode

- The model is displayed on the LCD when the menu button MENU and next button ▶ are pressed simultaneously for some longer seconds.
- Please don't change your truck model identity because it is already pre-set on the truck before delivery.

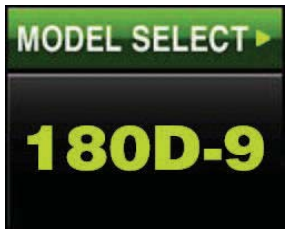
③ Engine error display

- The engine error is displayed on the LCD when the menu MENU button is pressed.
- On pressing the next button ▶, next page is displayed in case the error was occurred 5 or more.
- On pressing the next button ▶ once more, the LCD gets back to normal display status.

5) LCD

LCD has the functions to display start mode, standby mode, cruise function, model select and engine error.

NO	Display	Name	Description
1		Start mode	- Display initialization state with HYUNDAI logo and program version.
2		Standby mode	- Displays on the idle state. - Displays rpm, odometer and hourmeter
3			- Odometer is on, ODO is activated.
4			- Hourmeter is on, is activated.

NO	Display	Name	Description
5		Model select	- On model select mode, displays like this image. ※ Refer to the page 3-11.
		Engine error display	- In case of below 4 engine errors displays like this image. ※ Refer to the page 3-11.
			- In case of over 4 engine errors displays like this image.
			- To display next page in case of over 4 errors, press ▶.

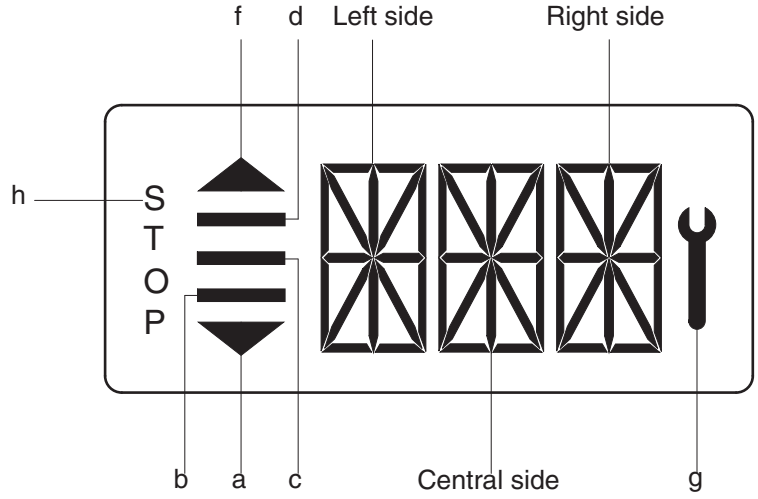
5. TRANSMISSION MESSAGE INDICATOR

1) TRANSMISSION ERROR DISPLAY

(1) Function

The display can be used with the gear selector. It indicates speed and driving direction as well as the activated inching.

When driving in the automatic mode, a bar indicator gives additionally also information about the selected driving range ; The automatic range is symbolized by arrows above and below the bar indicator. In case of possible errors in the system, a wrench appears on the display, combined with indication of the error number. Also sporadically occurring errors can be indicated.



D507CD33

1	Bars	a, f	Automatic range (up and down shiftion)
		b, c, d,	Preselected gear
2	Left side		For the moment still without function
3	Central and Right side		On the two alphanumerica 16-segment display, the electric control unit issues the actual state of gear and driving direction. Besides, a two digit error code will be indicated via these two segment
4	Spanner	g	Electronic control unit recognized an error, is flashing
5	Letters STOP	h	Immediate stop is required(at the moment not activated)

(2) Abbreviations

OC : Open circuit
SC : Short circuit
OP mode : Operating mode
TCU : Transmission control unit
EEC : Electronic engine controller
PTO : Power take off

2) DO AEB WORK

(1) Start engine after parking the machine on flat floor and blocking wheels.
(2) Release parking brake.
(3) With stepping on the service brake, operate T/M STALL (3 stage).
※ To avoid defect of clutch pack, repeat 10 sec of operation and 10 sec of placing neutral.
(4) When the T/M oil temperature reaches 75~80°C, lock the parking brake and then shift gear to neutral position to keep the machine at LOW RPM.
(5) Connect the AEB STARTER to T/M controller.
(6) Push AEB STARTER over 3 seconds.
(7) Confirm the status of AEB from the DISPLAY.
- Normal operation shows "ST, KR, KV, K1, K2, K3" orderly for 3~5 minutes.
- After the succesful completion, it displays "OK".
- With a new controller, it may display "F6" error code before AEB, it will disappear.

(8) In case of abnormal running, it may display "STOP" with the appropriate error code.
(9) After truobleshooting, start the machine again to repeat above.
※ As the STALL operation has to be done, the SERVICE BRAKE must be locked perfectly to avoid the fatal accident.
※ AEB mode : It controls the disc internal of the transmission, automatically.

3) DISPLAY DURING AEB-MODE

Symbol	Meaning	Remarks
PL	AEB-starter is plugged at the diagnostic plug	
ST	AEB-Starter-button is pressed	
K1.....K3 KV, KR	Calibrating clutch K1...K3, KV or KR resp.	
_and Kx	Wait for start, initialization of clutch Kx, x : 1, 2, 3, V, R	
≡and Kx	Fast fill time determination of clutch Kx	
=and Kx	Compensating pressure determination of clutch Kx	
OK	Calibration for all clutches finished	Transmission stays in neutral, you have to restart the TCU(ignition off/on) after removing AEB-Starter
STOP	AEB canceled(activation stopped)	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
STOP and Kx	AEB stopped, clutch Kx can't be calibrated	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
Spanner and Kx	Kx couldn't be calibrated, AEB finished	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
△E	Engine speed too low → raise enging speed	
▽E	Engine speed too high → lower enging speed	
△T	Transmission oil temperature too low → heat up transmission	
▽T	Transmission oil temperature too high → cool down transmission	
FT	Transmission temperature not in defined range during calibration	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
FB	Operating mode not NORMAL or transmission temperature sensor defective or storing of Calibrated values to EEPROM-has failed.	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
FO	Output speed_not_zero	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
FN	Shift lever not in Neutral position	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
FP	Park brake_not_applied	Transmission stays in neutral, you have to restart the TCU(ignition off/on)
STOP	AEB-Starter was used incorrect or is defective. Wrong device or wrong cable used.	Transmission stays in neutral, you have to restart the TCU(ignition off/on)

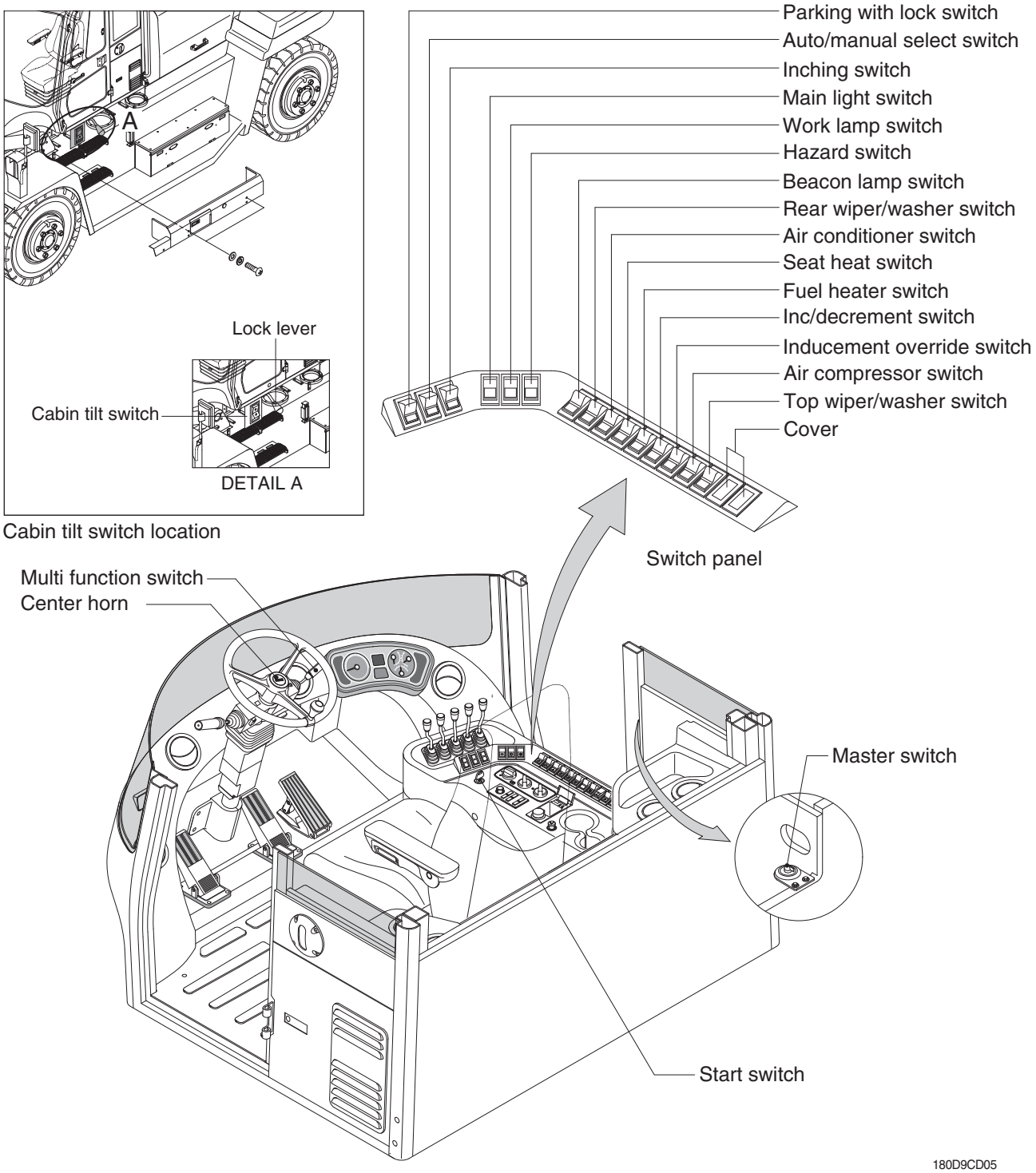
4) INITIALIZING THE INCHING SENSOR

(1) Start engine after parking the machine on flat floor and blocking wheels.
(2) Release parking brake and keep neutral gear shift.
(3) Adjust the inching sensor linkage so that the regular voltage is supplied to inching sensor when operating the pedal.
※ Regular voltage ; Before pedal operation (1±0.1V), After pedal operation (3.5±0.1V).
(4) Stop the engine and then just KEY ON. (Release parking brake, keep neutral gear)
(5) Connect the AEB STARTER to the T/M controller.
(6) Push AEB STARTER over 3 seconds.
(7) If display shows "▼IP", Step on the pedal fully.
(8) If display shows "▲IP", release "OK"
(9) After the successful completion, it displays "OK".
(10) In case of abnormal running, it may display "STOP" with the appropriate error code.
(11) After troubleshooting, start the machine again to repeat above.
※ Above works are to be done with the parking brake released, so machine's wheels must be blocked for safety.

5) DISPLAY DURING INCHPEDAL CALIBRATION

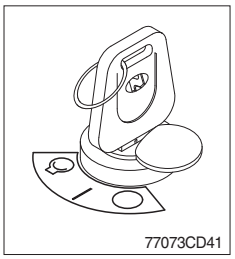
Symbol	Meaning	Remarks
▼IP	Push down the pedal slowly until endposition is reached and hold this position	
▲IP	Release the pedal slowly until endposition is reached	
IP blinkt	A problem occurred, release the pedal slowly until endposition is reached	If the expected endposition could not be reached, release the pedal and try again
OK	Finished inchpedal calibration successful	
FN and Stop	Shift lever not in Neutral position	Calibrations is aborted
FS and Stop	Sensor supply voltage AU1 is out of the specified range	Calibrations is aborted
FO and Stop	Outputspeed_not_zero	Calibrations is aborted
SL and Stop	Sensor voltage below specified range	Calibrations is aborted
SU and Stop	Sensor voltage below specified range	Calibrations is aborted
IL and Stop	Sensor position for released pedal out of specified range	Calibrations is aborted
IU and Stop	Sensor position for released pedal out of specified range	Calibrations is aborted
TO and Stop	Time-out calibration, pedal not moved after calibration start	Calibrations is aborted
DL and Stop	Angle between pedal positions released and pressed to small	Calibrations is aborted
DU and Stop	Angle between pedal positions released and pressed to small	Calibrations is aborted
FI and Stop	Sensor signal 1 and 2 don't match together	Calibrations is aborted

6. SWITCHES



Cabin tilt switch location

1) START SWITCH

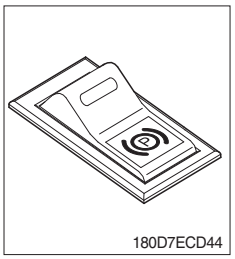


(1) There are three positions, OFF, ON and START.

- ○ (OFF) : None of electrical circuits activate.
- | (ON) : All the systems of truck operate.
- ⏱ (START) : Use when starting the engine.
  Release key immediately after starting.

※ **After engine start, electric circuit of start intercepted. Increase the durability of start motor after engine start, electric circuit of starting intercepted.**

2) PARKING WITH LOCK SWITCH

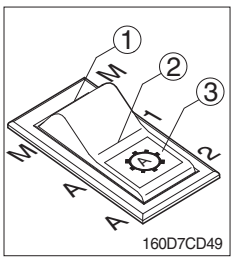


(1) This switch is used to lock or release parking brake of the truck.

(2) If this switch is pressed, the parking brake is applied and the gauge panel warning lamp will comes ON.

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

3) AUTO/MANUAL 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.

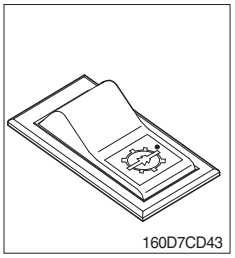
(2) Automatic 1st mode (②)

Place the switch in the middle position for the autoshift function changing from **1st** to **3rd** gear shift mode.

(3) Automatic 2nd mode (③)

Press the bottom of the switch fully for the autoshift function changing from **2nd** to **3rd** gear shift mode.

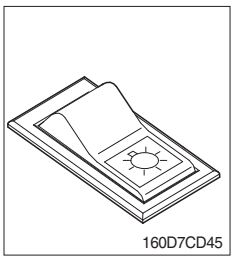
4) INCHING SWITCH



(1) If this switch is pressed, inching operation is applied to inching pedal.

(2) Also, inching lamp on the cluster is illuminated.

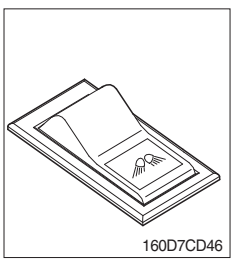
5) MAIN LIGHT SWITCH



(1) This switch is used to operate the clearance lamp and head light by two steps.

- First step : Clearance lamp and cluster illumination lamp comes ON. Also, all of the indicator lamps of switches come ON.
- Second step : Head light comes ON.

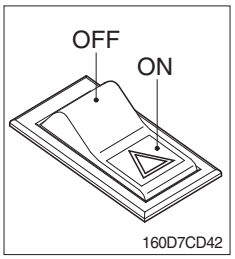
6) WORK LAMP SWITCH



(1) This switch is used to operate the front and rear work lamps by two steps.

- First step : Front work lamp comes ON.
- Second step : Rear work lamp comes ON.

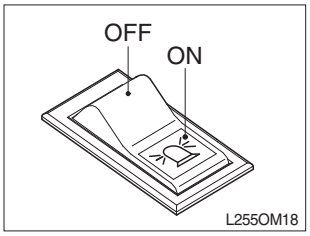
7) HAZARD SWITCH (option)



(1) Use for parking, or loading truck.

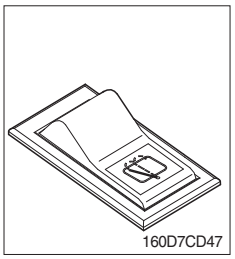
※ **If the switch is left ON for a long time, the battery may be discharged.**

8) BEACON SWITCH (option)



(1) This switch turn ON the rotary light.

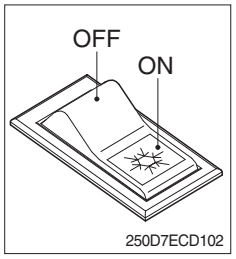
9) REAR WIPER AND WASHER SWITCH



(1) This switch is used to operate the rear wiper and washer by two steps.

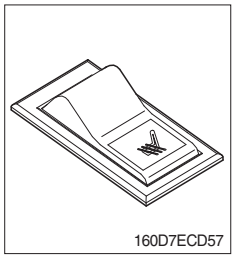
- First step : The rear wiper operates.
- Second step : The washer liquid is sprayed and the rear wiper is operated only while pressing. If release the switch, return to the first step position.

10) AIR CONDITIONER SWITCH



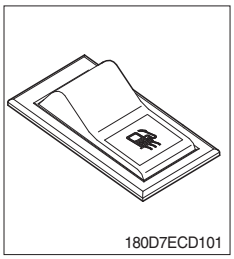
(1) This switch is used to turns ON or OFF the air conditioner.

11) SEAT HEAT SWITCH (option)



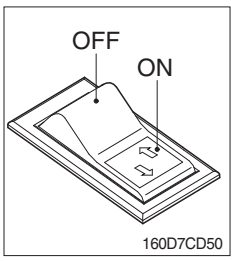
(1) This switch is used to heat the seat.

12) FUEL HEATER SWITCH



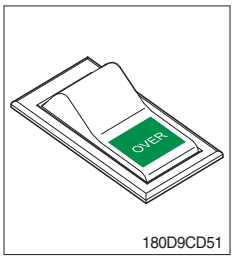
(1) This switch is used for the fuel heater of the pre-heater assy.

13) INC/DECREMENT SWITCH



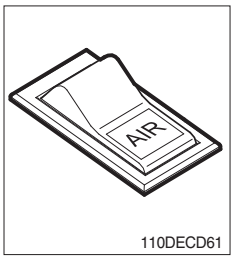
(1) When engine running, the low rpm of engine increase or decrease by 25 rpm by operating this switch.
(2) Engine low rpm returns to normal value when engine restarted.

14) INDUCEMENT OVERRIDE SWITCH



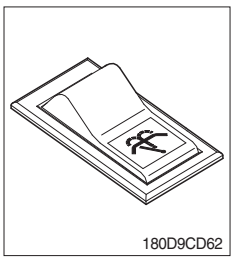
(1) If an emission-related malfunction of the exhaust gas aftertreatment system or DEF/AdBlue® supply is detected, this will lead to operating restrictions (engine torque and engine speed limitation)
(2) In emergencies, this switch can be operated to override the operating restriction. This means that full engine power is available for a minimum of 30 minutes. this emergency function by operating the switch can be activated a maximum of three times.

15) AIR COMPRESSOR SWITCH (option)



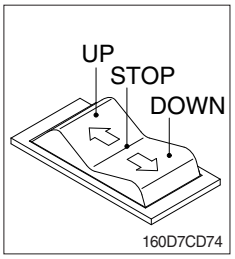
(1) This switch is used to operate air compressor.

16) TOP WIPER/WASHER SWITCH



(1) This switch is used to operate top wiper.

17) CABIN TILT SWITCH



(1) Tilting UP cabin

Press the top of the switch fully to tilt the cabin upward.

(2) STOP the tilting operation (Default)

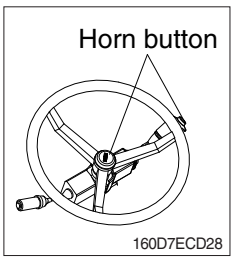
Release the switch to stop the tilting operation.

(3) Tilting DOWN cabin

Press the bottom of the switch fully to tilt the cabin downward.

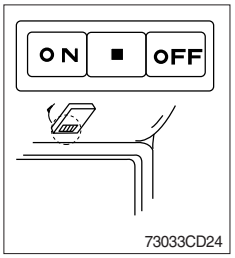
※ Refer to page 7-15 for cabin tilting procedure.

18) HORN BUTTON



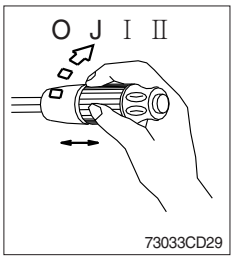
(1) If you press the button on the top of the multifunction switch and the center of the steering wheel, the horn will sound.

19) CAB LAMP SWITCH



(1) This switch turns ON the cab room lamp.

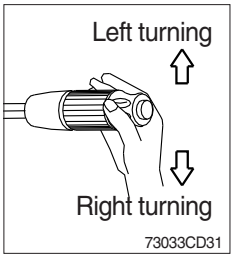
20) MULTI FUNCTION SWITCH



(1) Front wiper and washer switch

① When the switch is in **J** position, the wiper moves intermittently.
② When placed in Ⅰ or Ⅱ position, the wiper moves continuously.
③ If you push the grip of the lever, washer liquid will be sprayed and the wiper will be activated 2-3 times.

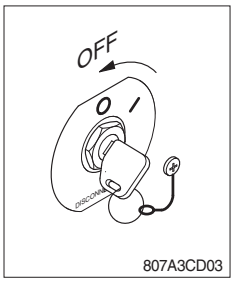
※ Check the quantity of washer liquid in the tank. If the level of the washer liquid is LOW, add the washer liquid (In cold, winter days) or water. The capacity of the tank is 1 liter.



(2) Turning switch

① This switch is used to warn or signal the turning direction of the truck to other vehicles or equipment.
② Push the lever up for turning left, pull the lever down for turning right.

21) MASTER SWITCH

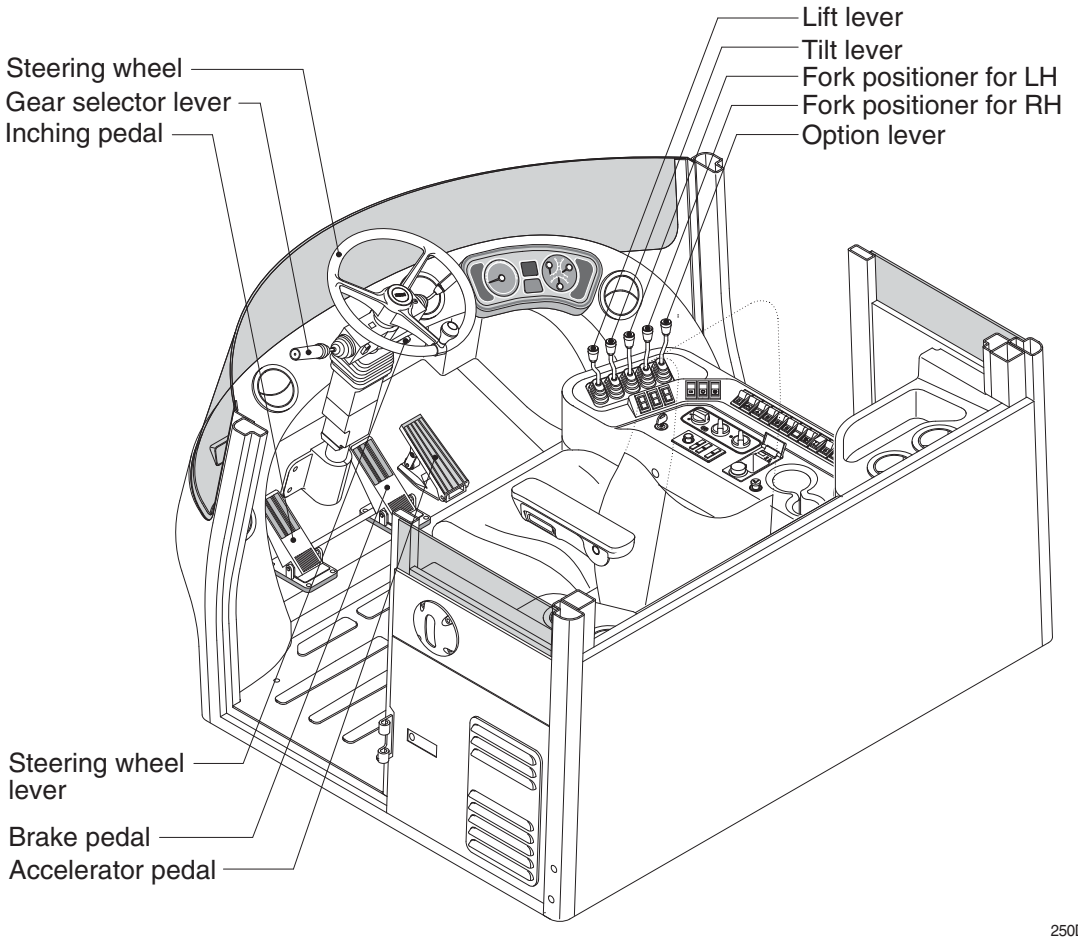


(1) This switch is used to shut off the entire electrical system.
When the machine is not operated for a long time, turn OFF the master switch for the safety purpose.

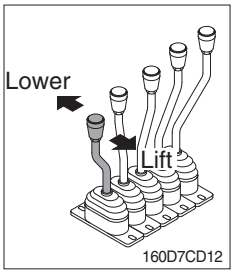
(2) I : The battery remains connected to the electrical system.
O : The battery is disconnected to the electrical system.

※ **Never turn the master switch to OFF with the engine running. Engine and electrical system damage could result.**

7. CONTROL DEVICE



1) LIFT LEVER



(1) LIFT

PULL the lever BACK to LIFT the forks.

(2) LOWER

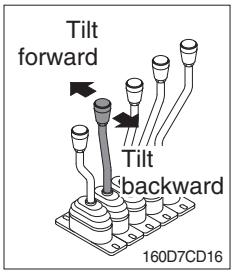
PUSH the lever FORWARD to LOWER the load.

(3) HOLDING

When the lever is released, the lifting or lowering action stops.

※ **Lifting speed is controlled by accelerator pedal. Lowering speed is controlled by lever only.**

2) TILT LEVER



(1) TILT FORWARD

PUSH the lever FORWARD to tilt mast FORWARD.

(2) TILT BACKWARD

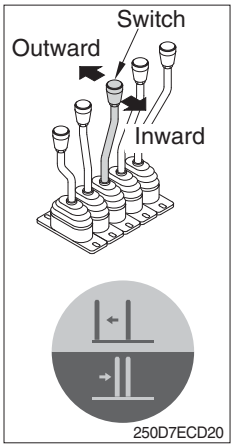
PULL the lever BACK to tilt mast BACKWARD.

(3) HOLDING

When the lever is released, tilting action stops.

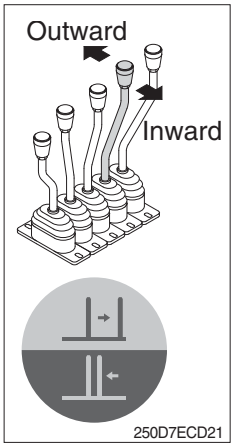
※ **Forward and backward tilting speeds are controlled by tilt lever and accelerator pedal.**

3) FORK POSITIONER



① LH FORK MOVEMENT

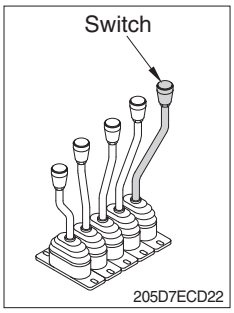
- Push the lever forward to move outward for the LH fork.
- Pull the lever backward to move inward for the LH fork.
- In case of switch operation, this lever becomes side shift which is actually performed by both fork movement.



② RH FORK MOVEMENT

- Push the lever forward to move outward for the RH fork.
- Pull the lever backward to move inward for the RH fork.

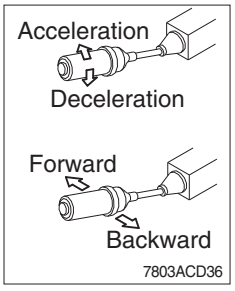
4) OPTION LEVER



OPTIONAL ATTACHMENT MOVEMENT

- Push and pull the lever for optional operation operates.
- In case of switch operation, this lever operates one more attachment.

5) GEAR SELECTOR LEVER



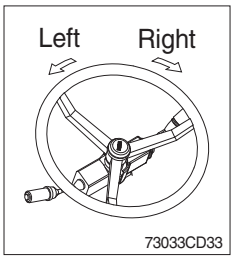
(1) This lever is used for gear selection, forward 3 stages and reverse 3 stages.

(2) If you push the gear selector lever, the truck moves forward, but pulling the gear selector lever, the truck moves backward.

(3) If you turn the gear selector lever forward, the truck increases the speed, but if you turn the gear selector lever backward, the truck reduces the speed.

※ **Auto parking function : Parking operated automatically to increase the safety of vehicle when transmission gear is neutral and user leaves seat.**

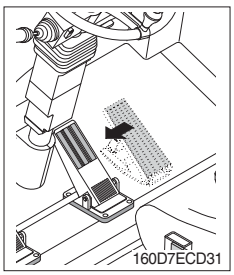
6) STEERING WHEEL



(1) A steering cylinder in the center of the steering axle will operate the steering function.

(2) Turning the steering wheel left, the truck moves to the left side and turning it right, the truck moves to the right side.

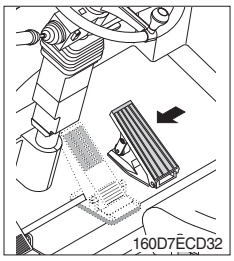
7) BRAKE PEDAL



(1) If the pedal is pushed, braking force is generated and bring the truck to a stop.

※ **Do not operate the truck with stepping on the brake pedal unnecessarily, or bring premature wear of brake disc.**

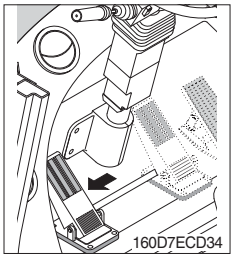
8) ACCELERATOR PEDAL



(1) This pedal controls the engine speed. The engine speed will increase in proportion to the degree of force applied to this pedal.

(2) Unless this pedal is pressed, the truck will run at low idling.

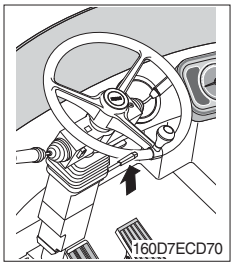
9) INCHING PEDAL

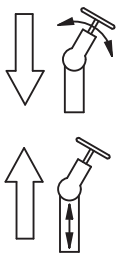


(1) Inching pedal is used for fine control of forward and reverse movement when lifting up or putting down loads.

※ **Do not put your foot on the inching pedal or brake pedal unless using it.**

10) STEERING WHEEL LEVER



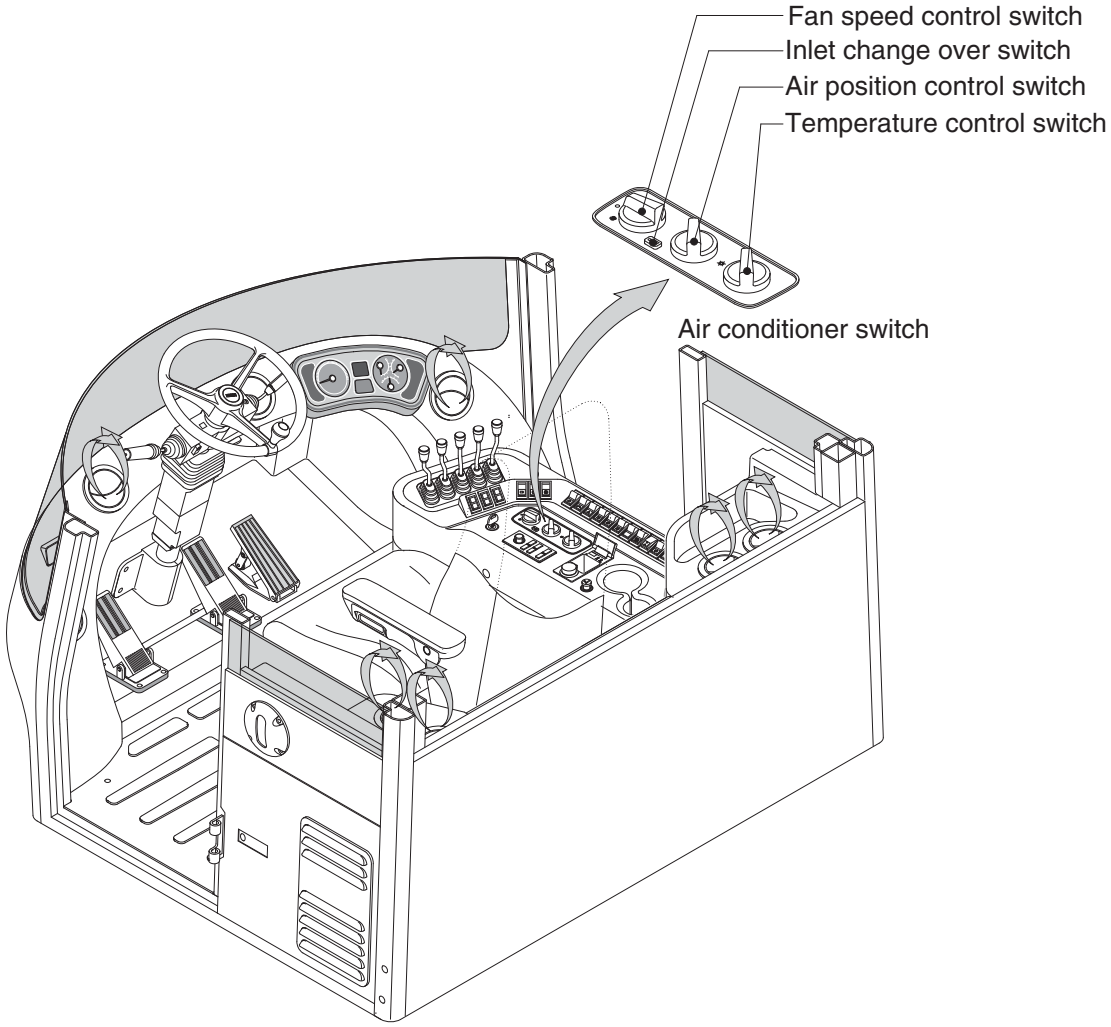


(1) By pulling down the lever, the wheel is adjustable to tilt.

(2) By pulling up the lever, the wheel is adjustable to telescope.

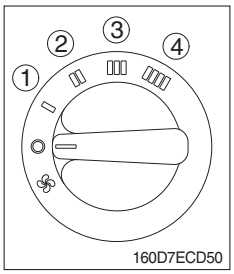
8. AIR CONDITIONER AND HEATER

Air conditioner and heater are equipped for pleasant operation against outside temperature and defrost on window glass.



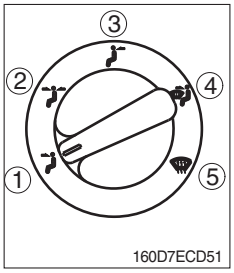
250D9CD90

1) FAN SPEED CONTROL SWITCH



(1) It is possible to control the fan speed to four steps.

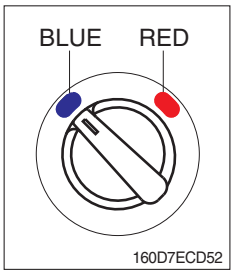
2) AIR POSITION CONTROL SWITCH



(1) This switch regulates the air position.

① Front
② Front & rear
③ Rear
④ Front & defrost
⑤ Defrost

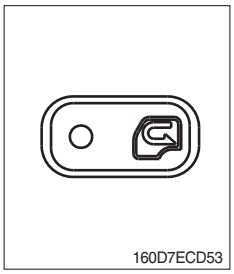
3) TEMPERATURE CONTROL SWITCH



(1) This switch regulates the temperature of air.

- Right side (red zone) : Heat up air temperature
- Left side (blue zone) : Cool down air temperature

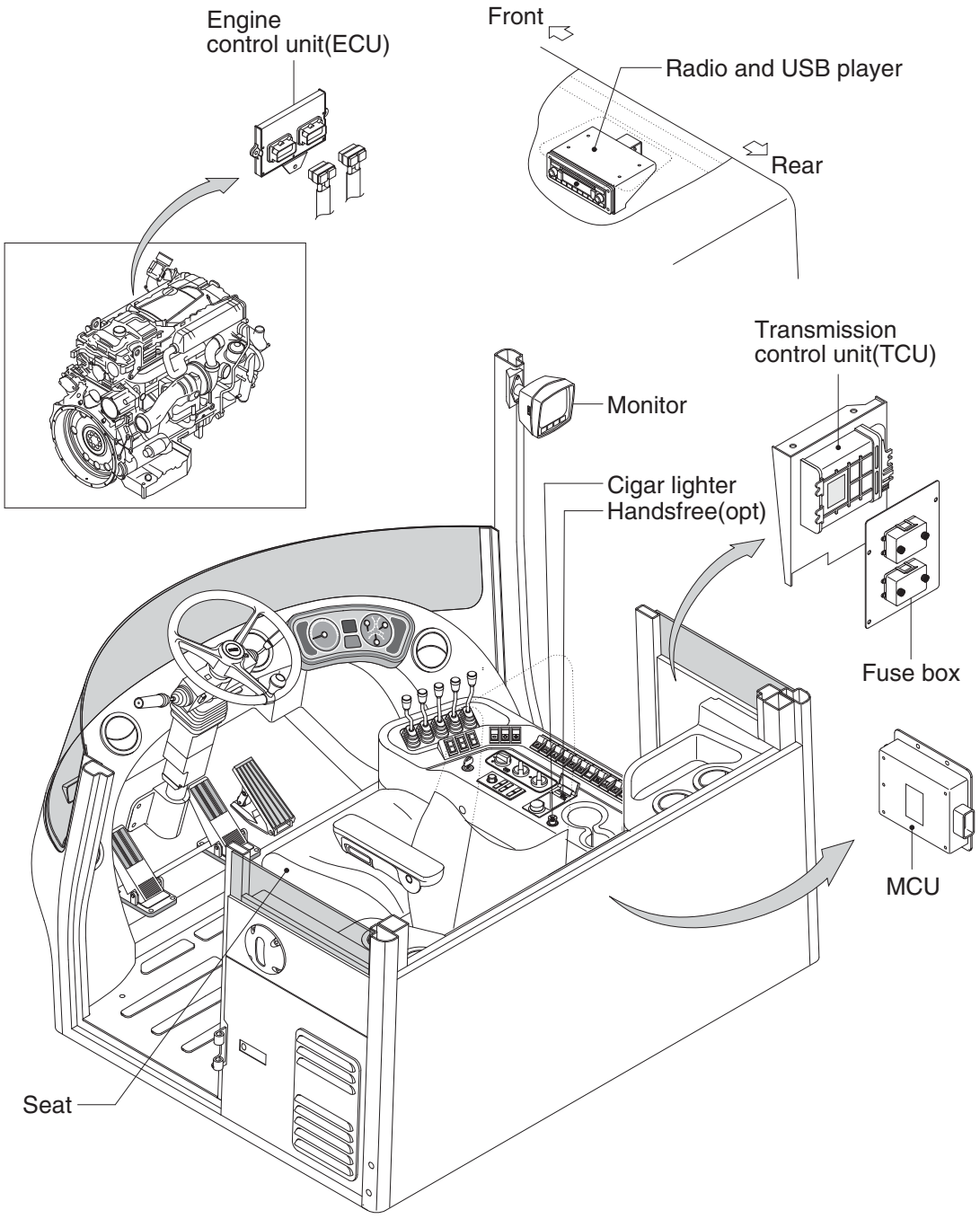
4) INLET CHANGE OVER SWITCH



(1) If this switch is pressed, air from the outside is inhaled

(2) If this switch is not pressed, air in the cab is recirculated.

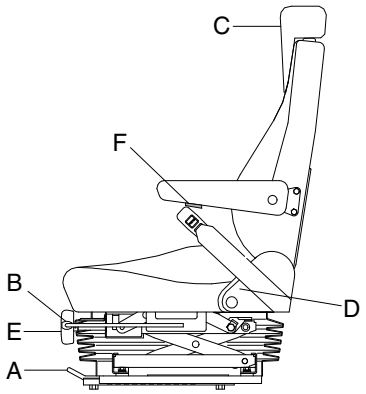
9. OTHERS



180D9CD09

1) 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.



180D7ECD50

(1) Forward/Backward adjustment

Pull lever (A) to adjust seat forward or backward.

(2) Upward/Downward adjustment

Push or pull the height adjust lever (B) to adjust seat upward or downward.

(3) Reclining adjustment

Pull lever (D) to adjust seat back rest.

(4) Arm rest adjustment

This can be adjusted by turning the handle (F) to right and left.

(5) Cushion adjustment (E)

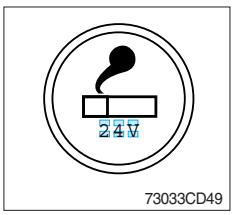
Adjusting handle to the operator's weight.

(6) Shoulder rest (C)

The shoulder rest can be adjust to upside.

※ **Refer to page 5-8 for the details.**

2) CIGAR LIGHTER



73033CD49

(1) This can be used when the engine starting switch is ON.

(2) The lighter can be used when it springs out in a short while after being pressed down.

※ **Service socket**

Use cigar lighter socket when you need emergency power.
Do not use the lighter exceeding 24V, 100W.

3) FUSE BOX

(1) The fuses protect the electrical parts and wiring from burning out.

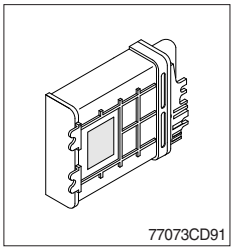
(2) The fuse box cover indicates the capacity of each fuse and circuit it protects.

※ **Replace a fuse with another of the same capacity.**

⚠ **Before replacing a fuse, be sure to turn OFF the starting switch.**

※ **Refer to 7-45.**

4) TRANSMISSION CONTROL UNIT (TCU)



77073CD91

(1) The control unit is shifting the required speeds fully-automatically under consideration of the following criteria.

- Gear selector lever position
- Driving speed
- Load level

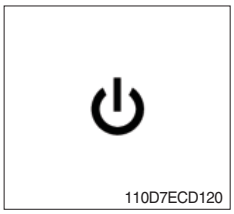
7) MONITOR

· Adjusting the angle

Upwards and downwards up to 7°, total 14°. Swivels left and right up to 15°, total 30°.

250D7ECD100

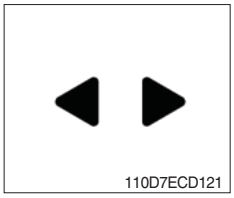
(1) Power button



① To turn the power off or on.

② To switch the monitor on or off, press and hold the power button for two second.

(2) Left / right selection button



① Select button allow you to select various monitor options and to input passwords.

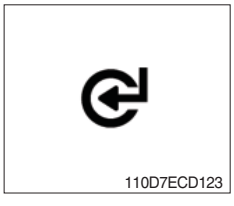
(3) Camera / ESC button

① To enter camera screen, press the Camera/ESC button at the menu selection screen.

② To return to the menu selection screen, press the Camera/ESC button on the camera screen.

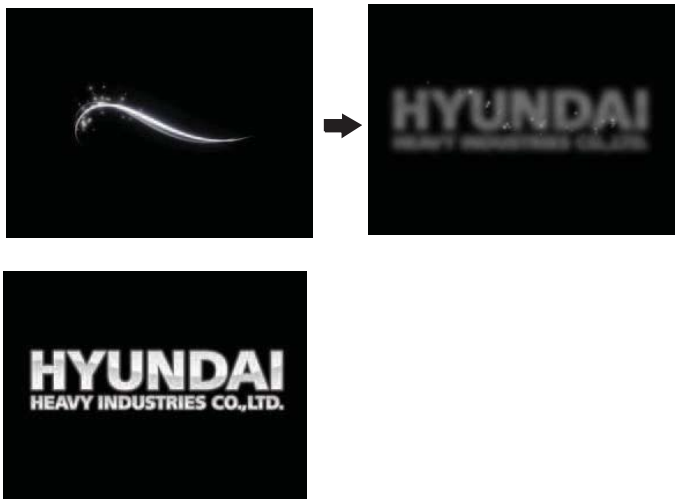
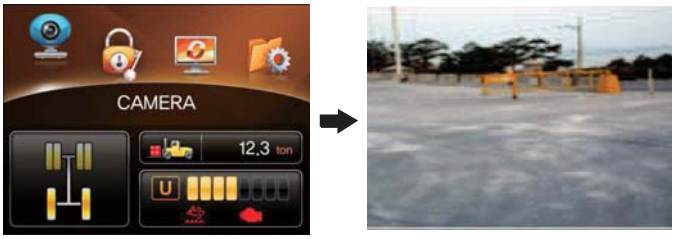
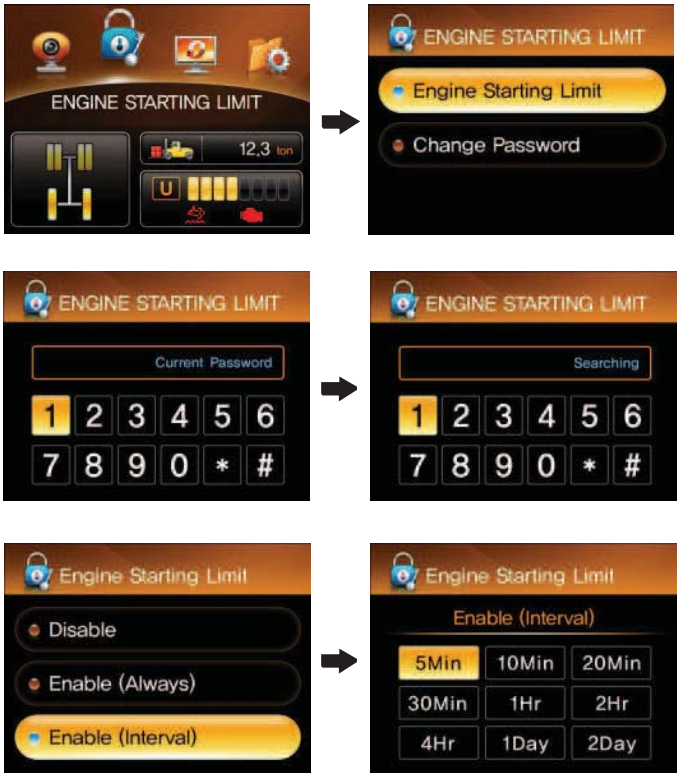
③ To cancel menu selection or escape from the menu, press the Camera/ESC button.

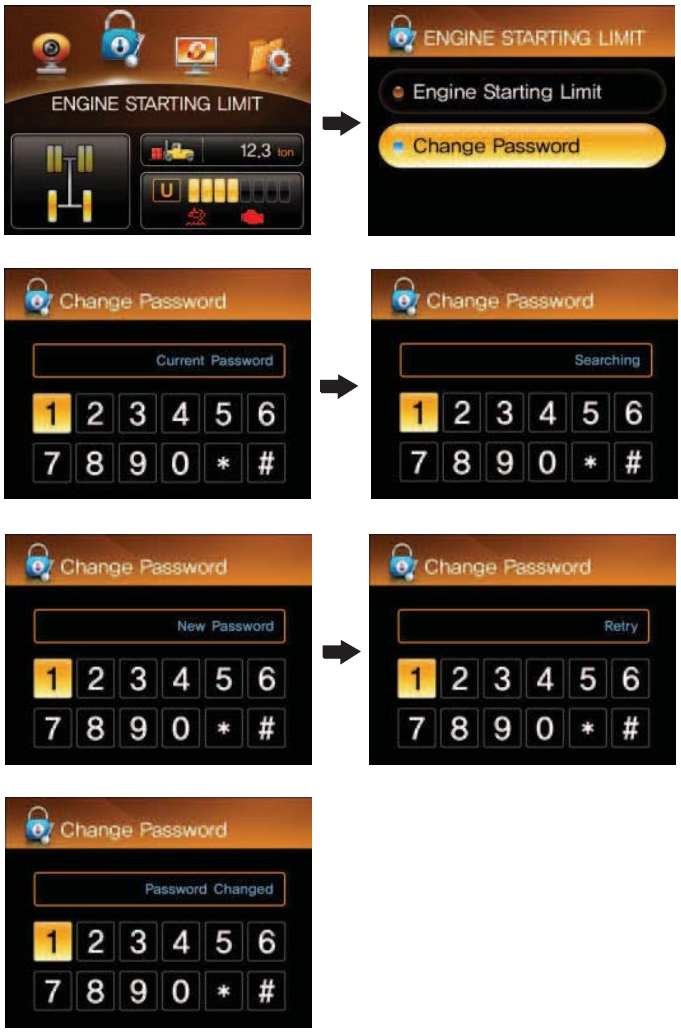
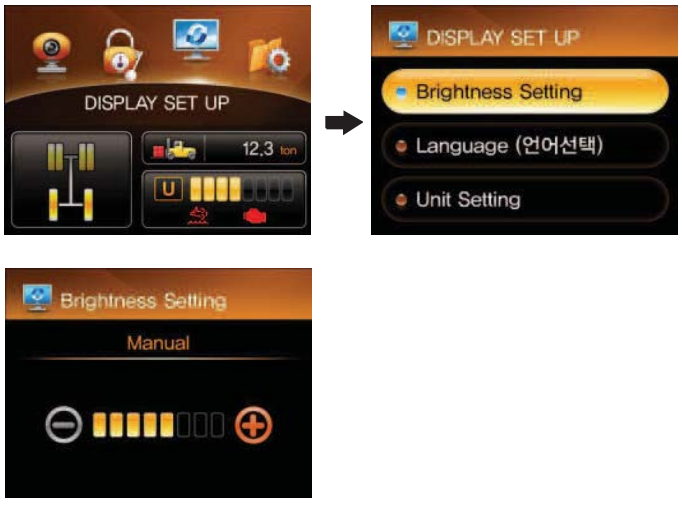
(4) Enter button

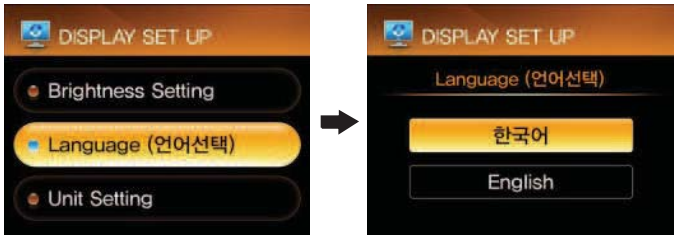
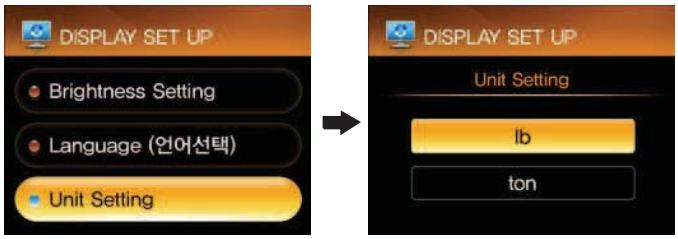
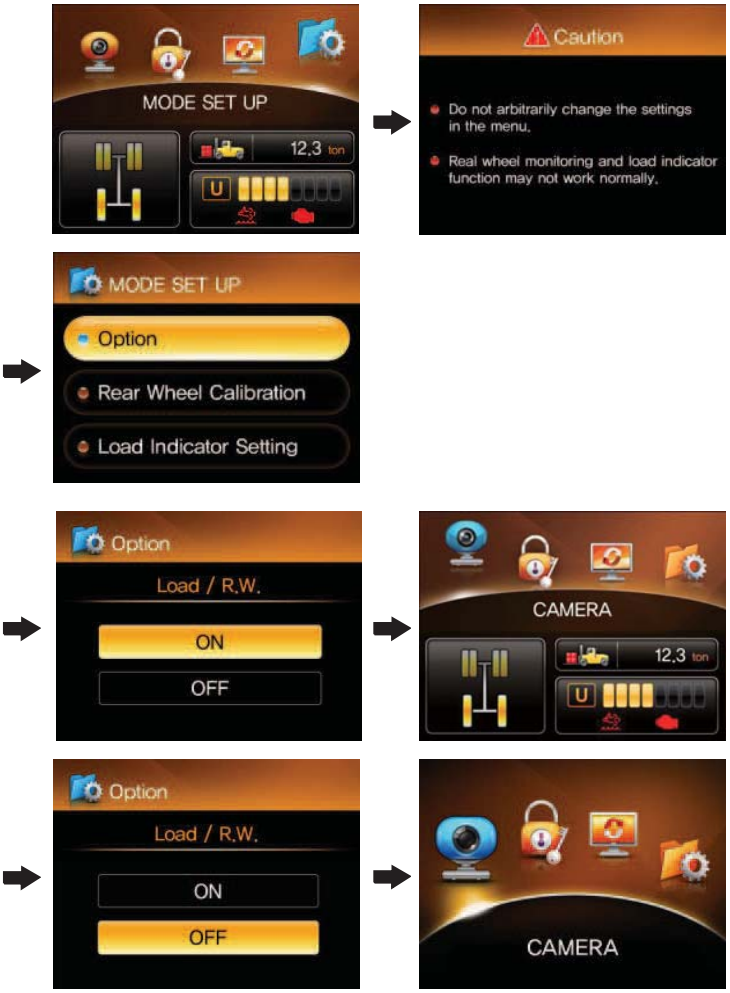


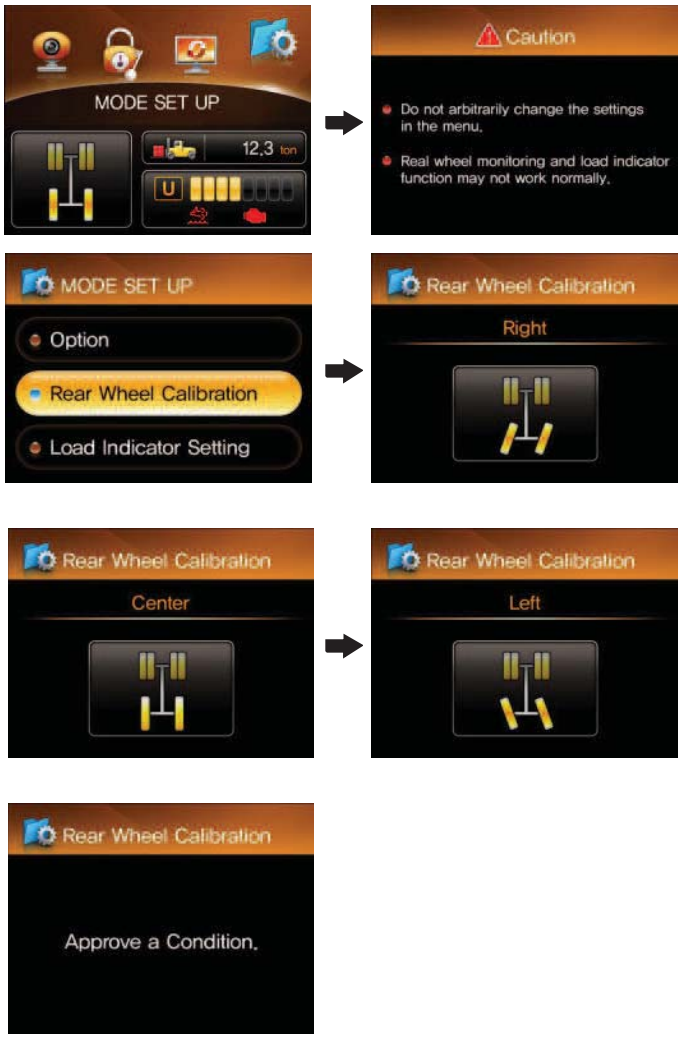
① To choose the option, press the enter button.

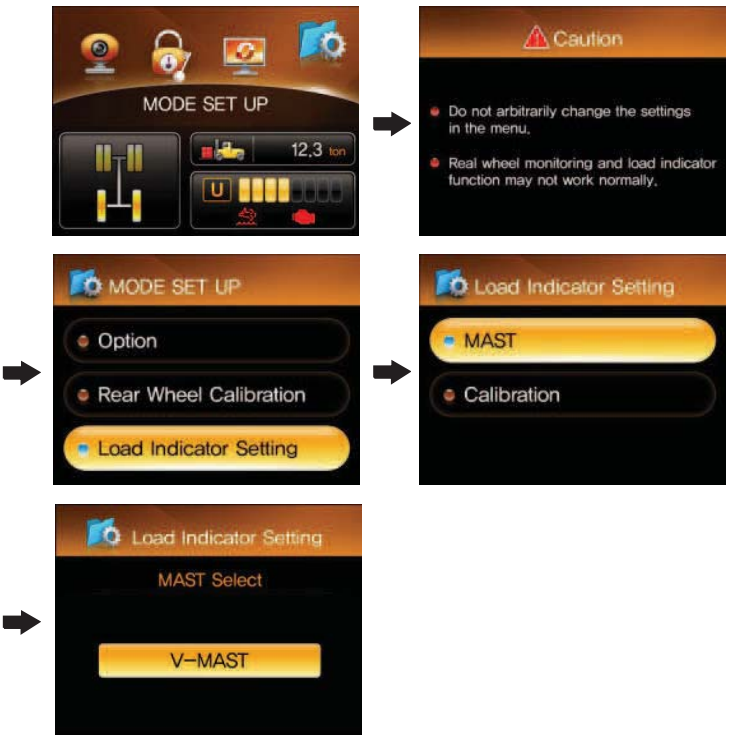
(5) LCD

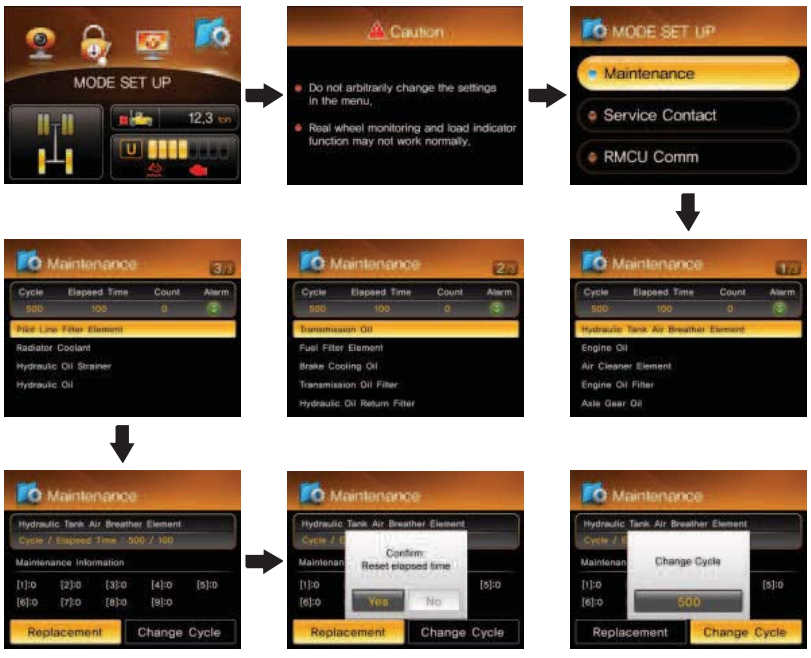
No	Name	Description
1	**Starting animation** 	
2	**Camera selection** 	To enter camera screen, press the ↵ or ESC button. To return to menu selection screen, press ESC button.
3	**ESL (Engine Starting Limit) screen** 	The password must be 5~10 digits long. After input password, you must input ✻ . ※ Default password : '0000000000'(digit '0', 10 times)

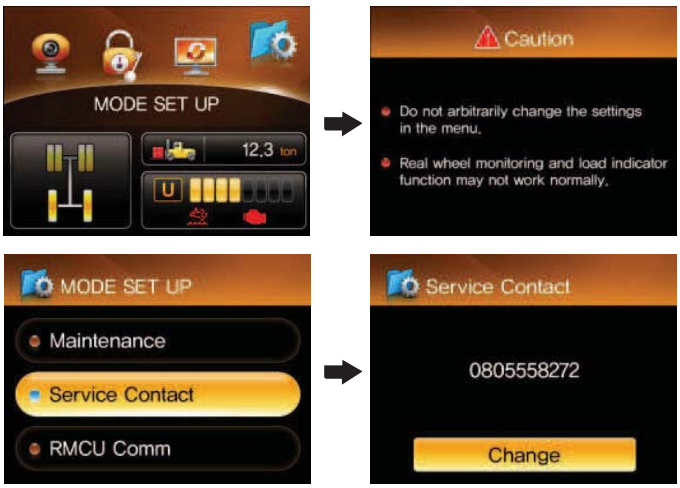
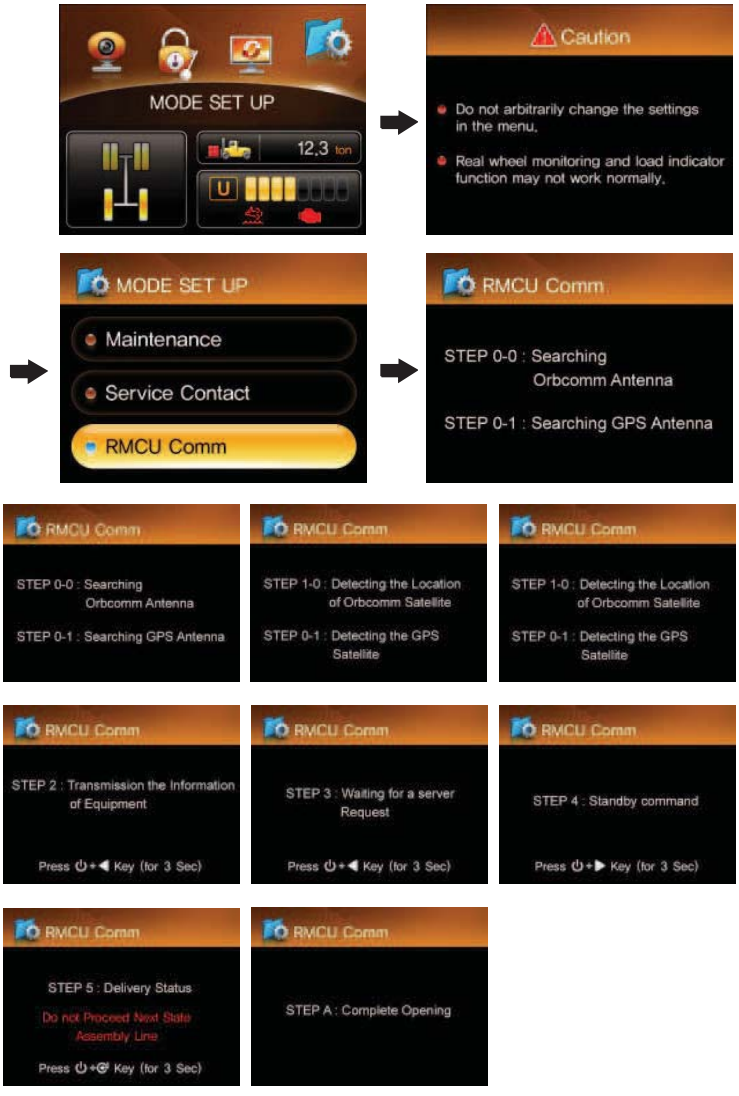
No	Name	Description
4	**Changing password** 	The password must be 5~10 digits long. After input password, you must input ✻ . ※ Default password : '0000000000'(digit '0', 10 times)
5	**Display set up screen** 	1) LCD brightness To adjust to display brightness, press ◀ or ▶ to decrease or increase.

No	Name	Description
5	**Display set up screen**  	2) Language selection Set a Korean or English.
	 	3) Unit setting Set a unit load indicator.
6	**Mode set up screen**  	1) Select on option Forklift change the main screen

No	Name	Description
6	**Mode set up screen** 	2) Rear wheel calibration The user revises a forklift truck streeing angle. ※ Right set rear wheel calibration ➡ To the left as possible to steer wheel (steer wheel LEFT) ➡ ※ Center set rear wheel calibration ➡ To the center as possible to steer wheel (steer wheel CENTER) ➡ ※ Left set rear wheel calibration ➡ To the right as possible to steer wheel (steer wheel RIGHT) ➡

No	Name	Description
6	**Mode set up screen**  **Equipment model selection varies depending on the mast** 180D-9 | V-MAST | - | -	3) Load indicator setting MAST Select

No	Name	Description
6	**Mode set up screen**  	4) Load indicator setting **Calibration** Correct a fork-lift load indicator After input passwords, you must input *. ※ **Define password is : "00008282"** ※ Tare ➡ In the unloaded from the ground waiting 8 seconds after lift 30 ㎝ ➡ Tare ON ➡  ※ Weight correction ➡ Input a password ➡ Loaded enter the weight. (Input ton) ➡ In the loaded from the ground waiting 5 seconds after lift 30 ㎝ ➡ Weight correction ON ➡ 
	 	5) Maintenance Change the replacement cycle of expandable supplies. Using ◀ ▶ button for changing the replacement cycle.

No	Name	Description
6	**Mode set up screen** 	6) Service Contact Check and change of contact information for customer service.
		7) RMCU Communication

No	Problem	Possible causes/consequences and ▶ Solutions
7	**Warning lamp**   LIM : Engine limit lamp : DEF lamp  : DEF gauge	
	The lights up.	An emissions-relevant malfunction in the exhaust gas aftertreatment system or in the DEF / AdBlue® supply has been detected. ▶ Top up the DEF / AdBlue® tank immediately. ▶ If this does not help : have the exhaust gas aftertreatment system checked at a qualified specialist workshop. Have the malfunction rectified immediately. If you do not, engine output may be reduced and engine speed may be limited. If there are no malfunctions, the indicator lamp only goes out after further test routines. The system check may involve several engine starts, several hours or several journeys without a malfunction.
	The lamp is flashing and LIM lamp lights up.	You have not rectified an emissions-relevant malfunction that has been detected in the exhaust gas aftertreatment system or in the DEF / AdBlue® supply. Reduced engine output is active. The engine torque is limited to a maximum of 75% across the whole engine speed range. The limitation will take effect the next time the engine is started. ▶ Adapt your driving/operating style. ▶ Top up the DEF / AdBlue® tank immediately. ▶ If this does not help : have the malfunction rectified at a qualified specialist workshop. If you do not follow the instructions, engine speed may be limited.
	The and LIM lamps are flashing.	You have not rectified an emissions-relevant malfunction that has been detected in the exhaust gas aftertreatment system or in the DEF / AdBlue® supply. Reduced engine output and engine speed limitation are active. The engine torque is limited to a maximum of 50% across the whole engine speed range. The engine speed is limited to a maximum of 60%. The limitation will take effect by means of a ramp function. ▶ Adapt your driving/operating style. ▶ Top up the DEF / AdBlue® tank immediately. ▶ If this does not help : have the malfunction rectified at a qualified specialist workshop. If you do not follow the instructions, further engine speed limitation may be imposed.

No	Problem	Possible causes/consequences and ▶ Solutions
7	The and LIM indicator lamps are flashing STOP ENGINE and lights up.	You have not rectified an emissions-relevant malfunction that has been detected in the exhaust gas aftertreatment system or in the DEF / AdBlue® supply. Reduced engine output and engine speed limitation are active. The engine torque is limited to a maximum of 20% across the whole engine speed range. The engine speed is limited to idling speed. ▶ Adapt your driving/operating style. ▶ Top up the DEF / AdBlue® tank immediately. ▶ If this does not help : have the malfunction rectified at a qualified specialist workshop.
	The , LIM and STOP ENGINE indicator lamps are flashing.	You have not rectified an emissions-relevant malfunction that has been detected in the exhaust gas aftertreatment system or in the DEF / AdBlue® supply. Reduced engine output and engine speed limitation are active. The engine torque is limited to a maximum of 20% across the whole engine speed range. The engine speed is limited to idling speed. ▶ Stop the vehicle/equipment, paying attention to road and traffic conditions. ▶ Have the malfunction rectified at a specialist workshop.

No	Name	Description
8	**Ending animation**