1. GENERAL LOCATIONS

180D9OM54

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

2. DATA/SAFETY PLATE AND DECAL

1) TRUCK DATA AND CAPACITY PLATE

80D9OM56

(1) Truck model number or registered name

(2) Truck type

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
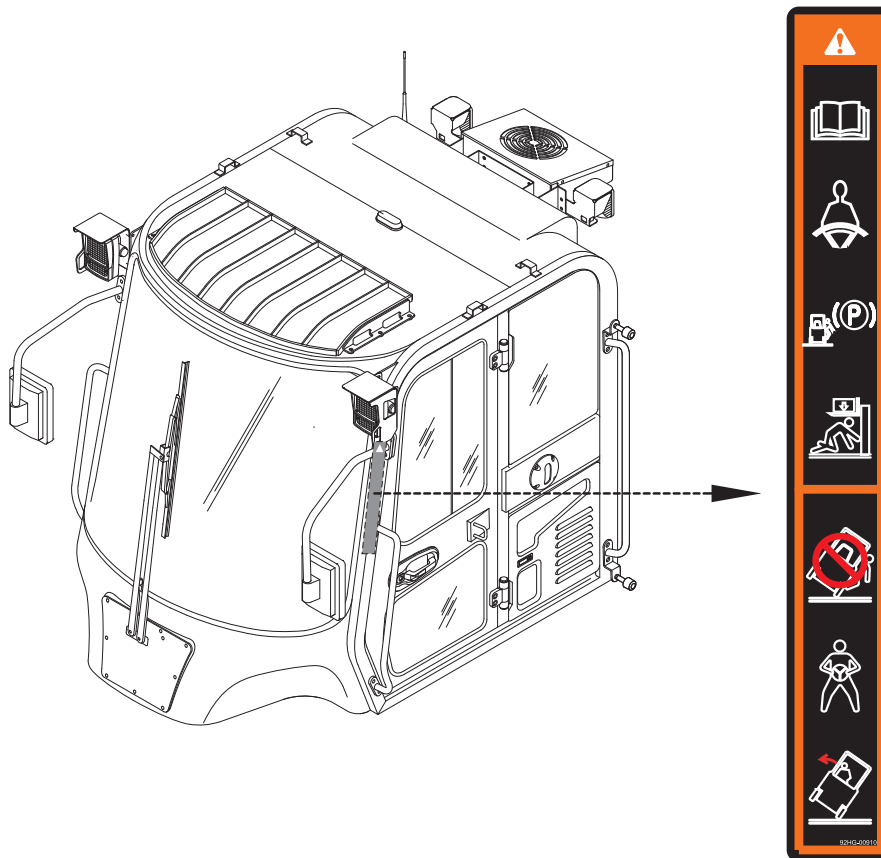
110D9OM59

⚠ 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 0-6 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.
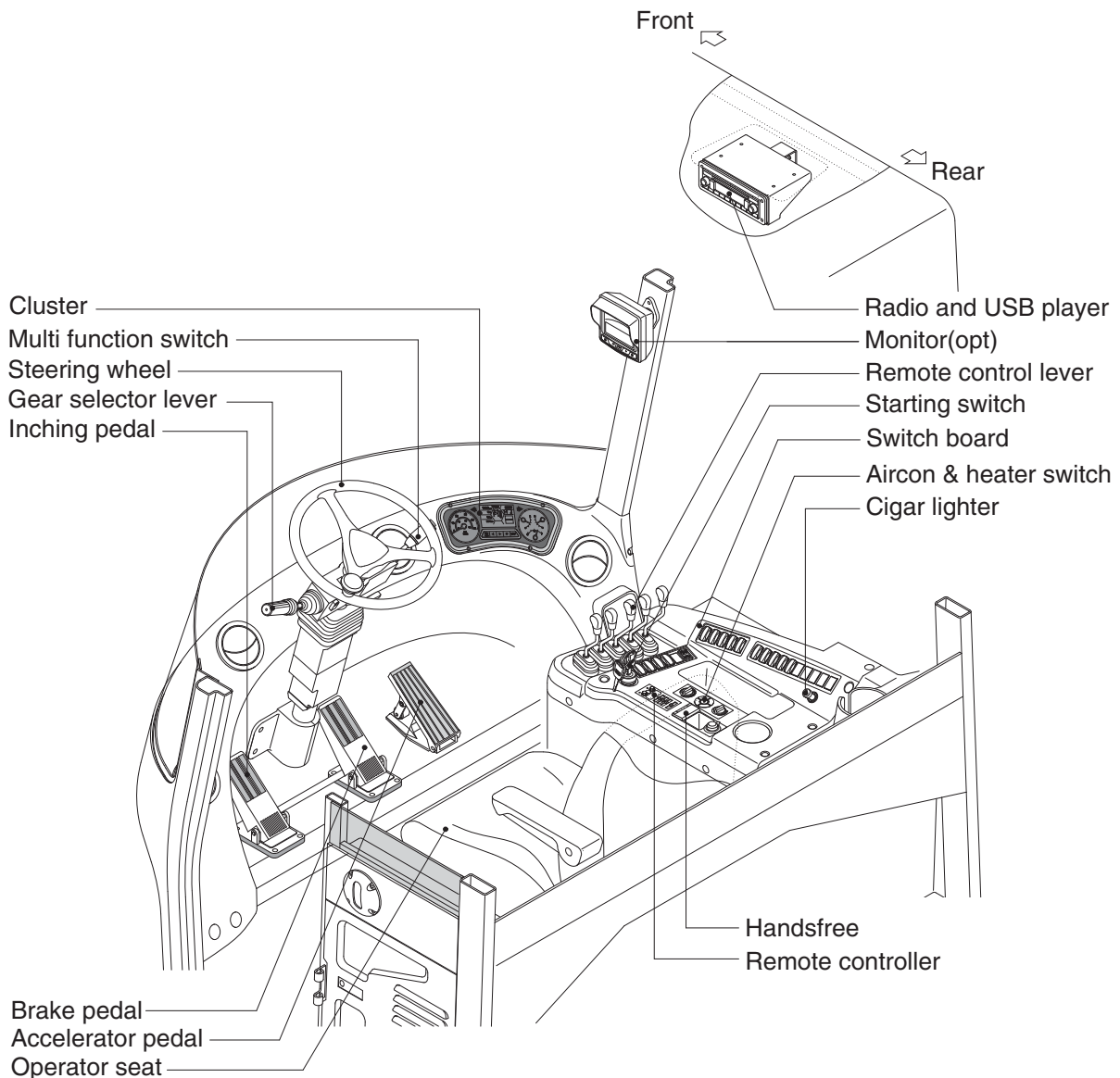Lift trucks can be tipped over if operated improperly. Experience with lift truck accidents has shown that the driver cannot react quickly enough to jump clear of the truck and cabin as the truck tips. To protect operators from severe injury or death in the event of a tip over, it is best to be held securely in the seat. So, please, always buckle up when driving your lift truck.

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.

Front

Rear

Cluster
Multi function switch
Steering wheel
Gear selector lever
Inching pedal

Radio and USB player
Monitor(opt)
Remote control lever
Starting switch
Switch board
Aircon & heater switch
Cigar lighter

Handsfree
Remote controller

Brake pedal
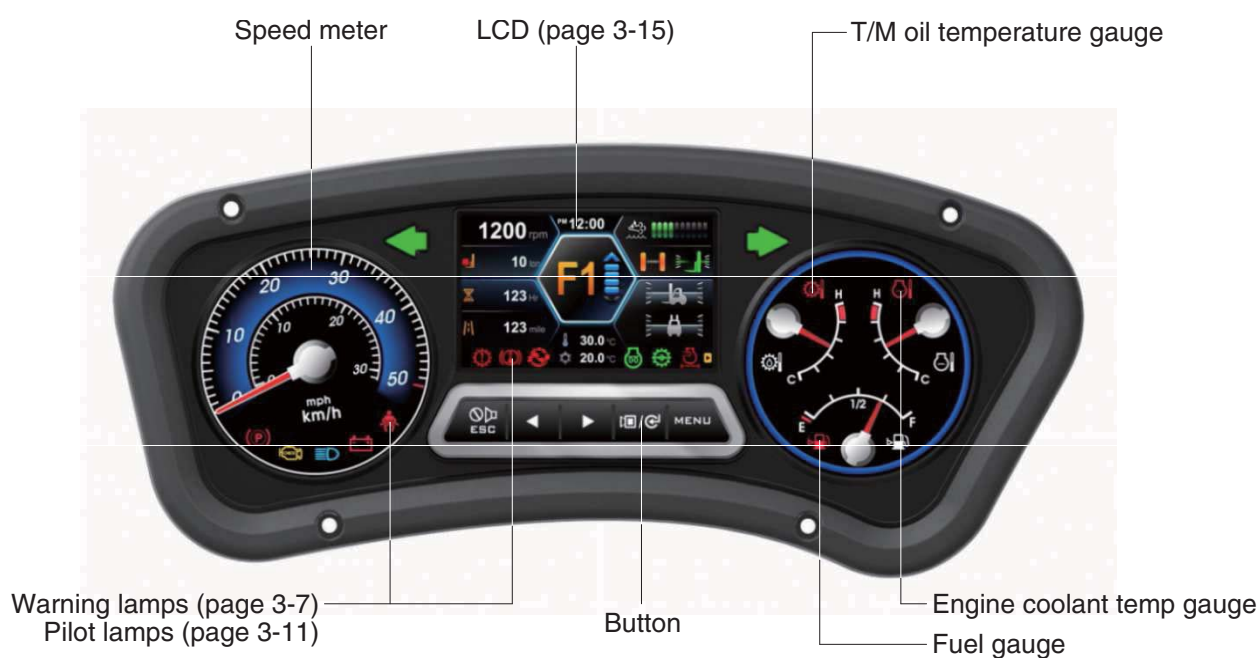Accelerator pedal
Operator seat

110D9CD01

4. CLUSTER

1) STRUCTURE

The cluster consists of gauges, lamps, buttons and LCD 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 lamps : Indicate abnormality of the truck.
- ・ Pilot lamps : Indicate operating status of the truck.
- ・ LCD : Display the truck model, error code and engine speed etc.
- ・ Buttons : Select the truck model, error code and engine speed etc and stop the buzzer sound.

※ **The cluster 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 cluster provides a warning immediately check the problem, and perform the required action.**

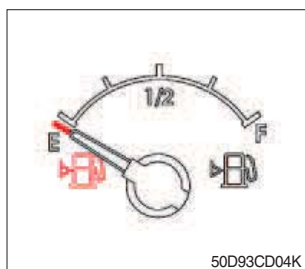Speed meter   LCD (page 3-15)   T/M oil temperature gauge

Warning lamps (page 3-7)
Pilot lamps (page 3-11)

Button

Engine coolant temp gauge
Fuel gauge

180D9CD03

2) GAUGE

(1) Speed meter

① The speed meter displays the speed of truck in mph and km/h.
 - 0~50 km/h
  - 0~31 mph

50D93CD03K

(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.**
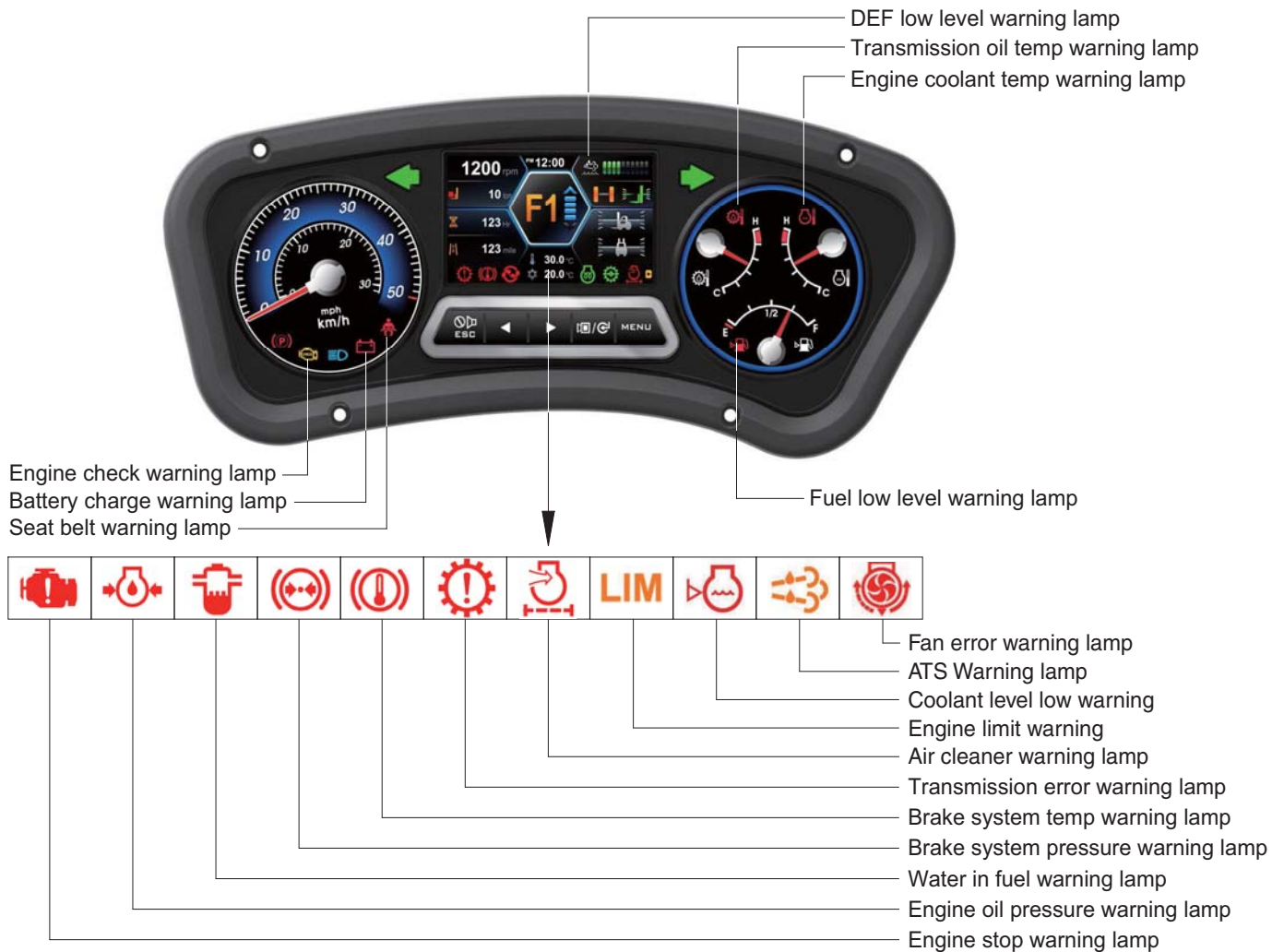
50D93CD04K

(3) Engine coolant temperature gauge

① This indicates the temperature of coolant.
  · White range : 40~115 ˚C (104~239 ˚F)
  · Red range : Above 115 ˚C (239 ˚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 and check the radiator and engine.

※ **If the gauge indicates red range 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.**

50D93CD10K

(4) Transmission oil temperature gauge
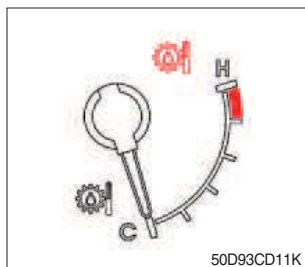
① This range indicates the temperature of transmission oil.
  · White range : 40~107 ˚C (104~225 ˚F)
  · Red range : Above 107 ˚C (225 ˚F)

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.

50D93CD11K

3) WARNING LAMPS

DEF low level warning lamp
Transmission oil temp warning lamp
Engine coolant temp warning lamp

Engine check warning lamp
Battery charge warning lamp
Seat belt warning lamp

Fuel low level warning lamp

Fan error warning lamp
ATS Warning lamp
Coolant level low warning
Engine limit warning
Air cleaner warning lamp
Transmission error warning lamp
Brake system temp warning lamp
Brake system pressure warning lamp
Water in fuel warning lamp
Engine oil pressure warning lamp
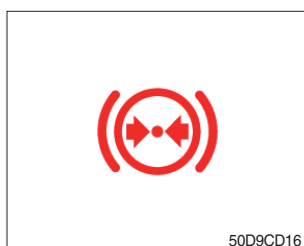Engine stop warning lamp

180D9CD03-1

※ When the warning and pilot lamps are illuminated more than display, you can display next lamps by push the button (▶).

(1) Engine check warning lamp

50D9CD904

① This lamp lights ON during a nonfatal engine system error.

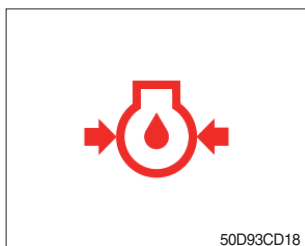② The engine can still be run, but the fault should be corrected as soon as possible.

(2) Brake fail warning lamp

50D9CD16

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

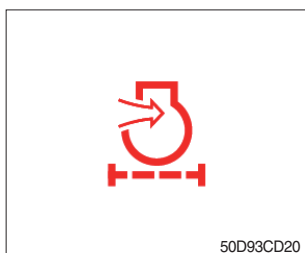② When the lamp is ON, stop the engine and check for its cause.

※ Do not operate until the problems are corrected.

3-7

(3) 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.

50D93CD18

(4) 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.

50D93CD20

(5) Battery charging warning lamp
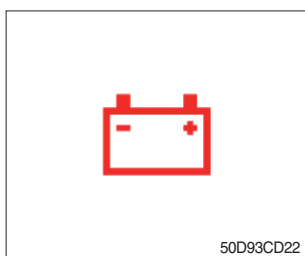
① This lamp is ON after key switch is turned ON, it is turned OFF after starting the engine.

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

50D93CD22

(6) Fuel low level warning lamp
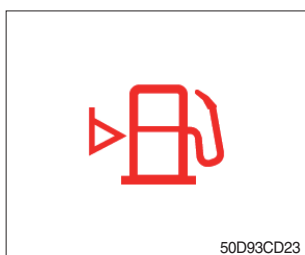
① Fill the fuel immediately when the lamp is turned ON.

50D93CD23

(7) Water in fuel warning lamp

① This lamp lights up when the prefilter is filled with water or malfunctioning.

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

50D93CD15

(8) Seat belt warning lamp

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

50D93CD24

(9) Engine coolant temperature warning lamp

① This lamp is turned ON when the temperature of cooling water is over the normal temperature (115 °C, 239 °F).
② Check the cooling system when the lamp is ON.

50D93CD17

(10) Transmission oil temperature warning lamp
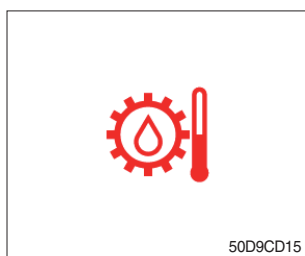
① This lamp informs the operator that transmission oil is above the specified temperature (107 ˚C, 225 ˚F).
　· Lamp ON : Abnormal
　· Lamp OFF : Normal
※ **When this lamp lights up during operation, stop the engine and check the truck.**

50D9CD15

(11) Transmission error warning lamp

① This lamp lights ON and the information window of the LCD shows the error code when an error occur 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.**

50D93CD19

(12) Brake system temperature warning lamp
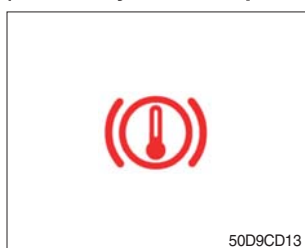
① This lamp is turned ON when the brake oil temperature is too high.

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

50D9CD13

(13) DEF (Diesel Exhaust Fluid) low warning lamp

50D9CD32

① This warning lamp indicates, when illuminated or flashing, that the diesel exhaust fluid level is low.

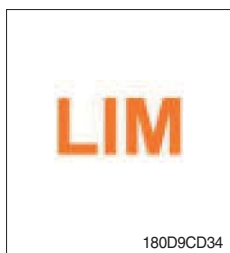※ **Add the diesel exhaust fluid into DEF tank.**

(14) Engine stop warning lamp

50D9CD33

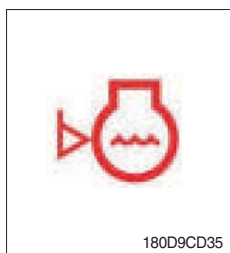① When this warning lamp lights ON, stop the engine immediately and and check the DEF level and related parts of the engine.

※ **Please contact your Hyundai service center or local dealer.**

(15) Engine limit warning lamp

180D9CD34

① Illiminates during torque and engine speed operating restriction.

(16) Coolant level low warning lamp

180D9CD35

① Illuminates when coolant level is too low.

※ Replenish the coolant.

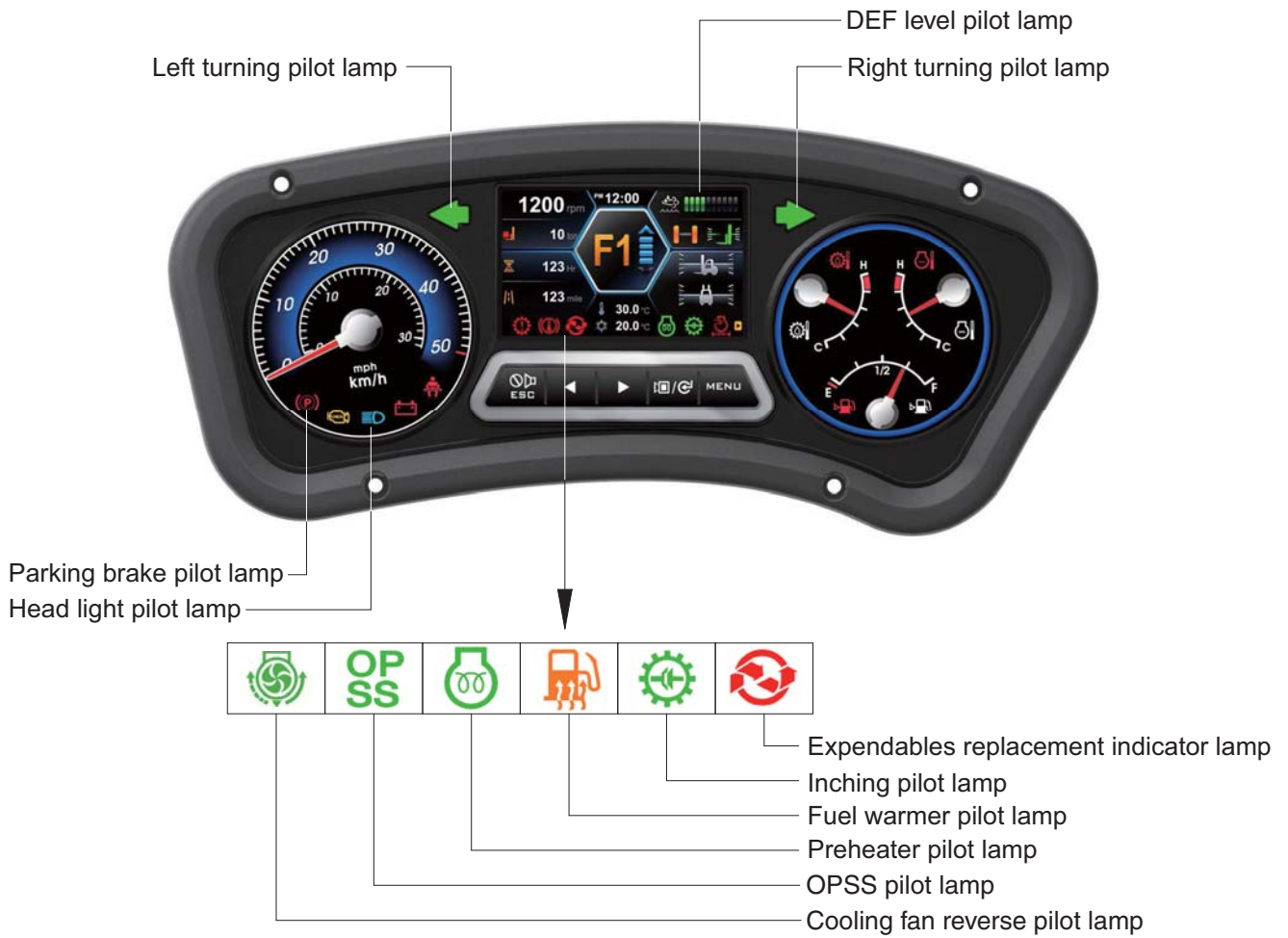### (17) ATS (After Treatment System) warning lamp

180D9CD36

① Illuminates during emissions-relevant malfunction of the exhaust gas after-treatment system or DEF.

⒅ Fan error warning lamp

180D9CD14

① This lamp is turned ON when the cooling fan error occurs.

4) PILOT LAMPS

DEF level pilot lamp

Left turning pilot lamp

Right turning pilot lamp

Parking brake pilot lamp
Head light pilot lamp

Expendables replacement indicator lamp
Inching pilot lamp
Fuel warmer pilot lamp
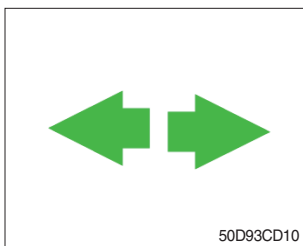Preheater pilot lamp
OPSS pilot lamp
Cooling fan reverse pilot lamp

180D9CD03-2

※ **When the warning and pilot lamps are illuminated more than display, you can display next lamps by push the button (▶).**

(1) Direction pilot lamp

50D93CD10
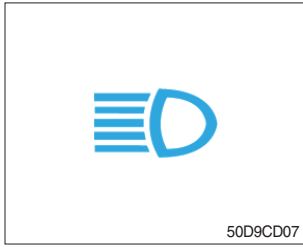
① This lamp flashes when the signal indicator lever is moved.

(2) Parking brake pilot lamp

50D93CD11

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

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

(3) Head light pilot lamp

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

50D9CD07

(4) 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.**

50D93CD14

(5) Inching pilot lamp
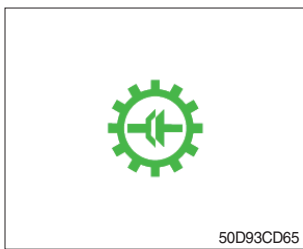
① When the inching switch is pressed, the lamp lights ON.

50D93CD65

(6) Fuel warmer 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 (140 °F) , or the hydraulic oil temperature is above 45 °C (113 °F) since the start switch was ON position.

50D93CD43

(7) OPSS pilot lamp

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 gear selector lever must be cycled through neutral with the operator in the normal operating position to regain powered direction control.

50D9CD14

(8) DEF (Diesel Exhaust Fluid) **level pilot lamp**

50D93CD66
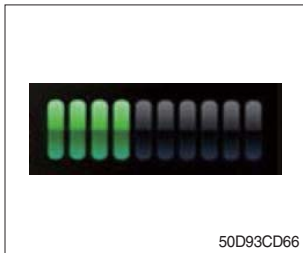
① This gauge indicates the level of DEF (10 steps).
② Fill the DEF when the level is low.

(9) Expendables replacement indicator lamp

50D93CD31

① This lamp lights ON if expendables which must be replaced are exist.
② The lamp will light up only 3 minutes since KEY ON, and then light off.
③ Please check the expendables management list in maintenance menu.

(10) Cooling fan reverse pilot lamp

180D9CD30

① This lamp lights ON when the cooling fan is operated to the reverse rotation.

※ **Refer to page 3-35 for the operation of the cooling fan.**

4) CLUSTER BUTTON
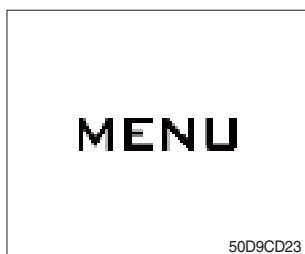
Each button has the following function.

Menu button
Camera/Enter button
Move button
Buzzer stop/ESC button
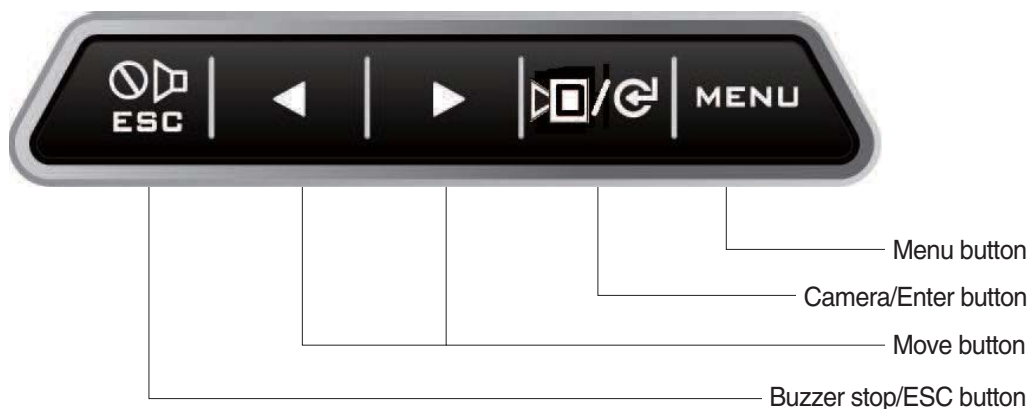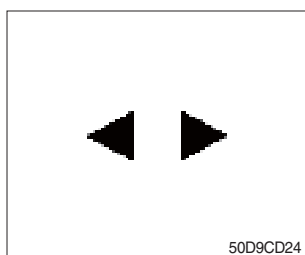
50D9CD121

(1) Buzzer stop/ESC button

50D9CD22

① This button is used to stop the buzzer sound.

② If another alarm condition occurs after this button has been pressed, the alarm buzzer will re-sound.
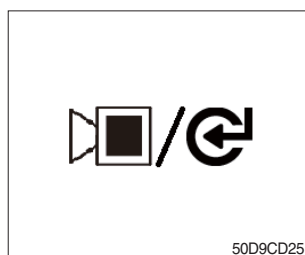
(2) Menu button

50D9CD23

① Move in menu (left, up / right, down).

(3) Move button

50D9CD24

① Move in menu (left, up / right, down).

② Decrease / Increase input value.

③ When the warning and pilot lamps occur over six, you can display next lamps by push the button (▶).
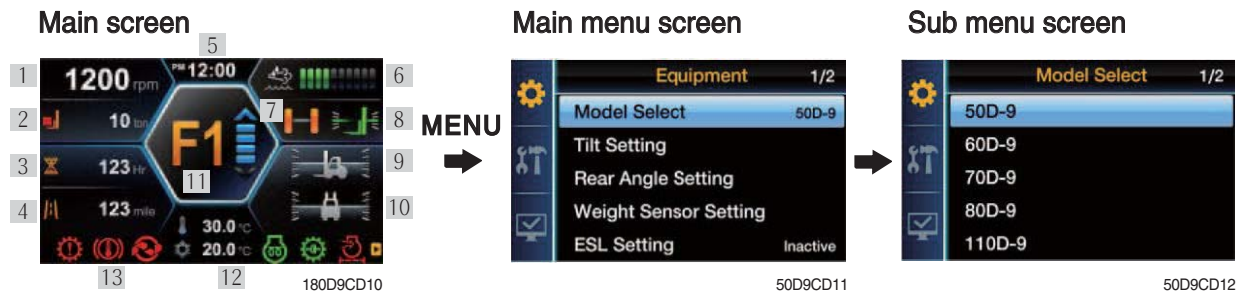
(4) Enter button

50D9CD25

① Change the camera screen on main

② This button is used to select menu.

3-14

5) LCD

(1) Main screen

※ You can select or set the menu by the button of the cluster.
※ Please refer to the page 3-14 for the selection and change of the menu and input value.

Main screen   Main menu screen   Sub menu screen

180D9CD10   50D9CD11   50D9CD12

1	Engine rpm	8	Mast angle (opt)
2	Load indicator (opt)	9	Vehicle angle X (opt)
3	Hour meter	10	Vehicle angle Y (opt)
4	Odometer	11	T/M info (error code, gear, warning)
5	Current time	12	Temperature (outdoor temp., setting temp) (cabin opt)
6	DEF level gauge	13	Warning and pilot lamps
7	Rear wheel angle (opt)		

Communication error

180D9CD13

※ Main screen when occurred communication error between the cluster and TCU/ MCU / ECU

Occurrence of the truck fault

While illuminates the engine, transmission or air conditioner warning lamp, when you press right button (▶) in the cluster button for about 4 seconds, it directly connected to the current failure screen.
(Warning lamp : Engine ( ), Transmission ( ) and Air conditioner ( ).

(2) Camera screen

① Depending on the gear, if the gear is rear position, screen is changed to camera screen.
② If the camera is not mounted or the camera signal is abnormal, the current screen remains.

(3) Main menu

| No.	Main menu	Sub menu	Description
1	Equipment 50D9CD14K	Model select Tilt setting Rear angle setting Weight sensor setting ESL setting Vehicle max speed limit AEB setting (R) MCU/cluster information Cooling fan control Auto idle down	Model select Tilt setting (mast and vehicle angle) Rear angle setting Cross-section, load weight adjust, weight display setting, load indicator buzzer ESL setting Vehicle max speed limit (10~30 km) AEB setting (R)MCU/cluster information Rotation direction, reverse interval and time Auto idle down ON/OFF
2	Maintenance 50D9CD15K	Failure history Maintenance management Signal statue User password change Alternate torque Opening of communication	Current history, logged history and delete logged fault Replacement, Change interval oils and filters Display information of sensors User password change (5~10 digit) Alternate torque mode Orbcomm, GPS antenna
3	Display setting 50D9CD16K	LCD adjustment Time setting Unit setting Language setting AS phone number ESL password change Maintenance management	LCD brightness setting Time setting Unit setting (temp, speed, weight, pressure) Language setting (13 languages) Check and change AS phone number ESL password change (5~10 digit) Maintenance information (cycle, elapsed time, change count, alarm info)

(3) Equipment
① Choose the equipment

180D9CD20

50D9CD21

- To enter the menu, you must input user password.
- Default password is '00000'
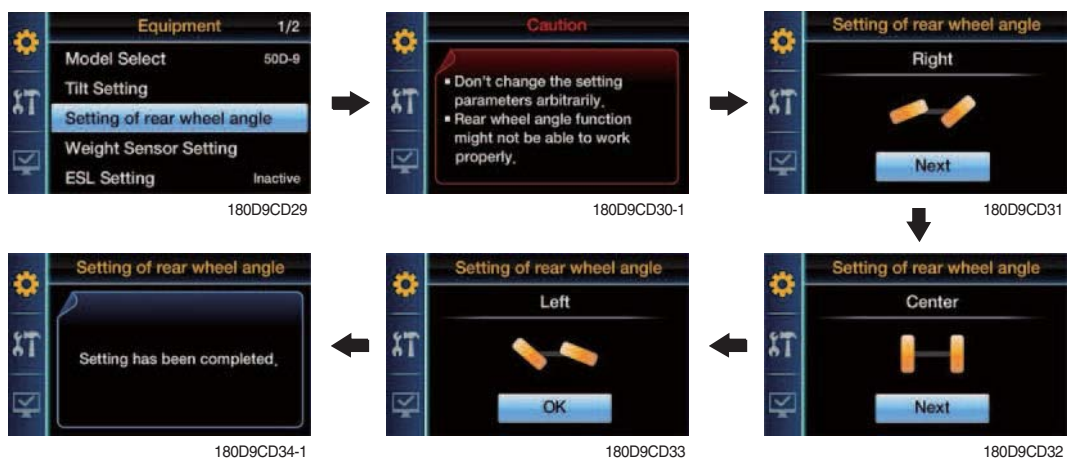- You should set password by five to ten digit.

② Model select

180D9CD22

50D9CD23

50D9CD24
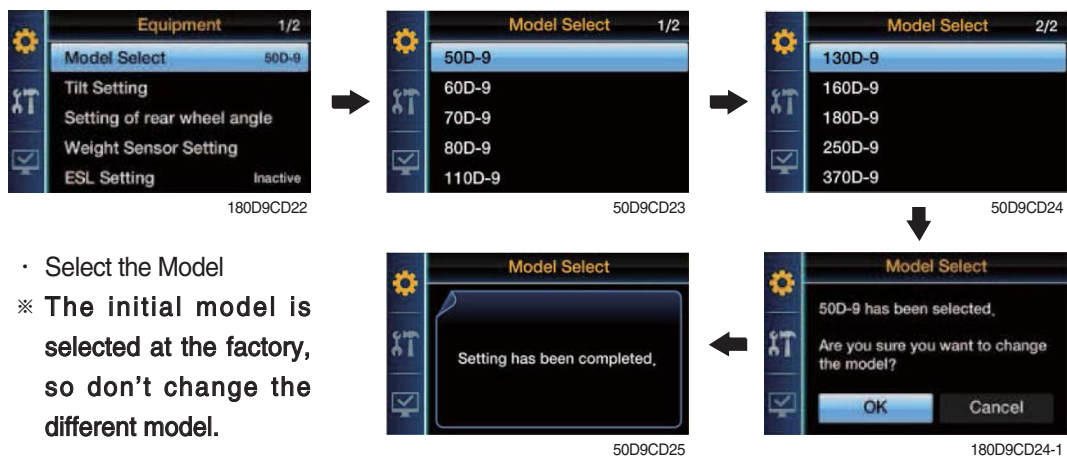
- Select the Model

※ **The initial model is selected at the factory, so don't change the different model.**

50D9CD25

180D9CD24-1

③ Tilt setting

180D9CD26

50D9CD27

180D9CD28

- Set the offset about mast angle sensors and vehicle angle sensors.

④ Setting for rear wheel angle

180D9CD29

180D9CD30-1

180D9CD31

180D9CD34-1

180D9CD33

180D9CD32
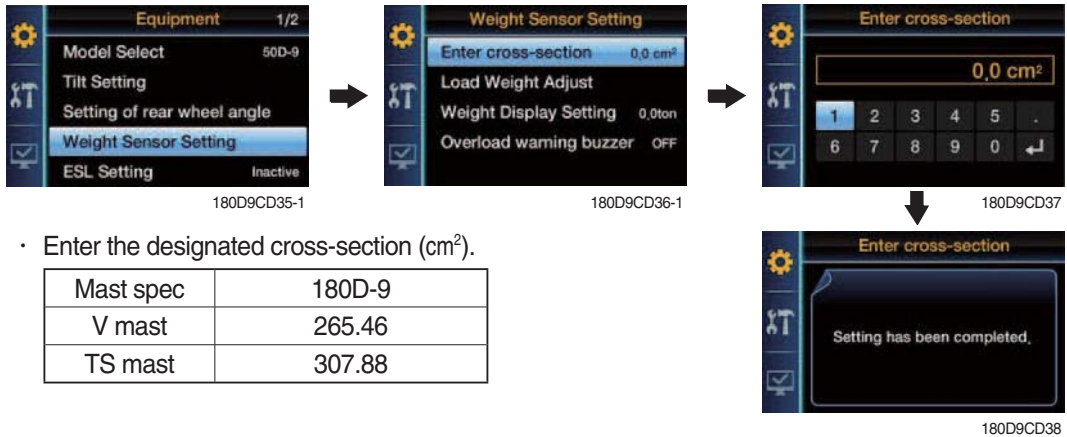
- The user revises a forklift truck steering angle.
- Display set to approve a condition.
  - – Right set rear wheel calibration.
  - – Center set rear wheel calibration.
  - – Left set rear wheel calibration.
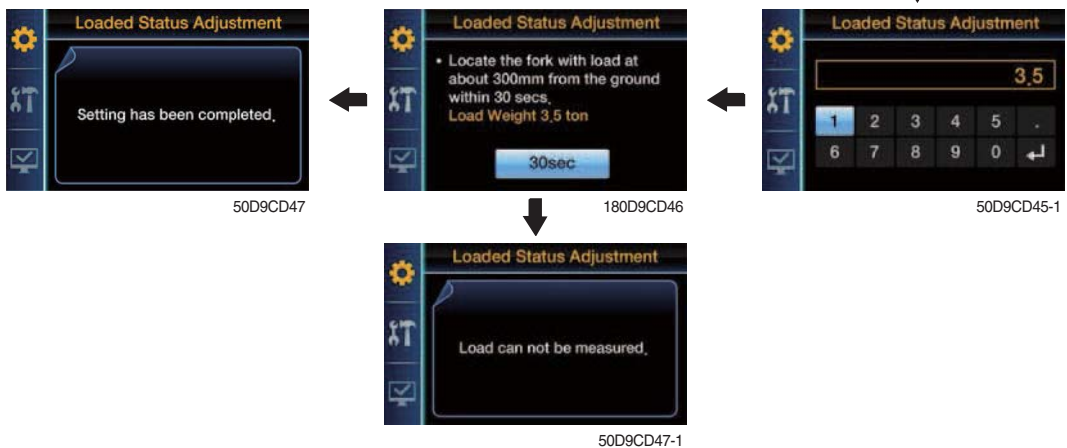
⑤ **Weight sensor setting**

a. Cross-section

180D9CD35-1

180D9CD36-1

180D9CD37

· Enter the designated cross-section (cm^2).

Mast spec	180D-9
V mast	265.46
TS mast	307.88

180D9CD38

b. Load weight adjust

· Unloaded status adjustment
In the unloaded from the ground waiting 5 seconds after lift 30 cm, and tare ON.

50D9CD39-1

50D9CD40

50D9CD42

180D9CD41

· Loaded status adjustment
Loaded enter the weight.
-> In the loaded from the ground waiting 5 seconds after lift 30 cm.
-> Weight correction ON.

50D9CD39-1

50D9CD44

50D9CD47

180D9CD46

50D9CD45-1

50D9CD47-1

3-18

180D9CD35-1   50D9CD39-1   50D9CD49

- Initialization
  It is initialized loaded
  status and unloaded
  status.

50D9CD51-1   50D9CD50-1

c. Weight display setting

180D9CD35-1   50D9CD53-1   50D9CD54

- Select the number of points of weight value display.

50D9CD55

d. Overload warning buzzer

180D9CD35-1   50D9CD57-1   50D9CD58-1

- Choose using buzzer when over weight.

⑥ **ESL setting**

Equipment 1/2		
Model Select	50D-9	
Tilt Setting		
Setting of rear wheel angle		
Weight Sensor Setting		
ESL Setting	Inactive	

180D9CD59

ESL Setting
- Inactive
- Active
- Delay Time

50D9CD60

ESL Setting
Are you sure you want to change the setting?
▪ Inactive

OK   Cancel

180D9CD61K

ESL Setting
Setting has been completed.

180D9CD55

ESL Setting
- Inactive
- Active
- Delay Time

50D9CD61-2

ESL Setting
Are you sure you want to change the setting?
▪ Active

OK   Cancel

50D9CD61-3

ESL Setting
Setting has been completed.

180D9CD55

ESL Setting
- Inactive
- Active
- Delay Time

50D9CD62

ESL Setting
Delay Time

5 mins	10 mins	20 mins
30 mins	1 hour	2 hour
4 hour	1 day	2 day

50D9CD63

ESL Setting
Are you sure you want to change the setting?
▪ Delay Time
5 mins

OK   Cancel

50D9CD64-1

ESL Setting
Setting has been completed.

180D9CD55

· Set ON/OFF function for using limitation of ignition and time for starting.
· Set time 5 minutes for starting :
  In 5 minutes you can restart without password, but after 5 minutes, you should input password for starting.

⑦ Vehicle max speed limit

180D9CD65-1

50D9CD66-1

50D9CD67
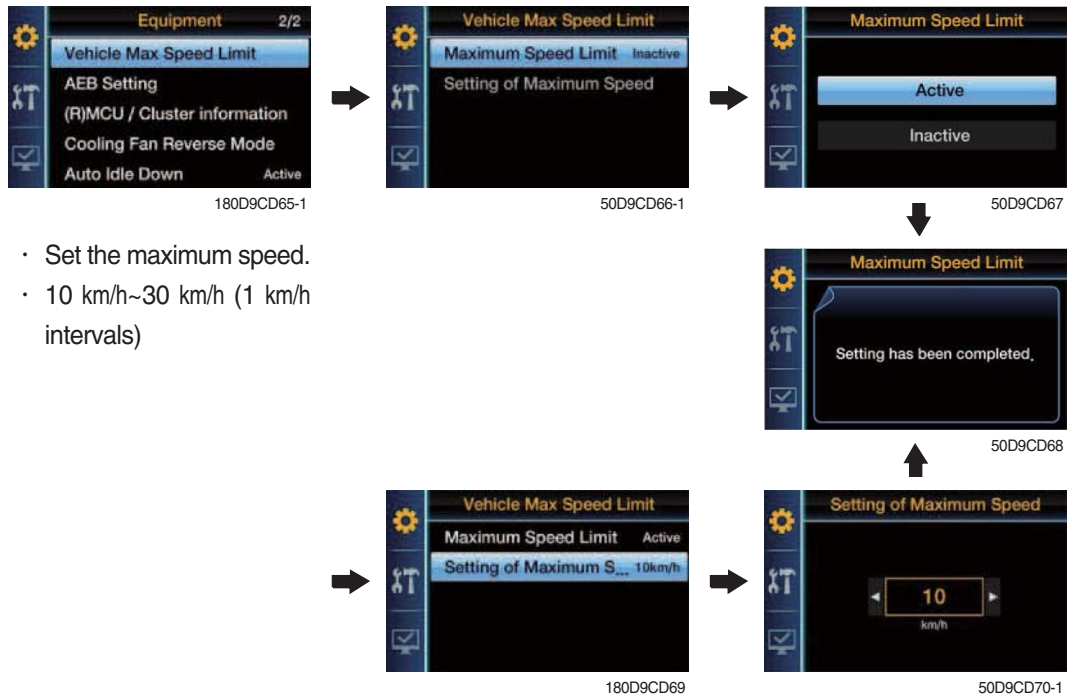
- · Set the maximum speed.
- · 10 km/h~30 km/h (1 km/h intervals)

50D9CD68

180D9CD69

50D9CD70-1

⑧ AEB setting

180D9CD71-1

180D9CD72

- · Press OK button, then calibration will be started, for cancel, press Menu/ECS/Enter button.
- · When it is finished (OK sign at gear box), Press Menu/ECS/Enter button.
- · Start the engine : AEB start
- · KEY ON : Brake pedal sensor calibration

⑨ (R) MCU / Cluster information

180D9CD73-1

50D9CD74-1

- · Software version check for MCU/Cluster/RMCU.

⑩ **Cooling fan reverse mode**

180D9CD101-1   180D9CD103-1
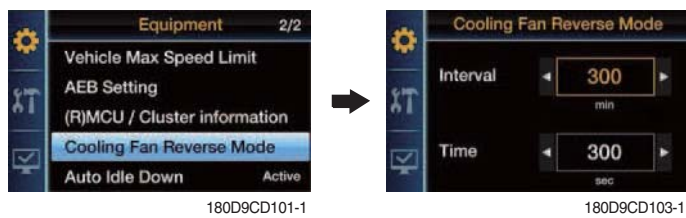
- Manual : The fan only rotate in reverse direction while you hold down the manual button.
- Automatic : The fan rotate in reverse direction at pre-set interval.
    - Interval : 30 minutes ~ 5 hours
    - Time : 30 seconds ~ 5 minutes

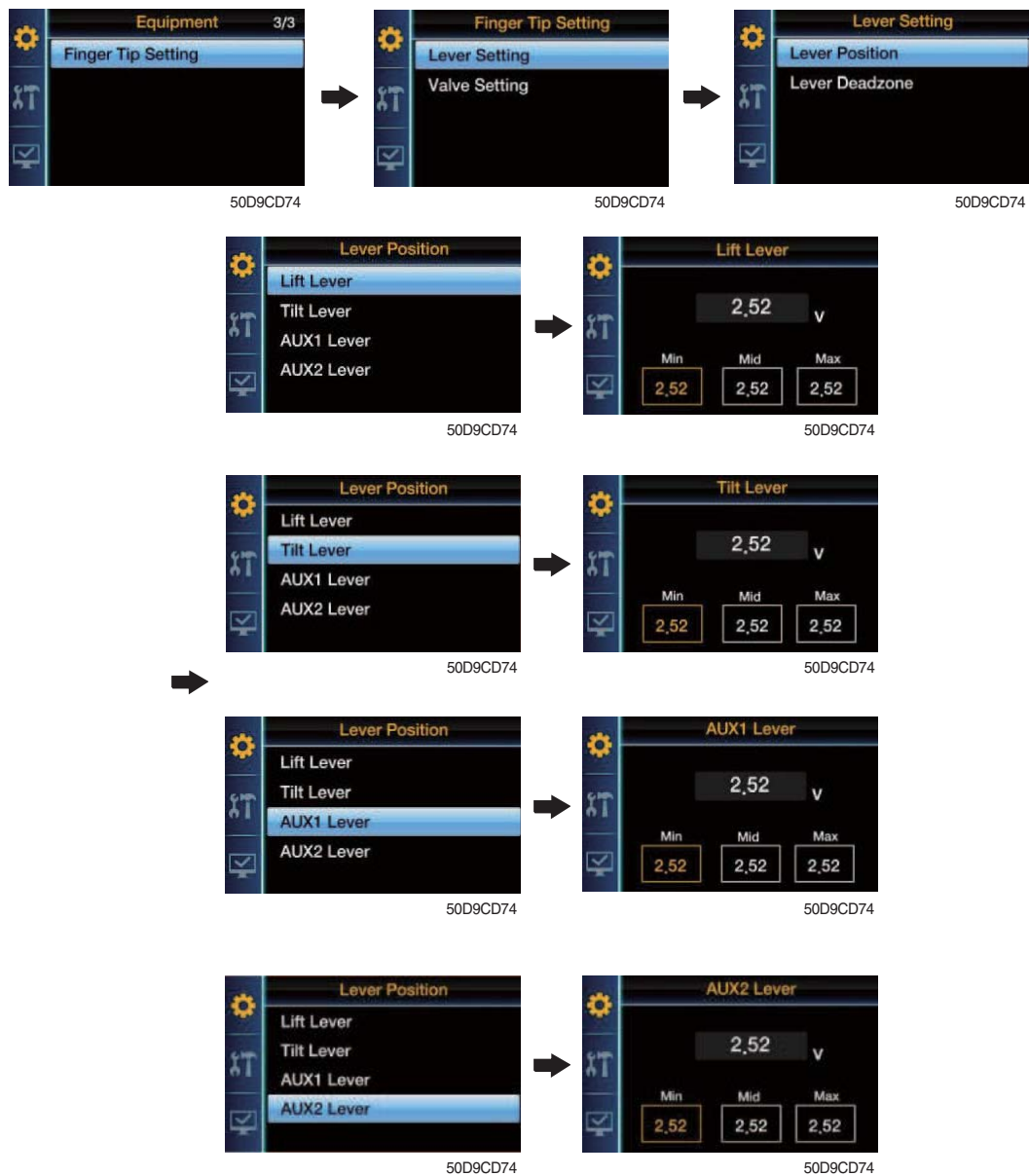※ **Refer to the page 3-35 for the cooling fan control switch.**

⑪ **Auto ilde down**

180D9CD104   180D9CD105

- On/off to the auto idle down function.

⑫ Finger tip setting
  a. Lever position setting

- Ability to set up the maximum Pull, Push (Min,Max) value
  and neutral value (Mid) of lever.
- Finger Tip lever set up about 0.5V~2.5V~4.5V.
  You must be to move with actual Lever. (Unit V)
  ex) Min 0.48, Mid 2.52, Max 4.52

b. Lever deadzone setting

· Ability to prevent the Value output due to a tiny error of the neutral Lever state (2.5V)

ex) If you set up the Upper : 0.26, Lower : 0.24, Lever operating range will be

Upper zone : 2.76V (2.5+0.26) ~ 4.5V (Lever Max value)

Lower zone : 2.26V (2.5-0.24) ~ 0.5V (Lever Min value)

c. Valve setting
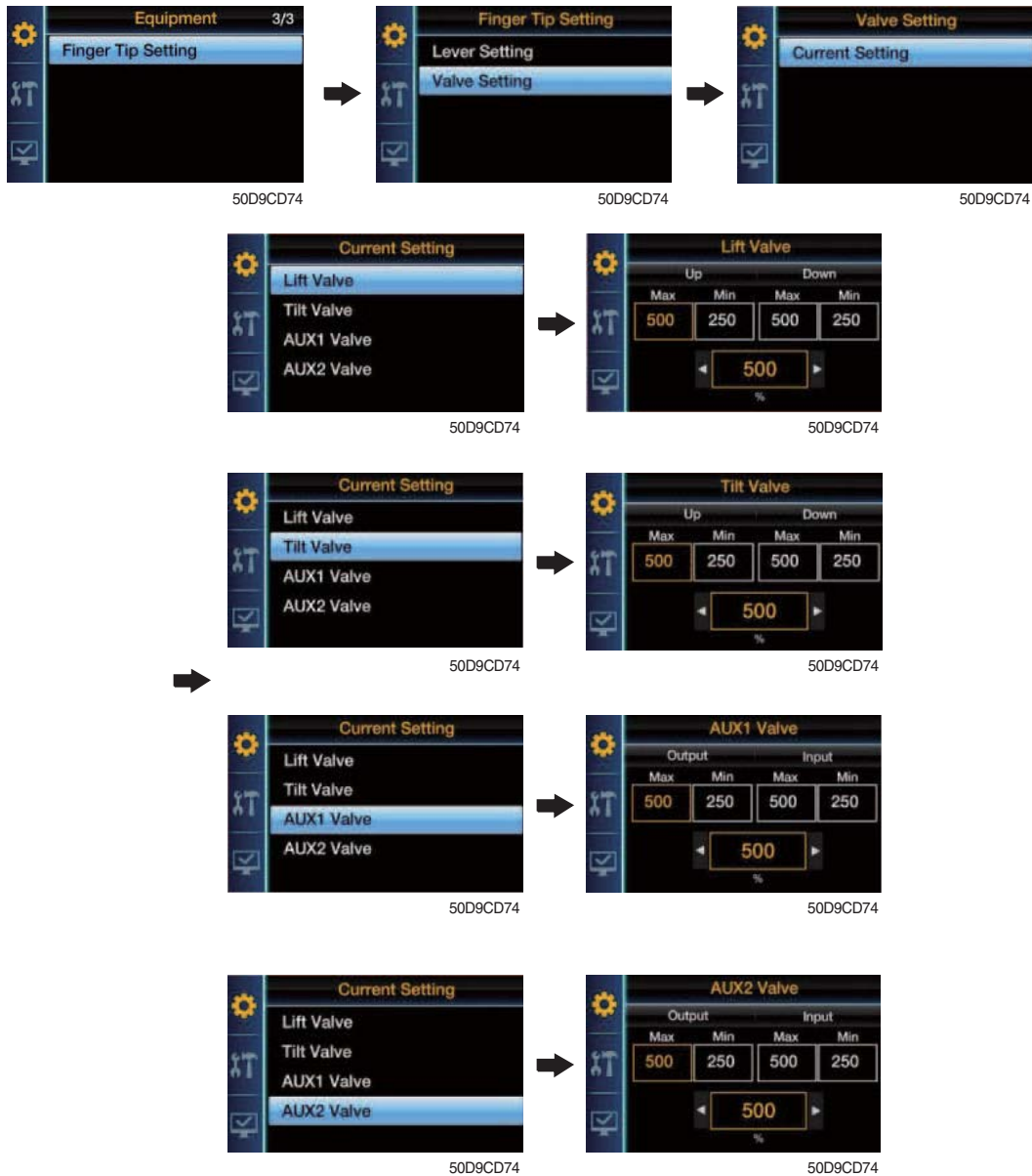
· Current Setting : Current setting for input each Valve Coil, it is to set up
each maximum value of movements according ot the current value
(Unit % (Over 110D-9 only), mA (Under 80D-9 Only)
ex) If the Max value increase, the maximum speed will also increase.
If the Min value increase, the minimum speed will also increase.
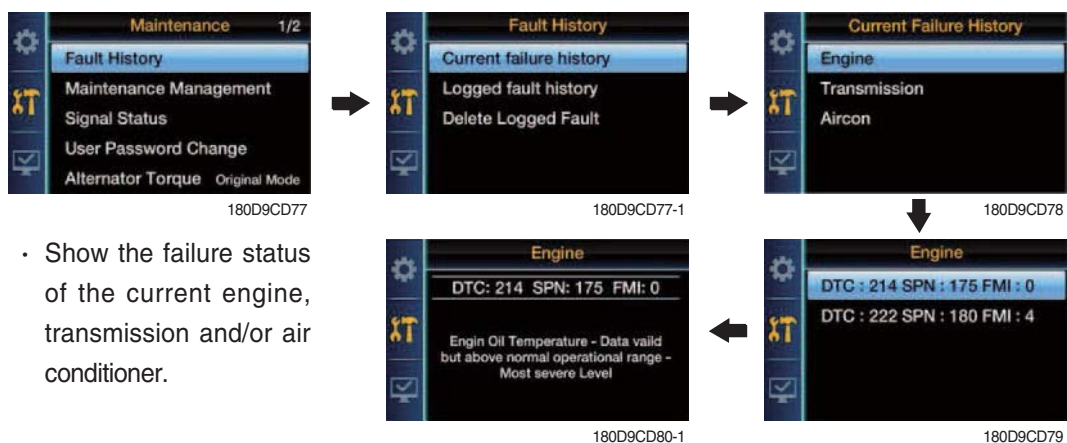
(4) Maintenance
① Choose the maintenance
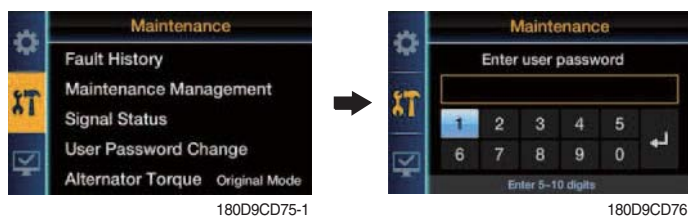
180D9CD75-1

180D9CD76

- To enter the Menu, you must input user password.
- Default password is '00000'
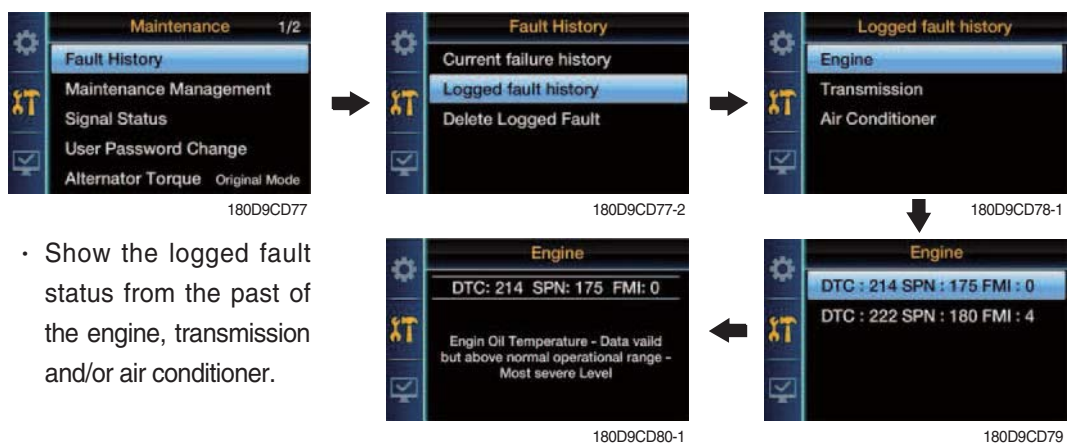- You should set password by five to ten digit.

② Failure history

a. Current failure history

180D9CD77

180D9CD77-1

180D9CD78

- Show the failure status of the current engine, transmission and/or air conditioner.

180D9CD80-1

180D9CD79

b. Logged fault history

180D9CD77

180D9CD77-2

180D9CD78-1

- Show the logged fault status from the past of the engine, transmission and/or air conditioner.

180D9CD80-1

180D9CD79

c. Delete logged fault

180D9CD77   180D9CD77-3   180D9CD78-2

180D9CD79-1

· Initialize of the past logged fault history.

③ Maintenance management

180D9CD81   180D9CD82   180D9CD83

180D9CD84   180D9CD85

180D9CD86   180D9CD87

180D9CD88-1

· Exchange expendable supplies.
· Change the replacement cycle.
· Show the Maintenance Information below 10.
(Delete the old item, when Information have more than 10)

④ **Signal status**

180D9CD89-1

50D9CD90

180D9CD91

· Display information of each sensors.

50D9CD92

180D9CD93

⑤ **User password change**

180D9CD94-1

50D9CD95-1

50D9CD96-1

· You should set password by five to ten digit.

180D9CD97

50D9CD97-1

⑥ **Alternate torque**

180D9CD201-1

50D9CD1000

50D9CD1002

· Select the alternate torque mode

⑦ Opening of communication

180D9CD98-1

180D9CD99

180D9CD100

· When successfully opened RMCU communication, except for the RMCU comm.

180D9CD102-1

180D9CD101

180D9CD102

180D9CD104-1

180D9CD105-1

180D9CD107
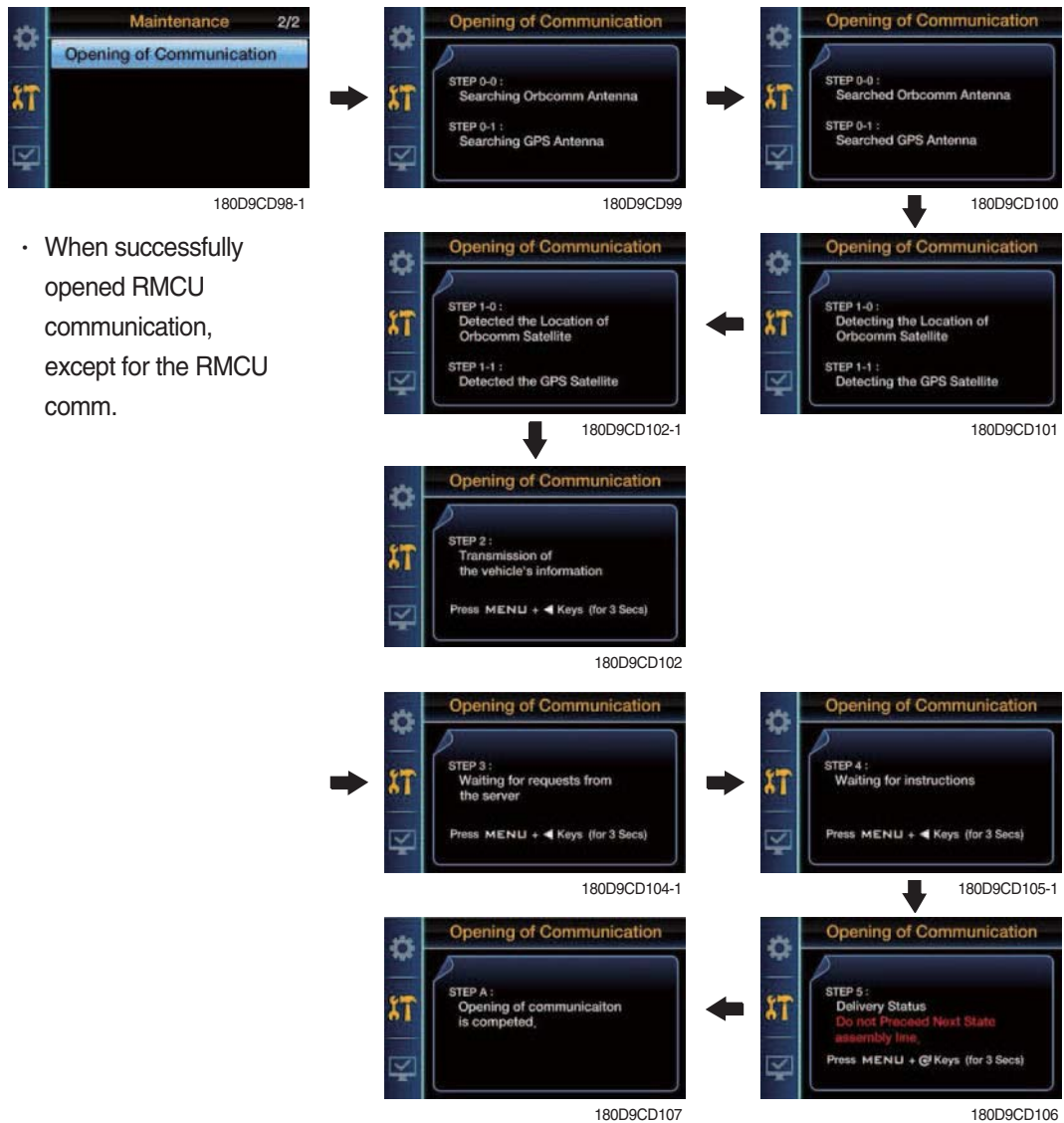
180D9CD106

(5) Display setting
① Choose the display setting

180D9CD108

· No password is required.

② LCD adjustment
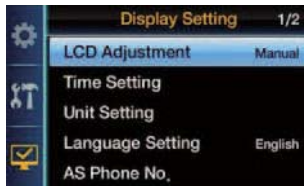
180D9CD109
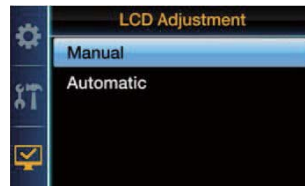
50D9CD110
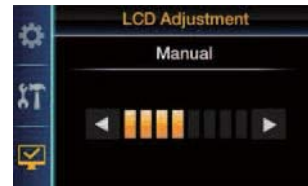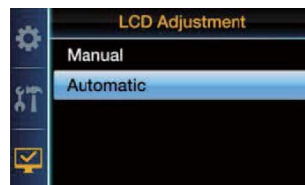

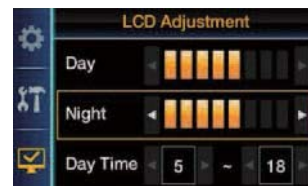180D9CD111

50D9CD112

180D9CD113

180D9CD114

180D9CD115

· Manual : Manual setting for LCD brightness.
· Automatic : Automatic control of LCD brightness as set level
                 of Day/Night.
· Setting day time : Set the time for daylight.
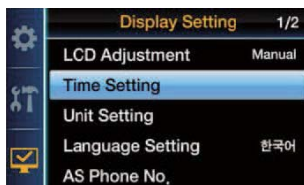 (If you set the time for daylight, the rest time will be night.)

③ Time setting

50D9CD116

180D9CD117

· Set the time (Year, Month, Day, Hour, Minute, AM/PM).

④ **Unit setting**

180D9CD118   50D9CD118-1   50D9CD119

· Change units of temperature / speed / wight / pressure.

⑤ **Language setting**

180D9CD120   180D9CD121   180D9CD122

180D9CD123

· Set the language used by your device.
  (13 Multiple language)

⑥ **A/S phone number**

50D9CD124   50D9CD125   180D9CD126

· Check and change of contact information for customer service.

⑦ **ESL password change**

50D9CD127   180D9CD128   180D9CD129

180D9CD130   180D9CD130-1
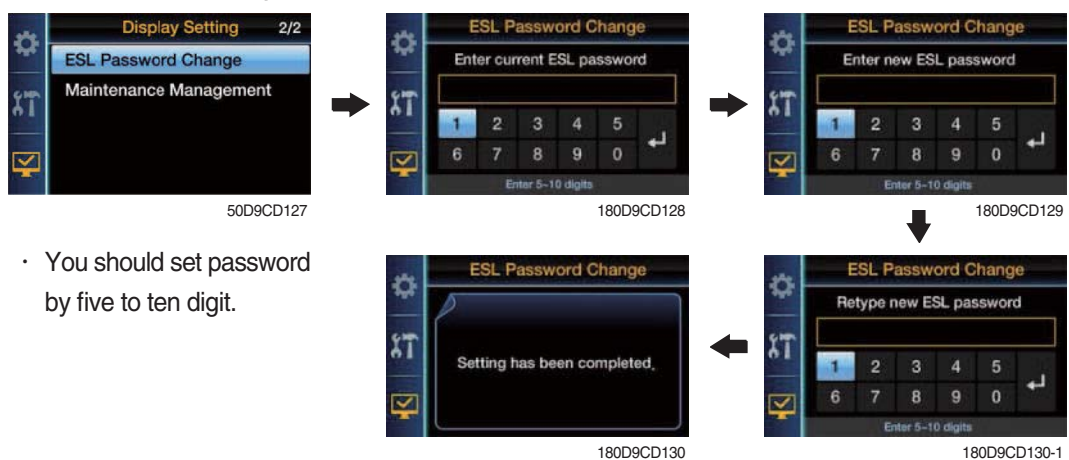
· You should set password
  by five to ten digit.

⑧ **Maintenance management**

50D9CD131   50D9CD132-1   50D9CD133-1

· Show the maintenance information (replacement cycle, elapsed time, change count, alarm information).

5.TRANSMISSION MESSAGE DISPLAY

1) FUNCTION

The display can be used with the gear selector (DW-3). It indicates speed and driving direction. 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.

Transmission message display

180D93ACD33

※ If it happens error codes, consult with Hyundai service center to repair the fault.

2) DISPLAY DURING AEB-MODE

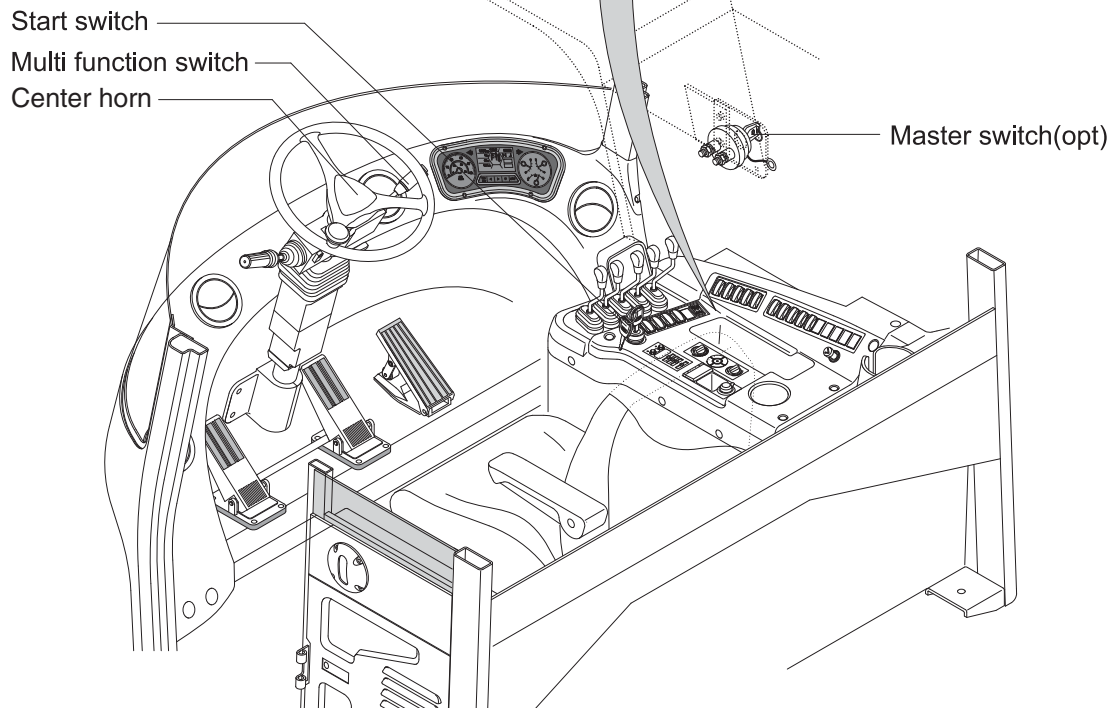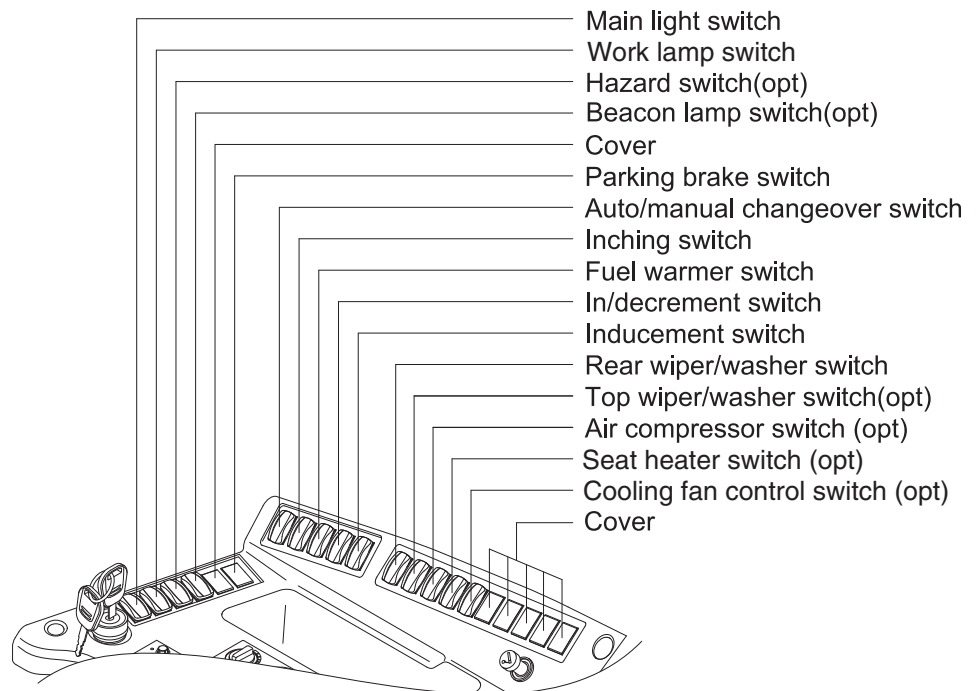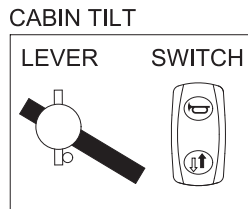| Symbol	Meaning	Remarks
K1......K3 KV, KR	Calibrating clutch K1...K3, KV or KR resp.	
_and Kx	Wait for start, initialization of clutch Kx, x : 1, 2, 3, V, R	
≡and Kx	Fast fill time determination of clutch Kx	
=and Kx	Compensating pressure determination of clutch Kx	
OK	Calibration for all clutches finished	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)

3) 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.
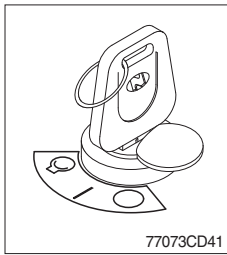

4) DISPLAY DURING INCHPEDAL CALIBRATION

| 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

LEVER   SWITCH

Main light switch
Work lamp switch
Hazard switch(opt)
Beacon lamp switch(opt)
Cover
Parking brake switch
Auto/manual changeover switch
Inching switch
Fuel warmer switch
In/decrement switch
Inducement switch
Rear wiper/washer switch
Top wiper/washer switch(opt)
Air compressor switch (opt)
Seat heater switch (opt)
Cooling fan control switch (opt)
Cover

Start switch
Multi function switch
Center horn

Master switch(opt)

180D9CD04

1) START SWITCH

77073CD41

(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.

2) HAZARD SWITCH (OPTION)

OFF   ON

35D9AOM17
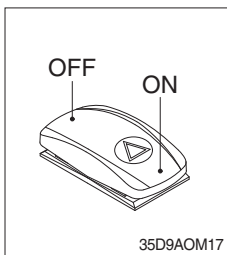
(1) Use for parking, or loading truck.

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

3) INCHING SWITCH

50D9CD43
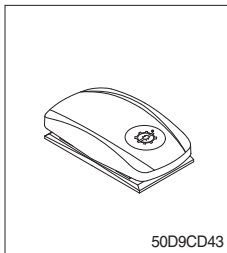
(1) If this switch is pressed, inching operation is applied to inching pedal.

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

4) PARKING BRAKE SWITCH

50D9CD44
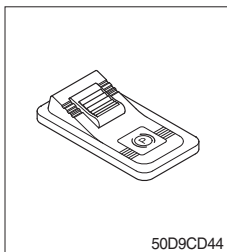
(1) This switch is used to parking brake lock or release.

(2) If this switch is pressed, the parking brake is applied and the warning lamp on the cluster 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.**

5) MAIN LIGHT SWITCH

50D9CD45
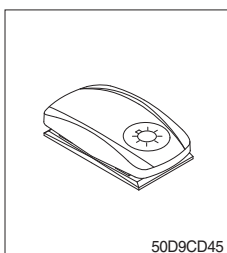
(1) This switch is used to operate the head light by one steps.
- ① First step   : Clearance lamp and cluster illumination lamp comes ON. Also, all of the pilot lamps of switches come ON.
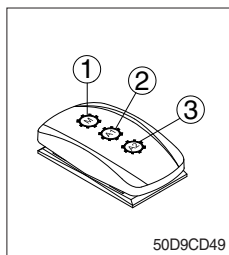- ② Second step : Head lamp comes ON.

6) WORK LAMP SWITCH

180D9OM16
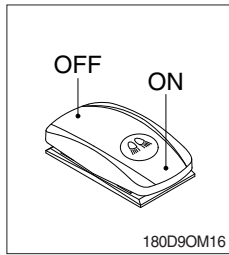
(1) This switch is used to operate the work lamps by two steps.
① First step : Front work lamp comes ON.
② Second step : Rear work lamp comes ON.

7) AUTO/MANUAL CHANGEOVER SWITCH

50D9CD49

(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.
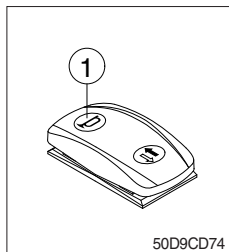
(2) Automatic 1st mode (②)
Place the switch in the middle position for the autoshift function changing from 1st to 3rd gear shift mode.

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

8) CABIN TILT SWITCH

50D9CD74

(1) Horn (⊏⊐)
By pressing position ①, the horn sounds and by releasing, the horn stops.
⚠ Sound the horn to warn near by personnel, before tilting the cabin.

(2) Tilting of the cabin (⬆ , ⬇)
Press the cabin tilt switch in order to tilt the cabin to right side or return to original location.
※ Refer to page 7-15 for the tilting method of the cabin.
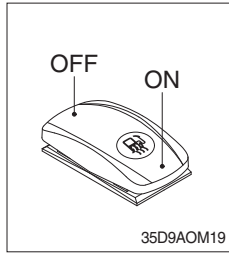
9) HAND PUMP LEVER

80D9CD75
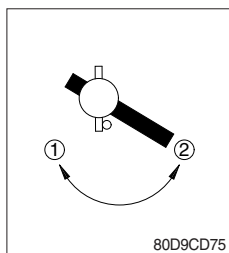
(1) This lever is used when tilting the cabin.
(2) Turn the hand pump lever to counterclockwise direction (①), the cabin shall be tilted to right side by the cabin tilt switch.
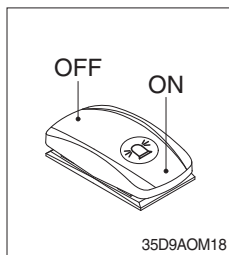(3) Turn the hand pump lever to clockwise direction (②), the cabin shall be returned to original location by the cabin tilt switch.
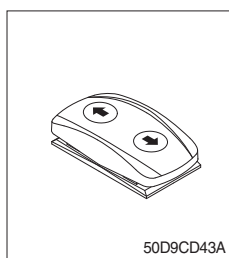
10) FUEL WARMER SWITCH

OFF ON

35D9AOM19

(1) This switch is used to heat the fuel of pre-heater.
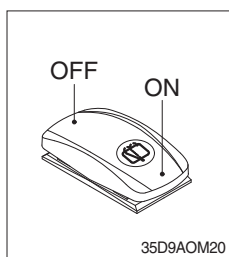

11) BEACON SWITCH (OPTION)

OFF ON

35D9AOM18

(1) This switch turn ON the strobe light.


12) INC/DECREMENT SWITCH

50D9CD43A

(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.

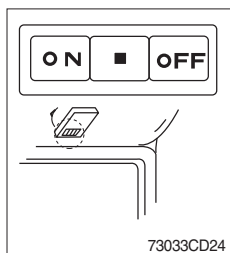## 13) TOP WIPER AND WASHER SWITCH (OPTION)

OFF ON

35D9AOM20

(1) This switch is used to operate the wiper and washer on the top of the cab.
(2) The washer liquid is sprayed and the wiper is operated only while pressing this switch.
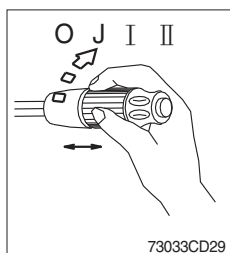

14) HORN BUTTON

Horn button

110D9CD28
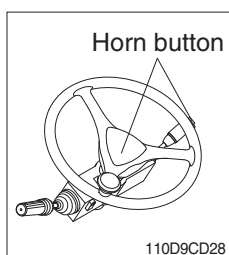
(1) If you press the button on the top of the multifunction switch and the center of the steering wheel, the horn will sound.

15) CAB LAMP SWITCH

73033CD24

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

16) MULTI FUNCTION SWITCH

73033CD29

(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.**

Left turning

Right turning

73033CD31
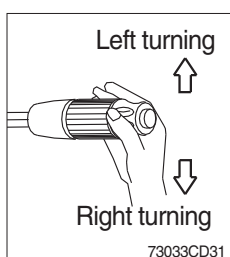
(2) Turning switch

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.

17) MASTER SWITCH (OPTION)

807A3CD03
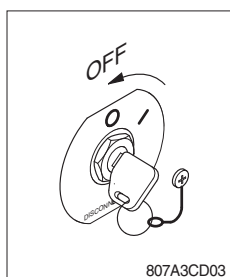
(1) This switch is used to shut off the entire electrical system.
When the machine is not operated for a long time, turn OFF the master switch for the safety purpose.

(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 O (OFF) with the engine running. Engine and electrical system damage could result.**

18) REAR WIPER/WASHER SWITCH

50D9OM20H
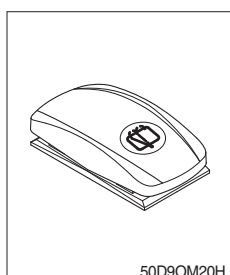
(1) This switch is used to operate the wiper and washer on the rear of the cab.

(2) The washer liquid is sprayed and the wiper is operated only while pressing this switch.

19) INDUCEMENT OVERRIDE

110D9CD60

(1) If an emission-related malfunction of the exhaust gas aftertreatment system or DEF 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.
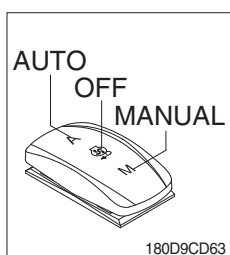
20) AIR COMPRESSOR SWITCH (option)

110D9CD61
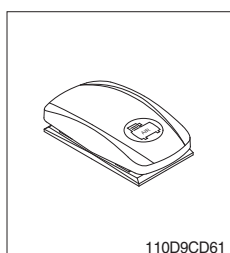
(1) This switch is used to activate the air compressor.

21) SEAT HEAT SWITCH (option)

110D9CD62
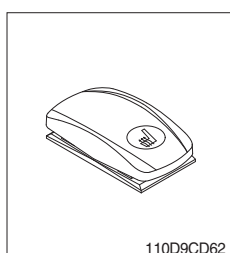
(1) This switch is used to heat the seat.

## 22) COOLING FAN CONTROL SWITCH (option)

AUTO
OFF
MANUAL

180D9CD63

(1) This switch use to control the cooling fan.

(2) This switch has three positions.
· AUTO : The fan automatically work in reverse according to set up interval and time of the cooling fan reverse mode.
  ※ **Refer to page 3-20-1 to set of the cluster.**
· OFF : Only forward rotation is possible.
· MANUAL : The fan rotates reverse only while pressing this position.

(3) If release the switch, return to the OFF position.

※ **The reverse rotation pilot lamp lights up on the area of the warning and pilot lamp of the LCD when the cooling fan is operated to the reverse rotation.**
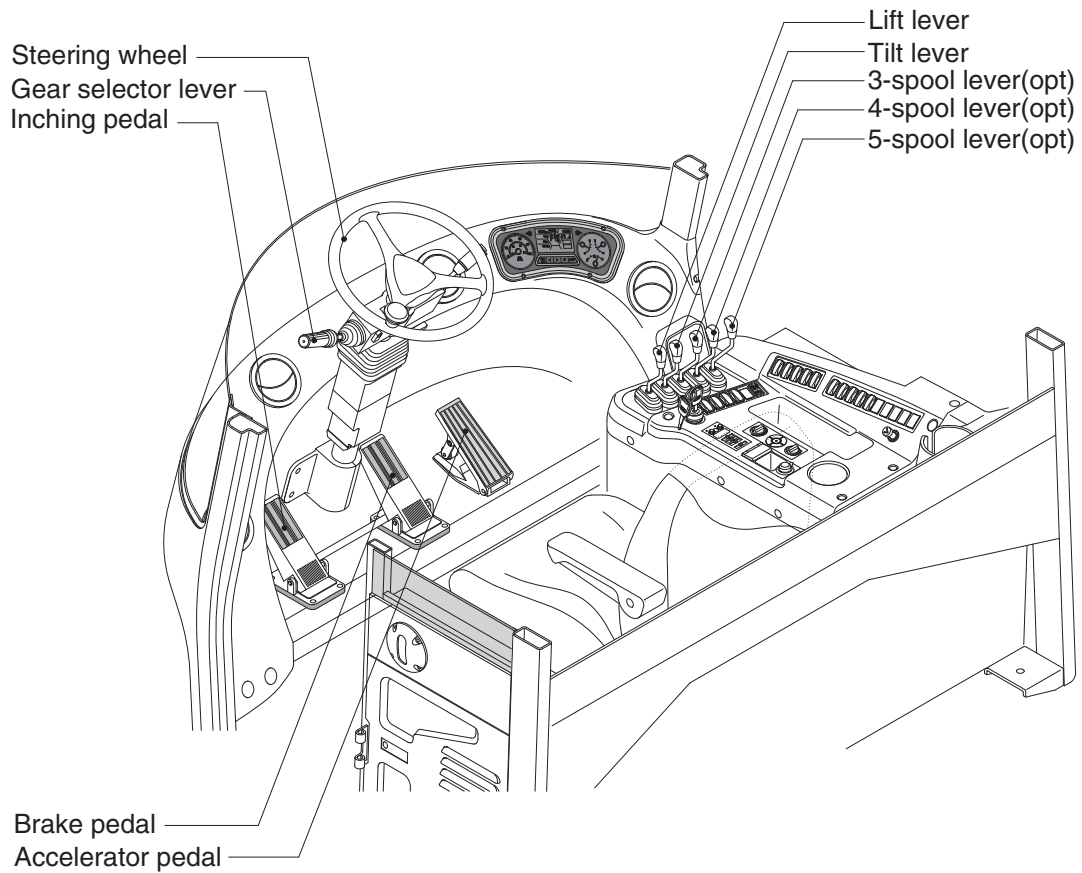
110D9CD08

1) LIFT LEVER

Lower

Lift

50D9CD12
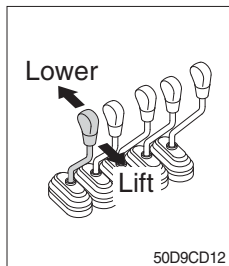
(1) LIFT

PULL the lever BACK to LIFT the forks.

(2) LOWER

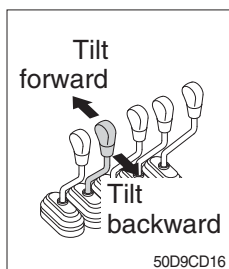PUSH the lever FORWARD to LOWER the load.

(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

Tilt
forward

Tilt
backward

50D9CD16

(1) TILT FORWARD

PUSH the lever FORWARD to tilt mast FORWARD.
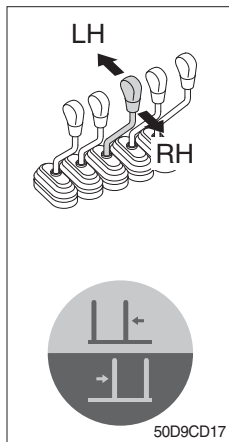
(2) TILT BACKWARD

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) LEVER FOR SIDE SHIFT
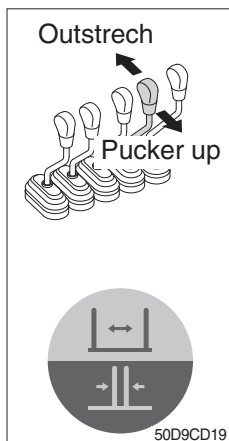

50D9CD17

(1) LH MOVEMENT

Push the lever forward to move the left hand for the side shift.

(2) RH MOVEMENT

Pull the lever backward to move the right hand for the side shift.

4) LEVER FOR SIDE SHIFT WITH FORK POSITIONER
(1) FORK POSITIONER (SYNCHRONIZER TYPE)

50D9CD19

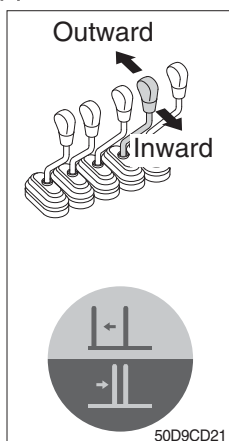#### ① OUTSTRECH THE FORKS

Push the lever forward to outstrech simultaneously outward of the both forks.
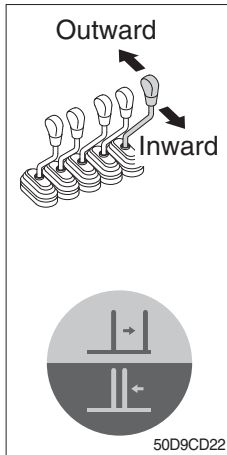
② PUCKER UP THE FORKS

Pull the lever backward to pucker up simultaneously inward of the both forks.

(2) FORK POSITIONER (INDEPENDENT TYPE)
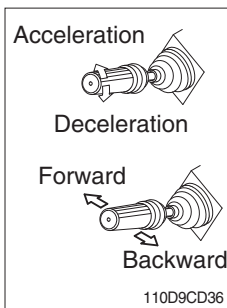

50D9CD21

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.

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.

Outward

Inward

50D9CD22

5) GEAR SELECTOR LEVER

Acceleration

Deceleration

Forward

Backward

110D9CD36

(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.

6) STEERING WHEEL

Left   Right

110D9CD33
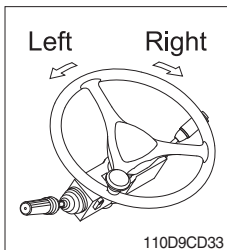
(1) A steering cylinder in the center of the steering axle will operate the steering function.

(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

160D7ECD31
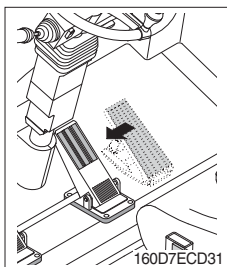
(1) If the pedal is pushed, braking force is generated and bring the truck to a stop.

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

8) ACCELERATOR PEDAL

160D7ECD32
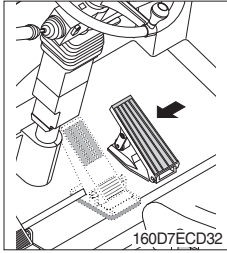
(1) This pedal controls the engine speed. The engine speed will increase in proportion to the degree of force applied to this pedal.

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

9) INCHING PEDAL

160D7ECD34
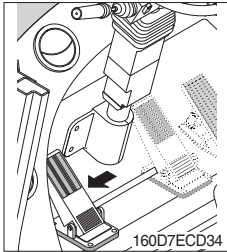
(1) Inching pedal is used for fine control of forward and reverse movement when lifting up or putting down loads.

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

10) STEERING WHEEL LEVER

110D9CD70
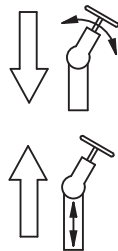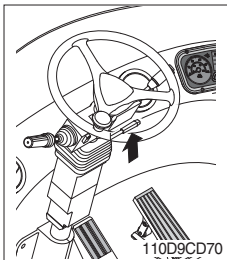
(1) By pulling down the lever, the wheel is adjustable to tilt.

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

(3) Adjustable steering wheel
Accommodates various operator's conditions.
- Tilting abgle : 40˚
- Telescopic stroke : 80 ㎜

11) ENGINE HOOD

Pull

50D7ACD25
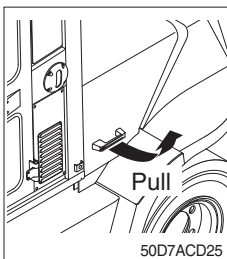
(1) Pull the handle attached on the bolt side of engine hood to open it.

8. AIR CONDITIONER AND HEATER

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

Fan speed control knob
Outlet control button
Air conditioner button
Air inlet control button
Temperature control knob

Air conditioner switch
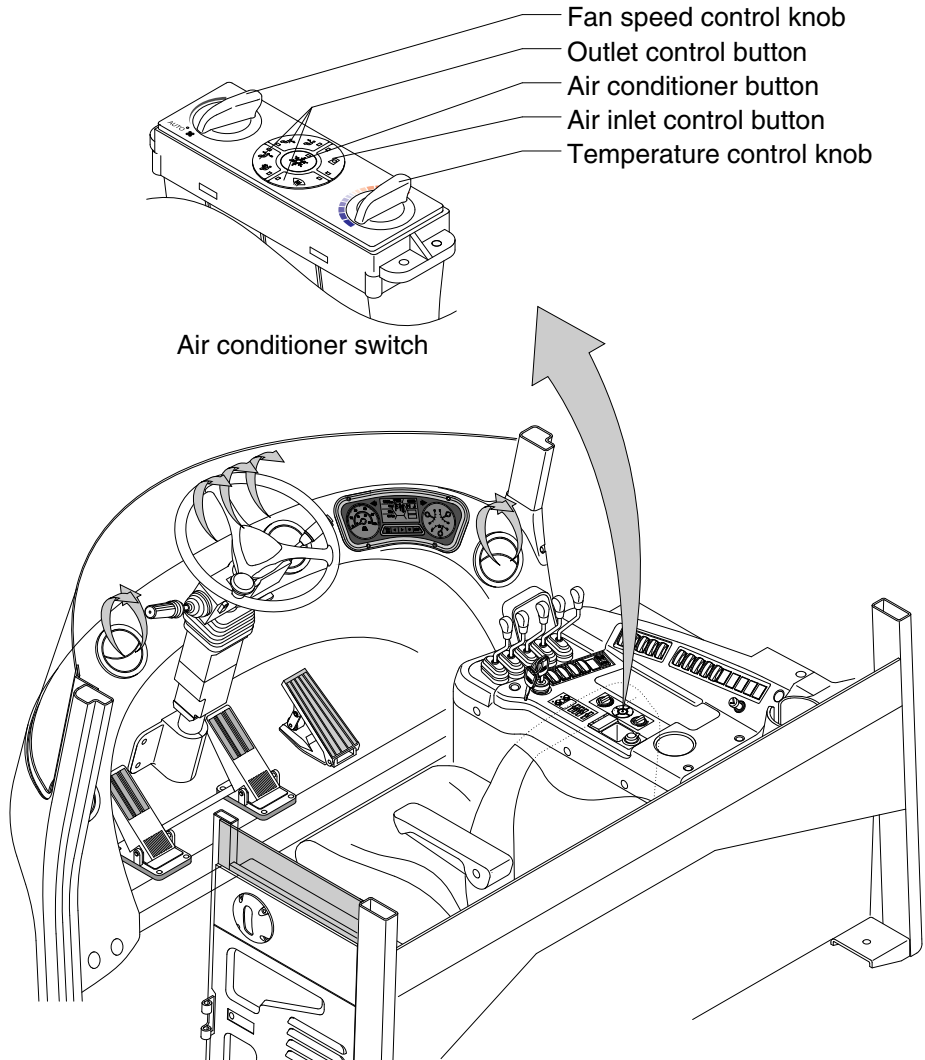
110D9CD90

1) AIR CONDITIONER BUTTON

50D9CD50
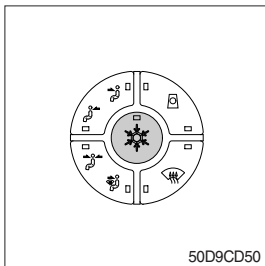
(1) When you push this button, air conditioner system is operated.

(2) Determines whether to perform a cooling function of air conditioner.

① Pilot lamp ON : Air conditioner operation

② Pilot lamp OFF : Fan only

※ **The AUTO pilot lamp ON when this button is pushed.**

2) OUTLET CONTROL BUTTON
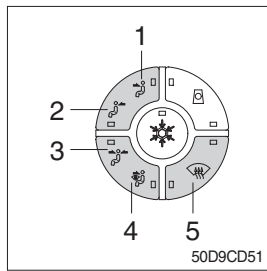
There are five kinds of air flow.
① Face
② Rear
③ Face and rear
④ Face and defrost
⑤ Defrost
  ※ **The pilot lamp is turned ON when the button is pushed.**

50D9CD51

3) TEMPERATURE CONTROL KNOB
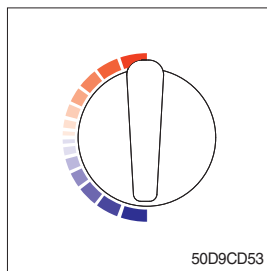
This knob regulates the temperature of air.
① Right side (red zone) : Cool down air temperature
② Left side (blue zone) : Heat up air temperature

50D9CD53

4) AIR INLET CONTROL BUTTON
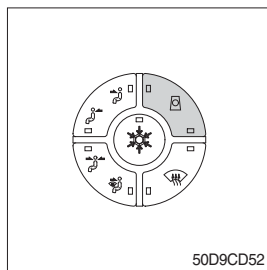
This button regulates the inlet air.
① Pilot lamp ON : Fresh air intake.
② Pilot lamp OFF : The air circulates in the cab.

※ **The pilot lamp is turned ON when the button is pushed.**
※ **Check out the fresh air filter periodically to keep a good efficiency.**
※ **Change air occasionally when using recirculation for a long time.**
※ **Check out the recirculation filter periodically to keep a good efficiency.**

50D9CD52

5) FAN SPEED CONTROL KNOB
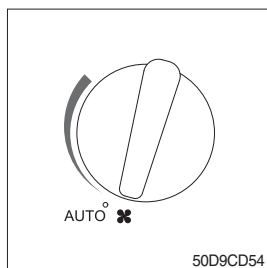
① Fan speed is controlled automatically by set temperature.
※ **The AUTO pilot lamp ON when the air conditioner button is pushed.**

② This knob controls fan speed manually.
※ **The AUTO pilot lamp OFF when this knob is operated.**

③ This knob makes the system ON.

AUTO

50D9CD54

Front
Rear

ECU

Radio and USB player
Monitor(option)

Cigar lighter

TCU

MCU

12V socket
Handsfree(option)
Remote controller(option)

Fuse box

Seat

110D9CD09

1) CIGAR LIGHTER

73033CD49
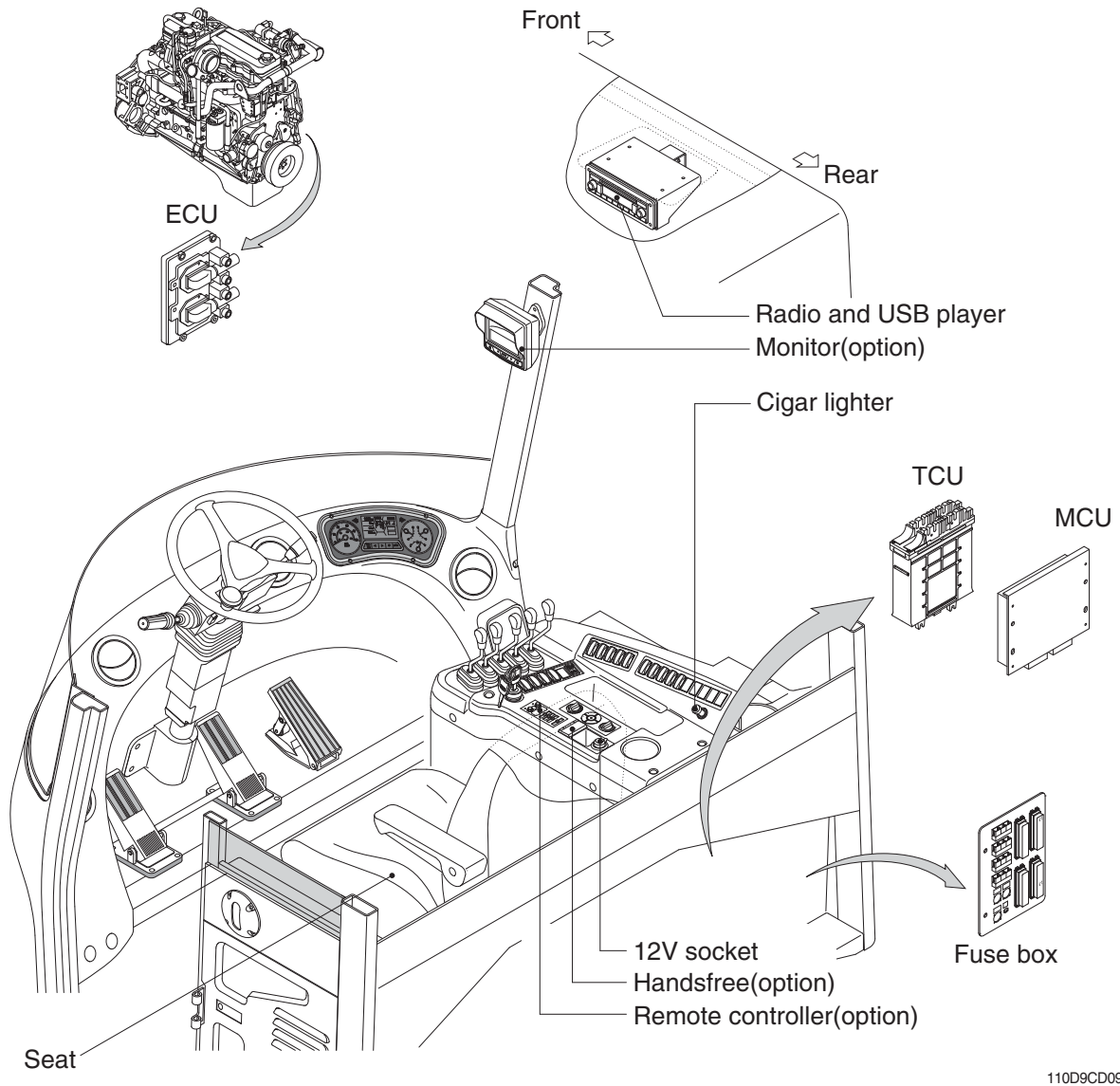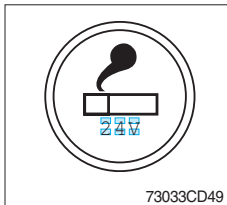
(1) This can be used when the engine starting switch is ON.

(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 24 V, 100 W.

2) 12V SOCKET

R5573CD49
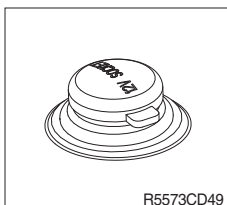
(1) Utilize the power of 12 V as your need and do not exceed power of 12 V, 120 W.

3) TRANSMISSION CONTROL UNIT (TCU)

77073CD91
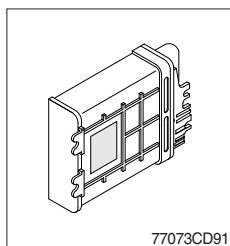
(1) The control unit is shifting the required speeds fully-automatically under consideration of the following criteria.

· Gear selector lever position
· Driving speed
· Load level

4) RADIO AND USB PLAYER (MACHINE SERIAL NO. : -#0148)

■BASIC FUNCTIONS

75793CD62-2

■FRONT PANEL PRESENTATION

1 SEL ······· Audio selection button

······· Audio selection knob

2 ······· Power and volume button

3 MODE ······· Mode button
(select RADIO / USB / AUX)

4 ······· UP / DOWN tuning button

5 1 ······· Preset memory button 1
DISP ·········· ID3 v2 display

6 2 ······· Preset memory button 2
SCN ··········· File scan

7 3 ······· Preset memory button 3
RPT ··········· Repeat play selector

8 4 ······· Preset memory button 4
RDM ··········· Random play selector

9 5 ······· Preset memory button 5
D- ················ Directory down

10 6 ······· Preset memory button 6
D+ ··············· Directory up

11 🔌 ······· Aux function

12 BSM ······· Preset scan (PS)
Best station memory (BSM)

13 MUTE ······· Audio mute button

14 AM/FM ······· AM / FM button (radio)

15 ······· Send

16 ······· End

17 MIC ······· MIC (microphone)

18 AUX ······· Aux connector

3-43

■ GENERAL

(1) Power and volume button

① **Power ON/OFF button**

Press power button to turn the unit ON or OFF shortly.

When the power is ON, the previous mode (last memory) will appear.

② **Volume up / down control**

Turn volume up / down button right to increase the volume level. The level will be shown in VOLUME xx on the LCD display. Turn it left to decrease the volume level. After 5 seconds of volume indication, display will return to the previous mode.

(2) Sound function selection button/knob (audio selection)

① This button is to adjust the sound. Each time you press SEL button shortly, LCD displays each mode as follows :

BASS → TREBLE → BAL → LOUD → EQ → BASS

※ When this button is pressed, LCD display shows selected function for 5 seconds and then returns back to the previous mode. On selected function, level can be controlled by turning this button. The display will automatically return to normal indication in 5 seconds after the last adjustment is made or when another function is activated.
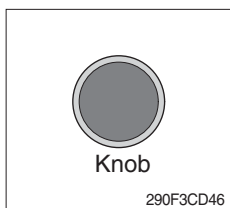
② **Bass control**

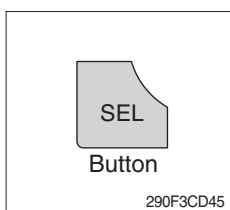To adjust the bass level, first select the bass mode by pressing the SEL button until BASS indication appears on the LCD display. Within 5 seconds of choosing the bass mode, turn selection knob right / left to adjust the bass level as desired.

The bass level will be shown on the LCD display from a minimum of BASS −10 to a maximum of BASS +10.

The display will automatically return to the normal indication in 5 seconds after the last adjustment or when another function is activated.

③ **Treble control**

To adjust the treble level, first select the treble mode by pressing the SEL button until TREBLE indication appears on the LCD display. Within 5 seconds of choosing the treble mode, turn selection knob right / left to adjust the treble level as desired.

The treble level will be shown on the LCD display from a minimum of TREBLE -10 to a maximum of TREBLE +10.

The display will automatically return to the normal indication in 5 seconds after the last adjustment or when another function is activated.

④ **Balance control**

To adjust the left-right speaker balance, first select the balance mode by pressing the SEL button until the BAL indication appears on the LCD display.

Within 5 seconds of choosing the balance mode, turn selection knob right / left to adjust the balance as desired.

The balance position will be shown on the LCD display from BAL 10L (full left) to BAL 10R (full right).

When the volume level between the left and right speakers is equal, BAL L=R will be shown on the LCD display panel.

The display will automatically return to the normal indication in 5 seconds after the last adjustment or when another function is activated.

⑤ **Loud control**

When listening to music at low volume levels, this feature will boost the bass and treble response.

This action will compensate for the reduction in bass and treble performance experienced at low volume.

To select the loudness feature, press SEL button until LOUD ON or LOUD OFF is displayed, then turn selection knob left or right to activate or deactivate loudness.

⑥ **Equalizer (EQ)**

You can select an equalizer curve designed for 4 music types (POP, ROCK, CLASSIC, JAZZ).

To select the desired curve, first select the EQ mode by pressing SEL button until the "EQ OFF" indication appears on the display panel. Within 5 seconds of choosing the EQ mode, turn selection knob to select an equalizer curve as desired.

(3) Mode button

MODE

290F3CD44
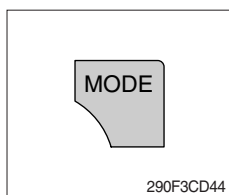
① Press mode button to select RADIO / USB / AUX / BT audio.

(4) Audio mute button

MUTE

75793CD77
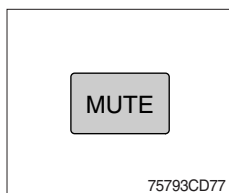
① Press mute button momentarily to mute volume and MUTE mark will blink on the LCD display.
Press the button again to return to the mode in use before the mute mode was activated.

■RADIO

(1) AM / FM / LW band selector

AM/FM

75793CD78
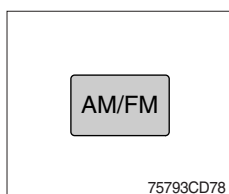
① Each time this button is pressed, the radio button is changed.
Each time this button is pressed, LCD displays each band as follows :

FM1 → FM2 → FM3 → AM → LW → FM1

※ LW band is only available for Europe.

(2) Up / down tuning

290F3CD43
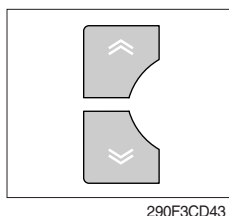
① To automatically select a radio station, momentarily press the up tune seek button ⋀ or down tune seek button ⋁ for less than 3 seconds to search for the closest radio station.
To manually select a radio station, press the up tuning & down tuning button for longer than 3 seconds.
The radio frequency will move up or down step by step each time you press button.

(3) Station pre-set button

1	2
3	4
5	6

75793CD69~74
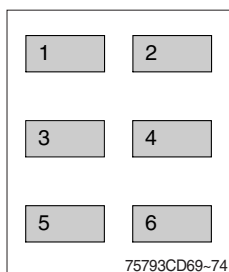
① Pressing these buttons shortly will recall your favorite pre-set radio stations.
To store your favorite stations into any of the 6 pre-set memories in each band (AM/FM/LW), use the following procedure :
a. Turn the radio ON and select the desired band.
b. Select the first station to be pre-set using the manual up/ down or automatic seek tuning control button.
c. Press the chosen pre-set button to store your selected station into and continue to hold it in. The beep sound will be momentarily heard and the pre-set number will apear on the LCD display indicating that the station is now set into that pre-set memory position and can be recalled at any time, by pressing that pre-set button.

(4) Pre-set scan (PS) / Best station memory (BSM) button

290F3CD42
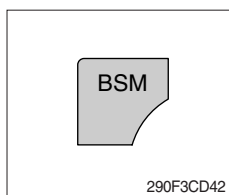
① **Pre-set scan (PS)**

Press BSM button shortly to scan the 6 pre-set station stored the memories on each band (AM/FM/LW).

The unit will stop at each pre-set station (the pre-set number on the LCD display will flash during pre-set scan operation) and remain on the selected frequency. Press the button momentarily again to remain on the station currently being heard.

② **Best station memory (BSM)**

Pressing BSM button for longer than 2 seconds will activate the BSM tuning feature which will automatically scan and enter each station into memory.

If you have already set the pre-set memories to your favorite stations, activating the BSM tuning feature will erase those stations and enter the new ones.

This BSM feature is most useful when traveling in a new area where you are not familiar with the local stations.

■USB PLAYER

75793CD81-1

(1) USB function

① Connect a USB device if you want to listen to MP3 file in a USB device.

② It will automatically play MP3 file in the USB device and the LCD display will show "READING USB".

※ If there are no files on USB device, playback will revert back to the previous mode after displaying "NO FILE".

(2) AUX function

① If you want to listen to music of a external audio device, connect a external audio device through AUX cable.

② Change AUX mode by pressing MODE button.

If audio file of Audio device is playing, you can listen to music through speaker.

(3) File selection & cue / review button
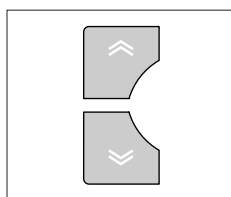
290F3CD43

① File selection function

This button is used to select file up / down.

Each time the forward file select ⩓ is pressed, file number is increased.

Each time the backward file select ⩔ is pressed, file number is decreased.

② Cue / review functions

High-speed audible search of file on a USB can be made by this button (the cue and review functions).

Press and hold the cue button ⩓ to advance rapidly in the forward direction or the review button ⩔ to advance rapidly in the backward direction.

(4) MP3 directory / file searching

① The D-, D+ button is used to select a particular directory and file.

Press and hold for more than 3 seconds while playing MP3 file.

Turn right / left the selection knob to search the directory. Press the button when you find the wanted directory.

For example, the directory search generally changes in two methods depending on the order of writing as follows.

· Method 1 : ROOT→ Dir01→ Dir02→ Dir03→ Dir04→ Dir05 →Dir06→Dir07→ROOT

· Method 2 : ROOT→ Dir01→ Dir02→ Dir05→ Dir03→ Dir06→ Dir04→Dir07→ROOT

If you want to search the file in the located directory, turn right / left the selection knob consecutively. Press the button when you find the wanted file. The unit will then play the selected file.

For instance, the file search changes in Dir01 as follows.

File01 → File02 → File03 → File04 → File01

※ MP3 directory / file configuration

ROOT

Directory01

File01 File02 File03 File04 **Dir02**   **Dir03**   **Dir04**

File05 File06 **Dir05**   File07 File08 **Dir06**   File09 File10 **Dir07**
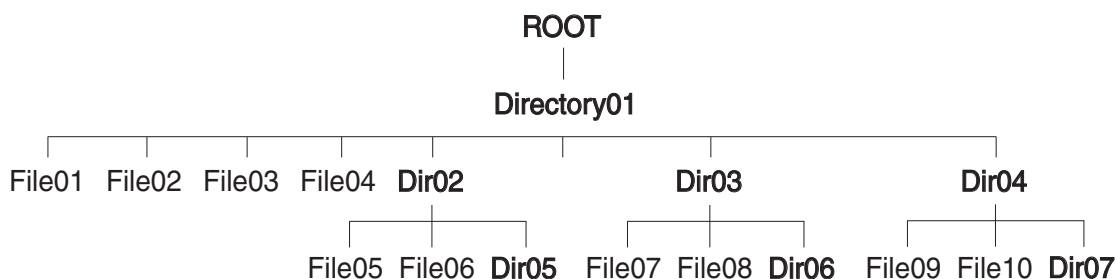
(5) ID3 v2 display

1 DISP

75793CD82

① Disp button is used to change the display information.

While playing an MP3 file, you can change the file information shown on the LCD display.

Each time you press DISP (display), the display changes to show the following.

※ If the MP3 disc does not have any ID3 information, the display will show NO ID3 on LCD display.

Directory name / file name (normal mode)

↓

Album name / performer / title

↓

File number / elapsed time

↓

Directory name / file name (normal mode)

(6) File scan (SCN)

2 SCN

75793CD83
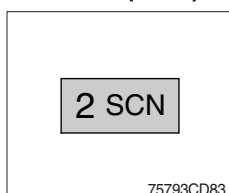
① During USB play, press SCN button to play the first 10 seconds of each file on the whole file on the USB (SCN mark will appear on the LCD display).

When a desired file is reached, press the SCN button again to cancel the function.

The unit will then play the selected file.

※ In case of playing MP3 file, when the SCN (scan) button is pressed and held for longer than 2 seconds, the SCN mark will blink on the LCD display and all files in the selected directory will be introduced until the file scan mode is cancelled by pressing the SCN button again or by activating the random or repeat functions.

(7) Repeat play selector (RPT)

3 RPT

75793CD84

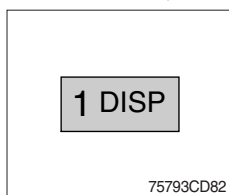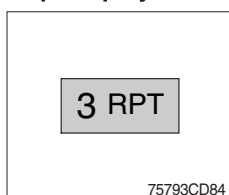① During USB play, press RPT button to play the selected file repeatedly (RPT will appear on the LCD display).

Play of the file will continue to repeat until this button is pressed again and the RPT disappears from the LCD display.

※ In case of playing MP3 file, when the RPT button is pressed and held longer than 2 seconds, the RPT mark will blink on the LCD display and play all files in the selected directory and will be repeated until the directory repeat mode is cancelled by pressing the repeat button again or by activating the scan or random functions (RPT mark will disappear from LCD display).

(8) Random play selector (RDM)

4 RDM

75793CD85
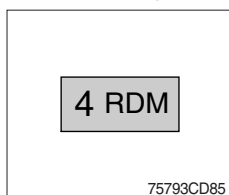
① During USB play, press RDM button to play the files on the USB in a random shuffled order (RDM will appear on the LCD display). The file select function will also select file in the random order instead of the normal process.
The random play mode can be cancelled by this button again.

※ In case of MP3 file, when the random button is pressed and held longer than 2 seconds, the RDM mark will blink on the LCD display and play all files in directory randomly until the directory random mode is cancelled by pressing the random button again or by activating the scan or repeat functions (RDM mark will disappear from LCD display).

(9) Directory down

5   D-

75793CD86
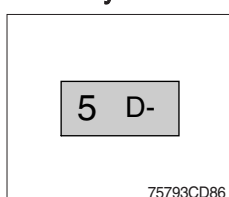
① Press D- button briefly while playing MP3. The previous directory is located each time you press this button.

(10) Directory up

6   D+

75793CD87
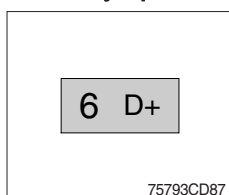
① Press D+ button briefly while playing MP3 . The next directory is located each time you press this button.

※ If the MP3 file does not have a directory, the unit play MP3 at 10-file intervals.

※ If any MP3 file does not exist in USB, this button can not operate.

■BLUETOOTH

(1) Introduce

The bluetooth radio supports bluetooth wireless technology. Bluetooth technology provides a wireless link between a bluetooth mobile phone or bluetooth music player and the hyundai bluetooth radio.

The bluetooth radio features a hands-free system so that you may talk on the telephone without taking your eyes off the road or your hands off the wheel. A microphone built into the front of the radio receives your voice and the calling party can be heard through the speakers.

Additionally, a bluetooth music player can be wirelessly connected to be the bluetooth radio and playback music tracks in high quality sound through the speakers. Many bluetooth mobile phones include a music player and can provide both hands-free calling and music playback.

Check your mobile phone owner's manual for details.

※ When the starting switch is in the ON position, the bluetooth radio is on standby to connect with your mobile phone even if the radio is switched off. The machine battery may therefore become drained if the ignition switch remains in the ON position for an extended period of time.

※ Bluetooth technology uses low power radio transmission to connect to your bluetooth mobile phone or bluetooth music player. As radio signal strength reduces over distance, the quality of sound performance during phone calls and music playback may become poor if the distance between the radio and device widens. It is recommended that the mobile phone or music player is kept inside the cab for best results.

※ As a bluetooth wireless connection can extend to 10 meters, your bluetooth device may automatically connect to the bluetooth radio even if the device is not in the machine.

※ The bluetooth radio uses the latest digital noise & echo suppression system to provide the best sound clarity with little or no distortion, but in some conditions there may be some echo and noise experienced. It is recommended to keep the car windows closed during hands-free calls for best results.

290F3CD215
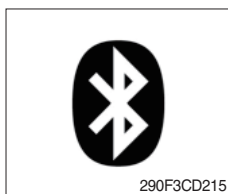
① **Bluetooth indicator**

The bluetooth logo is displayed when a bluetooth device is connected, and not displayed, when no bluetooth device is connected. If the bluetooth mobile phone is connected but the connection is not of satisfactory quality, the bluetooth logo is not displayed.

7709A3BT02
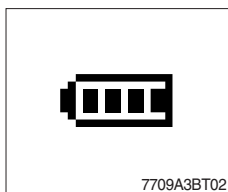
② **Battery strength indicator**

This is an indication of your mobile phone battery condition. If your mobile phone is unable to transmit battery condition level, the indicator is not displayed.

7709A3BT03

③ **Single level indicator**

This is an indication of the mobile phone network signal strength in your current location. If your mobile phone is not able to transmit signal level, the indicator is not displayed.

(2) Bluetooth function

① Pairing a bluetooth mobile phone or music player

A bluetooth connection must first be established between your bluetooth mobile phone or bluetooth music player and the bluetooth radio. The first step to connecting the bluetooth radio and bluetooth device is to introduce or "Pair" the bluetooth radio and bluetooth device together.

It is recommended that you have the instruction manual for your bluetooth mobile phone or music player with you during the pairing process described below to understand how to set your device to pair with the bluetooth radio.

※ It is recommended that all other bluetooth devices other than mobile phones are switched off during the registration or pairing process.

a. Connection method

a) Press SEND button for 2 seconds in any mode, **PAIRING** appears on the bluetooth radio display.

b) Browse your mobile phone or music player menu to find the **SETTINGS** or **CONNECTIVITY** section to find the bluetooth connection section.

c) Find the command that may be called search for bluetooth device or discovery mode so that your bluetooth device can locate all the bluetooth devices within range that may be connected.

d) After the search is complete, **HHI AUDIO** should appear on your mobile phone or music player screen.

e) Select **CONNECT** or **SELECT** on your mobile phone or music player.

f) The mobile phone or music player should now prompt you top enter a PIN code. Enter 0000 into your bluetooth device and select OK.

g) The mobile phone or music player should confirm that it has established a new paired connection with the bluetooth radio.

h) The connecting process is now complete.

i) If the connecting process is successful, the bluetooth logo appears on the radio display and paired phone name (e.g. Samsung or LG) and **CONNECTED** appear on the display for 2 seconds.

j) Your bluetooth device is now ready for use with the bluetooth radio.

k) If the pairing failed, **FAIL** appears on the bluetooth radio display.

※ (a) The bluetooth radio allows a maximum of 6 bluetooth devices to be paired.

(b) Bluetooth technology only allows one phone to be connected to your bluetooth radio at one time.

(c) If a bluetooth music player is to be connected together with a mobile phone, refer to the page 3-55, PLAYING MUSIC USING BLUETOOTH AUDIO.

(d) Bluetooth connection with a mobile phone is normally established using the Hands-Free Profile (HFP). However, in some cases, the connection may use Head Set Profile (HSP) and some functions may not be available.

(e) As each mobile phone or music player brand and model has a different menu structure and control names, you may need to refer to the user manual of your bluetooth device for the correct procedure to connect to another bluetooth device.

(f) Once the bluetooth pairing is complete, automatic connection between mobile phone and the bluetooth radio is possible whenever the starting switch is switched ON.

The mobile phone must be set to automatically connect to the bluetooth radio to allow this automatic connection.

(g) The bluetooth radio will give connection priority to the last connected mobile phone.

(h) It is recommended that all other bluetooth devices other than mobile phones are switched off during the registration or pairing process.

② Disconnecting a bluetooth device

If you need to disconnect your bluetooth mobile phone or music player with the bluetooth radio, follow the steps below.

a. Press END button for 2 seconds in any mode.

b. When the bluetooth connection is lost, bluetooth logo disappears and the previously connected device name (e.g. Samsung or LG) and **DISCONNECTED** appear on the display.

③ Select a bluetooth device

The bluetooth radio can pair up to 6 bluetooth devices. A previously paired mobile phone or music player can be selected for connection using the method described below. Refer to the table 2-1 for examples.

Preset No.	Bluetooth device name (for example)
1	Samsung
2	LG
3	Apple
4	Motorola
5	EMPTY
6	EMPTY

Table 2-1

a. Press SEND button, to select **BLUETOOTH** mode.

b. Press SEL button. **SELECT PHONE** will appear on the display.

c. Turn selection knob, until **SELECT PHONE** is displayed.

d. When **SELECT PHONE** appears on the display, press SEL button.

e. Press the preset button to display the name of the bluetooth device name of the mobile phones or music players previously paired. You may also turn selection knob to display the paired devices.

· Each time you turn or selection knob, the LCD displays as follows :

SAMSUNG → LG → APPLE → MOTOROLA → BACK → SAMSUNG

f. If the bluetooth mobile phone name is Samsung as in the example of table 2-1, then **Samsung** appears on the display. When preset button ▭ is pressed or selection knob is turned 1 click to the right.

g. Once the name of the bluetooth device you wish to connect is displayed, in this example **Samsung**, press SEL button to have the Samsung device connected.

h. If the connection is successful, the bluetooth logo appears on the display and paired phone name **Samsung** and **CONNECTED** appears on the display for 2 seconds.

④ Deleting a previously paired bluetooth device

If you no longer need to use a paired bluetooth device with the bluetooth radio, it can be deleted.
It is from the registration assignment for another mobile phone.
Refer to the example of paired devices shown table 2-1.

a. Press SEND button, to select **BLUETOOTH** mode.

b. Press SEL button and **SELECT PHONE** appears on the display.

c. Turn selection knob, until **DELETE PHONE** is displayed.

d. When **DELETE PHONE** appears on the display, press SEL button.

e. Press the preset button to display the name of the bluetooth device name of the mobile phones or music players previously paired. You may also turn selection knob to display the paired devices.

f. Once the name of the bluetooth device you wish to delete is displayed, in this example **Samsung**, press SEL button to have the Samsung device deleted.

g. The display will then show **DELETE NO** or if selection knob is turned, **DELETE OK** on the display.

h. To confirm your wish to delete the selected device, when **DELETE OK** appears on the display press SEL button.

i. If the bluetooth device being deleted (in this example) was connected, the display will show previous paired phone name "Samsung" and DISCONNECTED.

j. In the example above, the number of paired devices is now reduced to 3, leaving 3 vacant memory locations for additional devices. Table 2-2 shows the example.

Preset No.	Bluetooth device name (for example)
1	LG
2	Apple
3	Motorola
4	EMPTY
5	EMPTY
6	EMPTY

Table 2-2

⑤ Basic telephone operation

a. Using the bluetooth radio for hands-free calls

a) When an INCOMING call arrives at the bluetooth radio via your connected bluetooth mobile phone, **INCOMING CALL** appears on the display for 3 seconds then the calling telephone number is shown.

b) Press SEND button to answer the INCOMING call. **HANDSFREE** appears on the display.

c) To end the call, press END button and the call will end and **END CALL** is displayed.

d) If you wish to reject an INCOMING call, press END button.

e) To make an OUTGOING call use the keypad of the connected bluetooth mobile phone to enter a number and press the **OFF-HOOK** (SEND) button on your mobile phone.

f) **OUTGOING CALL** is displayed on the bluetooth radio and the call continues in hands-free mode.

g) The call can be ended by pressing END button the **ON-HOOK** (END) button of the connected mobile phone.

※ Some mobile phones may not reject an INCOMING call using the action of d) above. In this case, press the **ON-HOOK** button on the connected mobile phone to reject.

b. Last call number redials

Select **BLUETOOTH** mode by pressing SEND button. To making a call to the last dialed number, press SEND button again. **OUTGOING CALL** appears on the radio display for 1 second.

※ Some mobile phones may require an additional press of SEND button to start the last number redial call.

c. Switching to private (headset) mode during a call

During an INCOMING or OUTGOING call started in hands-free mode, it is possible to switch to the private call mode using the mobile phone handset to speak and to hear the calling party in private.

a) Press SEND button during the conversation ; **PRIVATE** appears on the display.

b) To switch back to hands-free mode using the bluetooth radio, press SEND button again during the private conversation ; **HANDSFREE** is shown on the display and hands-free call operation continues.

※ The above switching function may cause disconnection of the bluetooth link between the bluetooth radio and some mobile phones.
If SEND button is pressed during the private conversation, the bluetooth connection will return automatically.

(3) Funtion of bluetooth audio player

① Playing music using bluetooth audio

The bluetooth radio supports the bluetooth profile Audio Advanced Distribution Profile (A2DP). If your mobile phone or music player supports this profile then it is possible to listen to music tracks located on your bluetooth device through the bluetooth radio and speakers.
Additionally, the bluetooth radio supports the Audio Video Remote Control Profile (AVRCP).
If your bluetooth mobile phone or music player supports this profile then it is possible to advance to the next track or replay previous tracks on using the buttons on the front of the bluetooth radio your machine.

a. Press MODE button until **BT AUDIO** is displayed.

b. When **BT AUDIO** appears on the display, select the music player feature on your bluetooth device. And then bluetooth device play automatically to begin playback.

c. To pauses the bluetooth audio playback, press SEL button for 2 seconds. Press the knob again for 2 seconds to resume playback.

d. Press buttons (∧, ∨) advance to the next or previous music track.

※ (a) Check your bluetooth device owner's manual for details of how to play music tracks via an external bluetooth audio system such as the bluetooth radio.

(b) Some bluetooth mobile phones cannot play music at all or may play music tracks in low-quality audio through the bluetooth radio.

(c) Some mobile phones require additional pairing to allow bluetooth audio playback.

(d) Information about songs (ID3) (e.g. the elapsed playing time, song titles, song index, etc.) playing using bluetooth audio profile cannot be displayed on this bluetooth radio.

② Connecting a bluetooth music player and mobile phone simultaneously

It is possible to connect a bluetooth mobile phone and a separate bluetooth music player to the bluetooth radio at the same time. Phone calls can be sent and received using the hands-free feature while music is playing using the bluetooth audio feature.

(4) Bluetooth setting

① Setting the automatic call answer feature

If this function is selected, the bluetooth radio automatically answers all INCOMING calls.

This feature enhances safety as the driver does not need to take their hands from the steering wheel to accept an INCOMING call.

Note that this feature cannot be set at different settings for each of the paired mobile phones.

a. Press SEND button to select BLUETOOTH mode.

b. Turn selection knob until **SETTINGS** is displayed.

c. Press SEL button until **AUTO ANSWERING** is displayed.

d. Press SEL button and turn selection knob. The LCD then displays as follows :

ANSWER OFF ➔ ANSWER 5 SEC ➔ ANSWER 10 SEC ➔ RETURN ➔ ANSWER OFF

· ANSWER OFF = Automatic answer function is not active.
· ANSWER 5 SEC = Automatic answers all INCOMING calls after a 5 second delay.
· ANSWER 10 SEC = Automatic answers all INCOMING calls after a 10 second delay.
· RETURN = Return to previous menu.

e. After making your selection, press SEL button to store the selection.

f. **SETTINGS** is then displayed for adjustment if required.

g. If you do not wish to adjust any further bluetooth settings, press END button to return to the last selected mode.

② Setting calling voice volume

This function is to set the level of the mobile phone's calling voice volume to be heard through the bluetooth radio and speakers.

a. Follow steps a. to c. of above setting below ①.

b. When **VOICE VOLUME** appears on the display, press SEL button to display the current level of the calling voice. Turn selection knob right or left to adjust the calling voice volume as desired. This is the level the calling voice volume will be set to each time the bluetooth radio is used after the stating switch is turned off and then on again.

c. After making your selection, press SEL button to store the selection.

d. **SETTINGS** is then displayed for adjustment if required.

e. If you do not wish to adjust any further bluetooth settings, press END button to return to the last selected mode.

③ Setting the ring volume

This function is to set the level of the mobile phones ring tone volume to be heard through the bluetooth radio and speakers.

a. After making your selection, press SEL button to store the selection.

b. When **RING VOLUME** appears on the display, press the SEL button to display the current level of the ring tone. Turn selection knob right or left to adjust the ring tone volume as desired. This is the level the ringer volume will be set to each time the bluetooth radio is used after the starting switch is turned off and then on again.

c. After making your selection, press SEL button to store the selection.

d. The press END button to return to the last selected mode.

4) RADIO AND USB PLAYER (WITH BLUETOOTH, MACHINE SERIAL NO. : #0149-)


9403CD100

■FRONT PANEL PRESENTATION

1 ········ Power ON/OFF,
Volume UP/DOWN button

2 ········ Manual UP/DOWN Tuning,
File search, SEL button

3 ········ Mode button,
Audio mute button

4 ······· Call & Pair button

5 ······· Call end button

6 ······· Station preset 1
DIS ·········· Display button

7 ······· Station preset 2

8 ······· Station preset 3
RPT ·········· Repeat play button

9 ······· Station preset 4
RDM ·········· Random play button

10 ······· Station preset 5
DIR- ·········· Directory down button

11 ········ Station preset 6
DIR+ ·········· Directory up button

12 ········ Scan play button (SCAN)
Best station memory (BSM) button

13 ········ Auto tune up, Seek up button

14 ········ Auto tune down, Track down button

15 ········ USB connector

16 ········ AUX IN Jack

17 ········ MIC hole

RADIO AND USB PLAYER (WITHOUT BLUETOOTH, MACHINE SERIAL NO. : #0149-)

9403CD101

■FRONT PANEL PRESENTATION

1 .... Power ON/OFF,
Volume UP/DOWN button

2 .... Manual UP/DOWN Tuning,
File search, SEL button

3 .... Mode button,
Audio mute button

4 .... Radio seek up button

5 .... Radio seek down button

6 .... Station preset 1
DIS .... Display button

7 .... Station preset 2

8 .... Station preset 3
RPT .... Repeat play button

9 .... Station preset 4
RDM .... Random play button

10 .... Station preset 5
DIR- .... Directory down button

11 .... Station preset 6
DIR+ .... Directory up button

12 .... Scan play button (SCAN)
Best station memory (BSM) button

13 .... Track up button

14 .... Track down button

15 .... USB connector

16 .... AUX IN Jack

■GENERAL

(1) Power and volume button

9403CD102

① **Power ON / OFF button**

Press power button (1) to turn the unit on or off.

② **Volume UP/DOWN control knob**

Turn VOL knob (1) right to increase the volume level.
Turn VOL knob (1) left to decrease the volume.
After 5 seconds the display will return to the previous display mode.

③ **Initial volume level set up**

I-VOL is the volume level the unit will play at when it is next turned on. To adjust the I-VOL level, press and hold VOL button (1) for longer than 2 seconds. The current volume level displays on the display panel.
Then turn button (1) right or left to set the volume level as the I-VOL level.

④ **Clock ON/OFF control**

The CLOCK was default at off status. To turn CLOCK ON, press and hold VOL button (1) for longer than 2 seconds to display I-VOL, then short press VOL again, turn VOL knob while CLOCK OFF display, then the CLOCK ON will be displayed.

※ **Due to time tolerance, the clock display on the Audio unit might have slight difference.**

⑤ **Clock adjustment**

With CLOCK ON selected, press VOL knob again after CLOCK ON display, the hour will blink, turn VOL knob right or left to adjust hour.
Simply press VOL again, the minute will blink, turn VOL knob to adjust minute. Then press VOL again to confirm the clock once finished.

(2) Menu Selection

9403CD103

① This button can adjust the effect of the sound and other things. Each time you press this button (2), LCD displays as follows :

BAS → TREB → BAL L=R → FAD F=R → EQ → LOUD ON → BEEP 2ND

On each setting, the level can be controlled by turning TUNE knob (2). When the last adjustment is made, after 5 seconds, the display will automatically return to the previous display mode.

② **Bass control**

To adjust the bass tone level, first select the bass mode by pressing SEL button (2) repeatedly until BASS appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the bass level as desired. The bass level will be shown on the display panel from a minimum of BASS-7 to a maximum of BASS+7.

③ **Treble control**

To adjust the treble tone level, first select the treble mode by pressing SEL button (2) repeatedly until TREB appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the treble level as desired. The treble level will be shown on the display panel from a minimum of TREB -7 to a maximum of TREB +7.

④ **Balance control**

To adjust the left-right speaker balance, first select the balance mode by pressing SEL button (2) repeatedly until BAL indication appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the balance as desired. The balance position will be shown by the bars on the display panel from BAL 10R (full right) to BAL 10L (full left).

⑤ **Fader control**

To adjust the front-rear speaker balance, first select the fader mode by pressing SEL button (2) repeatedly until FADER indication appears on the display panel. Then turn knob (2) right or left within 5 seconds to adjust the front-rear speaker level as desired. The fader position will be shown by the bars on the display panel from FAD 10F (full front) to FAD 10R (full rear).

⑥ **EQ control**

You can select an equalizer curve for 4 music types (CLASSIC, POP, ROCK, JAZZ). Press button (2) until EQ is displayed, then turn knob (2) right or left to select the desired equalizer curve. Each time you turn the knob, LCD displays as follows :

EQ OFF → CLASSIC → POP → ROCK → JAZZ

※ **When the EQ mode is activated, the BASS and TREBLE modes are not displayed.**

⑦ **Loud control**

When listening to music at low volume levels, this feature will boost the bass and treble response. This action will compensate for the reduction in bass and treble performance experienced at low volume.

To select the loudness feature, press button (2) until LOUD is displayed, then turn knob (2) right or left to activate or deactivate loudness.

⑧ **Beep control**

To adjust the BEEP mode, first select the BEEP mode by pressing button (2) repeatedly until BEEP indication appears on the display panel. Then turn knob (2) left or right within 5 seconds to select BEEP 2ND, BEEP OFF or BEEP ON.

· BEEP 2ND : You will only hear the beep sound when the buttons are held down for more than 2 seconds.
· BEEP OFF : You can not hear the sound beep when you press the buttons.
· BEEP ON : You can hear the beep sound each time you press the buttons.

(3) Mute control

① Press and hold MUTE button (3) for over 2 seconds to mute sound output and MUTE ON will blink on the LCD. Press the button again to cancel MUTE function and resume to normal playing mode.

(4) Mode selection

① Repeat press MODE button (3) to switch between FM1, FM2, AM, USB, AUX, BT MUSIC.

※ **If there is no USB, AUX, Bluetooth Phone connected, it would not display USB, AUX, BT when you press button (3).**

■RADIO

(1) Mode button

9403CD104

① Repeat press MODE button to select FM1, FM2 or AM.

(2) Manual tuning button

9403CD105

① To manually tune to a radio station, simply turn encoder TUNE (2) left or right to increase or decrease the radio frequency.

(3) Auto tuning button

9403CD106

① To automatically select a radio station, simply press Seek up or Track down button.

9403CD107

(4) Station preset button

9403CD108

① In radio mode, pressing buttons (6) to (11) will recall the radio stations that are memorized. To store desired stations into any of the 6 preset memories, in either the AM or FM bands, use the following procedure :

  a. Select the desired station.
  b. Press and hold one of the preset buttons for more than 2 seconds to store the current station into preset memory. Six stations can be memorized on each of FM1, FM2, and AM.

(5) Preset scan (PS) / Best station memory (BSM) button

9403CD109
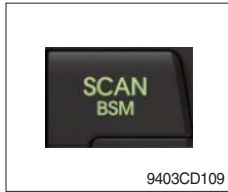
① Press BSM button (12) momentarily to scan the 6 preset stations stored in the selected band. When you hear your desired station, press it again to listen to it.

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.**

■ USB PLAYER

(1) USB playback

9403CD110

① The unit was equipped with a front USB jack and also a rear USB Jack.
With a USB device plugged in the front USB jack, it will be detected as front USB mode. And with a USB device plugged in the rear USB jack, it will be detected as rear USB. To get to a USB mode, press MODE (3) button momentarily or insert the USB device in front or rear USB jack.

※ **If there are no mp3 or wma files in USB device, it will revert to the previous mode after displaying NO FILE.**

(2) Track Up / Down button

9403CD106

9403CD107

① Press SEEK up (13) or TRACK down (14) to select the next or previous track. Press and hold the buttons to advance the track rapidly in the forward or backward direction.

(3) MP3 directory / File searching

9403CD111

① Button (2) is used to select a particular directory and file in the device. Turn button (2) right or left to display the available directories. Press button (2) momentarily when the desired directory is displayed, then turn button (2) right or left again to display the tracks in that directory. Press button (2) to begin playback when the desired file is displayed.

(4) Directory Up / Down button

9403CD112

① During MP3/WMA playback, simply press DIR- button (10) to select the previous directory (if available in the device); simply press DIR+ button (11) to select the next directory (if available in the device).

※ **If the USB device does not contain directories, it would play MP3/WMA tracks at 10- file when you press DIR- button (10), and play MP3/WMA tracks at 10+ file when you press DIR+ (11) button.**

(5) Track Scan Play (SCAN) button

9403CD113
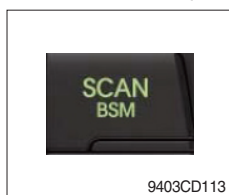
- SCAN playback : Simply press SCAN (12) button to play the first 10 seconds of each track.
- SCAN folder : Press and hold SCAN button for longer than 2 seconds to scan play the tracks in current folder.
- SCAN off : Simply press it again to cancel SCAN feature.

(6) Track Repeat Play (RPT) button

9403CD114

- REPEAT playback : Simply press RPT (8) button to play current track repeatedly.
- REPEAT folder : Press and hold RPT for longer than 2 seconds to repeat play the tracks in current folder.
- REPEAT off : Simply press it again to cancel REPEAT feature.

(7) Track Random Play (RDM) button

9403CD115

- RANDOM playback : Simply press RDM (9) button to play the tracks in the device in a random sequence.
- RANDOM folder : Press and hold RDM button for longer than 2 seconds to randomy play the tracks in the current folder.
- RANDOM off : Simply press it again to cancel RANDOM feature.

(8) ID3 v2 (DISP)

9403CD116

① While a MP3 file is playing, press DISP button (6) to display ID3 information. Repeat push DISP button (6) to show directory name / file name and album name / performer / title.

※ **If the MP3 disc does not have any ID3 information, it will show NO ID3.**

∗ USB Information and Notice
   a. Playback FILE SYSTEM and condition allowance.
      - FAT, FAT12, FAT16 and FAT32 in the file system.
      - V1.1, V2.2 and V2.3 in the TAG (ID3) version.
   b. Display up to 32 characters in the LCD display.
   c. No support any of MULTI-CARD Reader.
   d. No high speed playback but only playing with normal full speed.

   ※ **DRM files in the USB may cause malfunction to playback in the radio unit.**
   ※ **In temperatures below -10℃ (14℉), the audio unit with USB hook up may be affected and not play well.**

■AUX OPERATION

It is possible to connect your portable media player to the audio system for playback of the audio tracks via the cab speakers.

To get the best results when connecting the portable media to the audio system, follow these steps :

- Use a 3.5 mm stereo plug cable to connect the media player headphone socket at each end as follows.
- Adjust the portable media player to approximately 3/4 volume and start playback.
- Press the MODE button (3) on the audio unit to change into AUX mode.
- The volume and tone can now be adjusted on the audio unit to the desired level.

※ The audio quality of your media player and the audio tracks on it may not be of the same sound quality as the audio system is CD Player.

※ If the sound of the media player is too low compared with the radio or CD, increase the volume of the player.

※ If the sound of the media player is too loud and/or distorted, decrease the volume of the player.

※ When in AUX mode, only the Volume, Bass, Treble, EQ and Mode functions of the audio unit can be used.

■BLUETOOTH (if equipped)

(1) Using a bluetooth wireless connection

① Your audio unit supports bluetooth wireless technology. You can set up a wireless link with bluetooth cellular phone.

② Continue to pair the cellular phone with the audio unit. Within a few moments the two should be able to connect.

※ Since this audio unit is on standby to connect with your cellular phone via bluetooth wireless technology, using this audio unit without running the engine can result in battery drainage.

※ This audio units phone call reception is on standby when ignition switch is set to ACC OFF or ON.

※ The line-of-sight distance between this audio unit and your cellular phone must be 10 meters or less for sending and receiving voice and data via bluetooth wireless technology. However the transmission distance may become shorter than the estimated distance depending on the environment where it is being used.

※ Digital Noise & Echo suppression system provides the best sound clarity with little or no distortion (Echo & side tone will happen depending on cellular phone or service network).

※ To ensure the quality of calling, you should select a proper bluetooth VR level. This audio unit is already equipped with the best bluetooth VR level.

290F3CD215
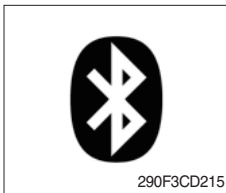
a. Bluetooth icon
It will blink while establishing the bluetooth pairing.
It will light up after a bluetooth device connected.

7709A3BT02
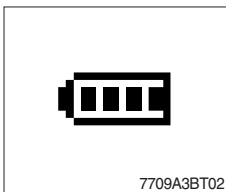
b. Battery icon
It indicates the battery status of the connected bluetooth device.

7709A3BT03

c. Single strength icon
It indicates the signal strength of the connected bluetooth device.

(2) Pairing in hands free modes

9403CD117

① Press and hold CALL button (4) for 2 seconds until you hear beep sound, then PAIR STR will appear on the display.

② For the next procedure, go to cellular phone pairing mode.

③ If it is in pairing status with audio unit and cellular phone, PAIRING will show on the display.

④ If you want to exit pairing mode, press CALL END button (5) briefly while pairing, then it will show PAIR CLR on the display.

⑤ Bluetooth Icon and PAIR OK appear on the display when pairing is successful.

(3) Cellular phone pairing mode

① Browse your cellular phone menu and find the connectivity or bluetooth connection section.

② Select search for a new handsfree device function and allow the phone to find the mobile.

③ HYUNDAI should appear on your cellular phone screen.

④ Press connect menu among the handsfree option on your cellular phone.

⑤ The cellular phone should prompt for a pin code. Insert the pin code 1234.

⑥ The cellular phone should confirm that it has established a new paired connection.

⑦ Close the menu. The pairing is now completed. It appears PAIR FAIL on the display for 3 seconds.

※ Each cellular phone type has distinct phone menu so you may need to refer to your manufactures instruction for the correct procedure on how to connect a new bluetooth device.

※ Please retry the pairing instruction if HYUNDAI does not appear on the cellular phone screen.

※ Please select authorized, if there is authorized menu in the menu of bluetooth connection in your cellular phone.

※ Once the bluetooth pairing is completed between your cellular phone and this audio unit, both units will be automatically recognized on its paring like when you turn on the key in your car even though the audio unit is turned off.

※ This audio unit can store up to 6 phones pairings. If the memory is full, the first stored paired phone will be deleted.

※ The connecting priority will be given to the last connected cellular phone.

※ If you want to change the connecting priority, try to connect this audio unit from the cellular phone you want.

(4) Bluetooth connection and disconnection

① When established bluetooth connection is made between this audio unit and the cellular phone, bluetooth icon on the display appears and then the display shows HF/AV CONN when handsfree & AV profile is connected.

② To disconnect bluetooth link

Press and hold CALL END button (5) for 2 seconds, it shows DIS CON and bluetooth Icon disappears on the display.

9403CD118

③ To connect bluetooth link

Press CALL button (4) briefly, it blinks bluetooth Icon on the display while bluetooth is being connected. If the connection is completed, bluetooth Icon displays on the display.

9403CD117

※ When your cellular phone battery is at low charge, the bluetooth connection may occasionally be lost. To maintain good connectivity ensure that your phone battery is adequately charged.

※ In case of failure of bluetooth pairing :
 - Delete item in paired list on your phone.
 - Reset both phone by power off/on and the audio unit by ACC off/ on.

※ Connecting priority of handsfree profile is higher than headset profile.

※ The headset mode does not support caller ID, reject call and call Transfer.

(5) Using the audio unit as a handsfree device

① When the audio unit is ringing, it shows CALL and follows with the phone number ********** on the display.

② To accept call

Press CALL button (4), ANSWER CALL followed by TALKING will show in the display.

③ To end call

To end call, press CALL END button (5), REJECT appears on the display.

9403CD117/8

※ If reject call is activated in your phone, then your cellular phone does not support reject call function.

(6) Audio transfer between the audio unit and phone

The audio transfer function is for switching the call from the audio unit to the cellular phone for private conversation.

9403CD117

① Press CALL button (4) briefly during conversation, it appears CALL TRANS on the display. To switch back to the audio unit, press button (4) briefly during private conversation, then it appears CALL TRANS on the display again.

※ **This function will be a cause of disconnection of bluetooth link in some nokia phones, but do not worry, just press button (4) during private conversation, then switch back to the audio unit automatically.**

※ **The quality of calling between cellular phone and audio unit is better than calling between one audio unit and another one.**

(7) Last call number dialing

9403CD117

① Press CALL button (4) briefly, it appears CALL TO on the display, then simply press CALL button once again, it would make the last call with phone number displayed on LCD.

If Reject call is activated in your phone, then your cellular phone does not support Reject Call function.

※ **If you are using SAMSUNG phone, then you may need to press send button once more. With the first press of button it should show contact list in your phone, then if you press again you should be ready to make the last call.**

(8) To make a call by cellular phone

The audio transfer function is for switching the call from the audio unit to the cellular phone for private conversation.

① The audio unit will be activated automatically when you make a call with cellular phone.
② When you make a call processing by cellular phone, it shows CALLING on the display.
③ When you receive a call, the phone number ******** appears on the display.

(9) Using the audio unit as bluetooth music

The audio unit supports A2DP (Audio Advanced Distribution Profile) and AVRCP (Audio Video Remote Control Profile), and both profiles are available to listen music at the audio unit via cellular phone which is supporting the two profiles above.

① To play music, search the menu on your cellular phone as below :

i.e : Menu→ File manager→ Music→ Option→ Play via bluetooth.

It appears BT MP3 on the display.

② During BT MP3 playing, you could select the previous or next track by pressing SEEK up or TRACK down button on audio unit or operate via your cellular phone.

③ To stop music, press button (5) briefly and it will automatically switch into the previous mode.

④ To resume music playing, press the play button on your cellular phone.

※ This function may be different depending on cellular phone. Please follow the cellular phone menu. Some types of phones need to pair once more for bluetooth MP3 connection.

※ This function will be caused to disconnect A2DP, AVRCP depends on cellular phone.

※ Information about songs (e.g.: the elapsed playing time, song title, song index, etc.) cannot be displayed on this audio unit.

■RESET AND PRECAUTIONS

(1) Reset function

Interfering noise or abnormal compressed files in the MP3 disc or USB instrument may cause intermittent operation (or unit frozen/locking up). It is strongly recommended to use appropriate USB storage to not cause any malfunction to the audio unit. In the unlikely event that the player fails to operate correctly, try to reset unit by any of following two methods.

① press and hold [SEEK] [5 DIR-] simultaneously for about 5 seconds. (without Bluetooth)

② Press and hold [ ] [5 DIR-] simultaneously for about 5 seconds. (with Bluetooth)

※ Take out the fuse for the audio system in the vehicle once and then plug it back in.

※ It will be necessary to re-enter the radio preset memories as these will have been erased when the microprocessor was reset.

After resetting the player, ensure all functions are operating correctly.

(2) Precautions

When the inside of the cab is very cold and the player is used shortly after switching on the heater, moisture may form on the disc or the optical parts of the player and proper playback may not be possible.

If moisture forms on the optical parts of the player, do not use the player for about one hour. The condensation will disappear naturally allowing normal operation.

① Operation voltage : 9~32 volts DC, negative
② Output power : 40 watts maximum (20 watts x 2 channels)
③ Tuning range

Area	Band	Frequency range	Step
USA	FM	87.5~107.9 MHZ	200K
	AM	530~1710 KHZ	10K
EUROPE	FM	87.5~108.0 MHZ	50K
	AM	522~1620 KHZ	9K
ASIA	FM	87.5~108.0 MHZ	100K
	AM	531~1602 KHZ	9K
LATIN	FM	87.5~107.9 MHZ	100K
	AM	530~1710 KHZ	10K

● AREA Selection :

- To select an area, press and hold related buttons at FM1 band for about 3 seconds.
- USA Area: Press and hold mode + 1DIS buttons for 3 seconds
- EUROPE Area: Press and hold mode + 2 buttons for 3 seconds
- ASIA Area: Press and hold mode + 3RPT buttons for 3 seconds
- LATIN Area: Press and hold mode + 4RDM buttons for 3 seconds.
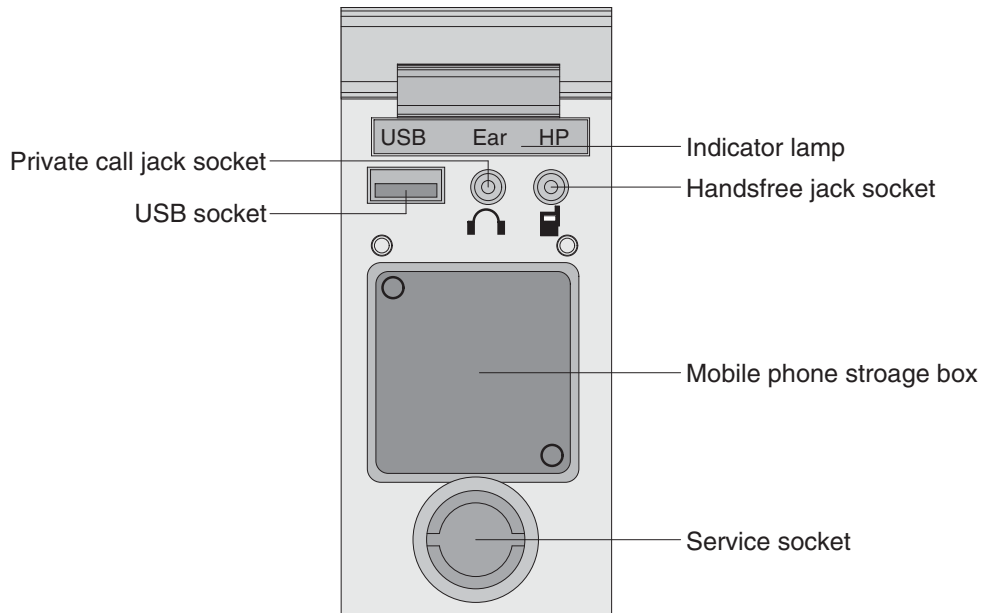
④ USB version : USB 1.1
⑤ Bluetooth version : V2.1
⑥ Bluetooth supported profile :
- A2DP : Advanced Audio Distribution Profile
- AVRCP : Audio/Video Remote Control Profile
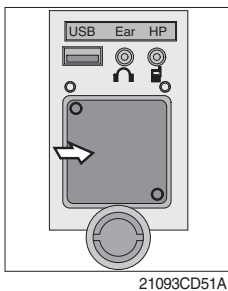- HFP : Hands-Free Profile

5) HANDSFREE (OPTION)

Allow you to dial a call or to have a conversation without holding your handset. Use the remote controller when making and answering a calls or ring off.
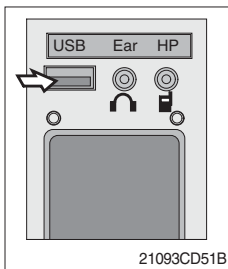

Private call jack socket

USB socket

USB   Ear   HP

Indicator lamp

Handsfree jack socket

Mobile phone stroage box

Service socket

21093CD51

(1) Mobile phone storage box

USB Ear HP

21093CD51A

① Mobile phone can be stored when call by handsfree.

(2) USB socket

USB   Ear   HP

21093CD51B

① This socket is used to charging the mobile phone.

(3) Private call jack socket

USB   Ear   HP

21093CD51C
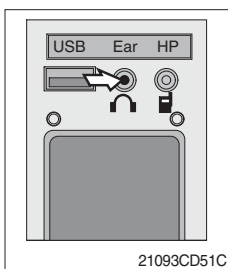
① This can be used protect you privacy calling by using ear phone.

② The mobile phone must be connected handsfree jack socket.

(4) Handsfree jack socket

21093CD51D
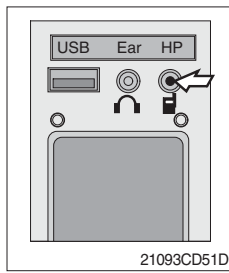
① Connect the jack cable when call by handsfree.

② Use the special adapter when jack cable is not interchangeable.

③ Check the jack type of mobile phone before use.

(5) Indicator lamp

21093CD51E
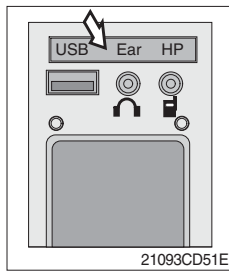
① This lamp is turned ON when the handsfree mode selected.

(7) Wireless handsfree

LCD

Call button

55I3CD26

① Select the handsfree mode by pressing bluetooth button on the mobile phone.

Press the CALL button for more than 6 seconds for pairing (connection process of the mobile phone and handsfree), you can hear beep sounds three times.

⚹ HYUNDAI

PAIRING

55I3CD27
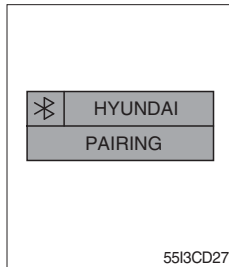
② The mobile phone finds bluetooth named " HYUNDAI".

Select "HYUNDAI" and set "connect with Bluetooth on the mobile phone".

· Default password : 0000

⚹ HYUNDAI

CONNECTED

55I3CD28
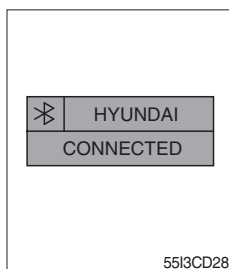
③ The Bluetooth pairing is made, the LCD screen shows "CONNECTED".

④ Once the Bluetooth pairing is made, they will be automatically connected after 20 seconds when start key ON.

⑤ When you want to deactivate the pairing, press and hold the CALL button for more than 3 seconds then you can hear beep sounds twice and the function will be deactivated.

6) REMOTE CONTROLLER (OPTION)

Radio handsfree jack
External speaker microphone (null)
Power/volume switch
LCD
CALL button
SEEK button
MODE button
Radio calling mode button

External speaker LED (null)
Handsfree jack MIC
External speaker switch (null)
Handsfree mode button
SEEK button
MUTE button
TALK button
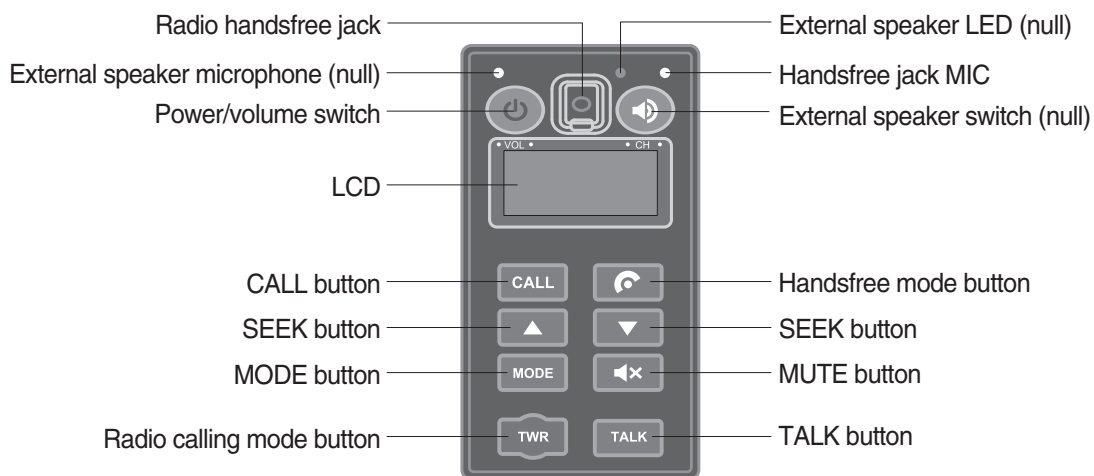
55I3CD31

(1) Power and volume switch

55I3CD31A

① This switch is used to turn the audio or handsfree ON or OFF.
② This switch is turned to right, the handsfree volume is increased over 7 steps.
③ If it is turned to left, volume will be decreased.
※ **This switch adjust the audio volume when selected audio mode.**

(2) Mode change button
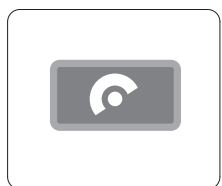
55I3CD31B

① This button is to select the handsfree mode or audio mode.
· Lamp ON : Handsfree mode ("TEL MUTE" displayed ON audio LCD)
· Lamp OFF : Audio mode

(3) Call button
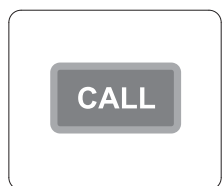
55I3CD31C

① This button is used answer a call, last number radial, ring off.

② For calling, press the button 0.5~1.5 seconds until the beep sounds.

※ **This can be used when the starting switch is ON.**

3-60
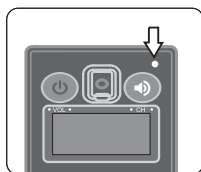
(4) Handsfree MIC

55I3CD31D

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

(5) Seek button
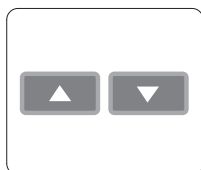
55I3CD31E

① If this button pressed, the radio automatically stops at the next frequency of broadcasting for your listening.

② This button enable to select the song of the MP3 from USB.

    ⋀ : Turn a station of higher frequency and the next song of the MP3.

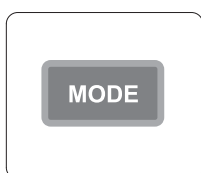   ⋁ : Turn a station of lower frequency and the previous song of the MP3.

(6) Mute button

55I3CD31F

① Short press this button to mute or cancel the mute (silence) while broadcasting.

(7) Mode button

MODE

55I3CD31G

① Press the mode button to select the desired mode.

② Radio → MP3 → AUX

※ **The LCD displayed each mode.**

(8) Radio calling mode button

TWR
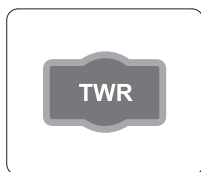
55I3CD31H

① Press this button, activated or deactivated the radio handsfree function.

② As long as you do not press this button, you can hear the other party.

③ The LED is turned ON when this button is activated.
The LED turned OFF when the audio mode or the mobile phone handsfree calling mode is activated.

※ **Radio handsfree**
You can make a call to external worker without holding the radio by hand. (The radio is not installed to the machine).

(9) Talk button

TALK

55I3CD31J

① The call is connected while pressing this button (when TALK button is activated).

※ **Unlike mobile phones, when you want to talk through the radio, you need to press the button (Push-to-talk method).**
While one is talking through the radio, the other party can only listen to him/her.

(10) Handsfree jack

55I3CD31K

① Connect the jack cable when call by radio handsfree.
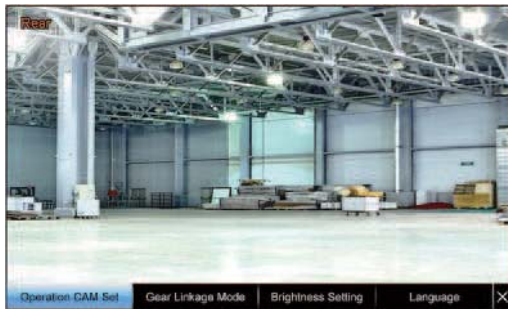
7) MONITOR (OPTION)
· **Adjusting the angle**

Upwards and downwards up to 7°, swivels left and right up to 15°.

Sunshade

LCD (7")

OSD

Buttons

50D9CD211

| No.	Symbol	Name	Description
1	◀	LEFT	- Move the Menu (left). Lower the value.
2	○	MENU / ENTER	- Enter the OSD menu - Choose the menu
3	▶	RIGHT	- Move the Menu (right). Upper the value.

(1) Operation CAM set

50D9CD200

50D9CD201

· Set the number of camera channels on screen.

① 1 CH (standard)

50D9CD202K

· Display one camera image on screen.
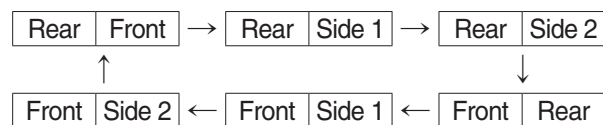· Press left or right key to change the camera channel.

| Rear | → | Front | → | Side 1 |

| Side 2 |
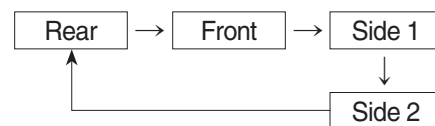
② 2 CH (dual)

50D9CD203K

· Display two camera images on screen.
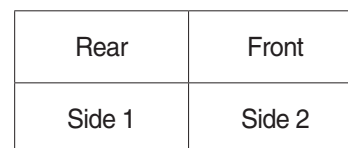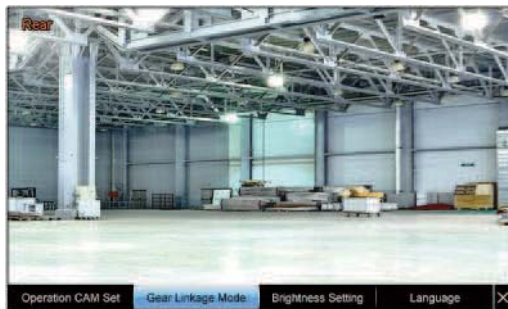· Press left or right key to change the camera channel.

| Rear | Front | → | Rear | Side 1 | → | Rear | Side 2 |

| Front | Side 2 | ← | Front | Side 1 | ← | Front | Rear |

③ 4 CH (quad)

50D9CD204K

· Display four camera images on screen.

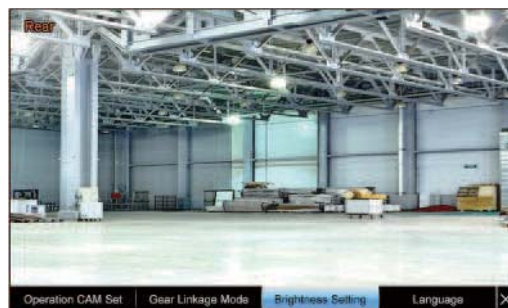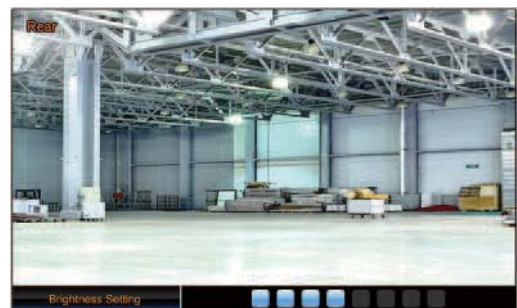| Rear	Front
Side 1	Side 2

(2) Gear linkage mode

50D9CD205

50D9CD206

· Depending on the gear state (forward/ backward), camera channel is switched automatically.
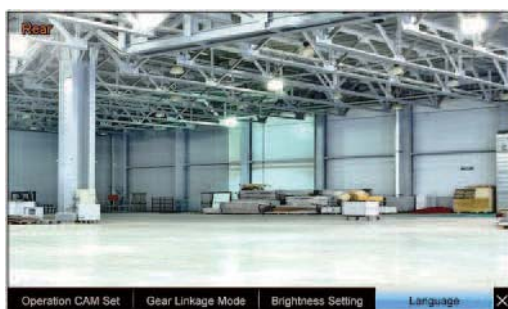
(3) Brightness setting

50D9CD207

50D9CD208

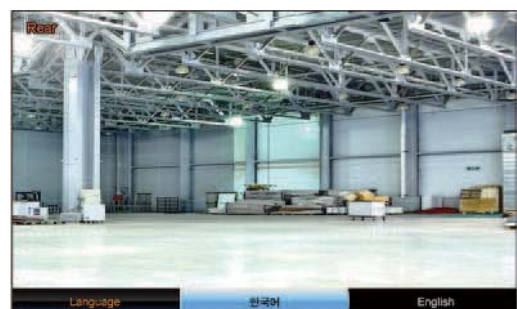· Adjust the display brightness.

(4) Language

50D9CD209

50D9CD210

· Set the language (13 multiple language).