1. CAB DEVICES

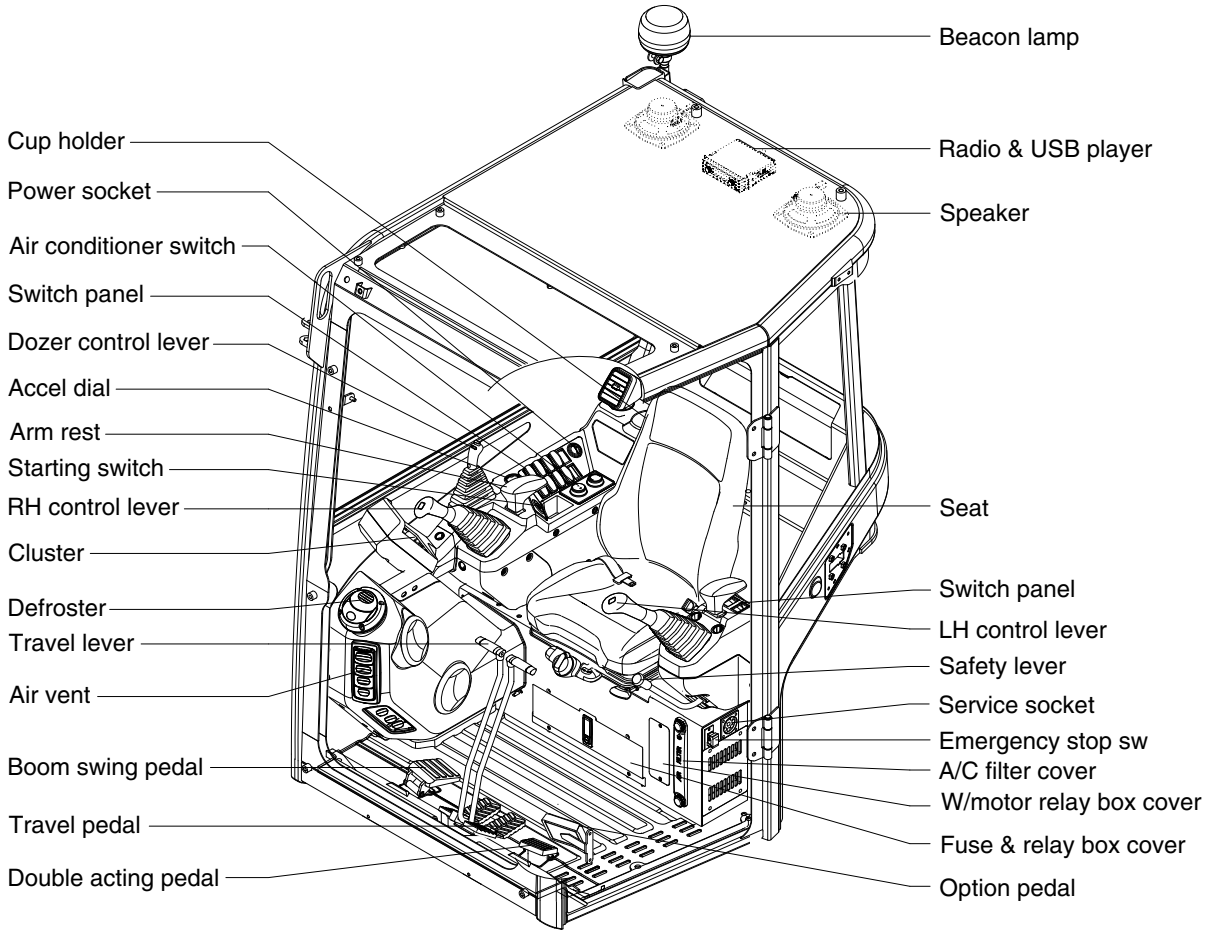
1) The ergonomically designed console box and suspension type seat provide the operator with comfort.

2) ELECTRONIC MONITOR SYSTEM

(1) The centralized electronic monitor system allows the status and conditions of the machine to be monitored at a glance.

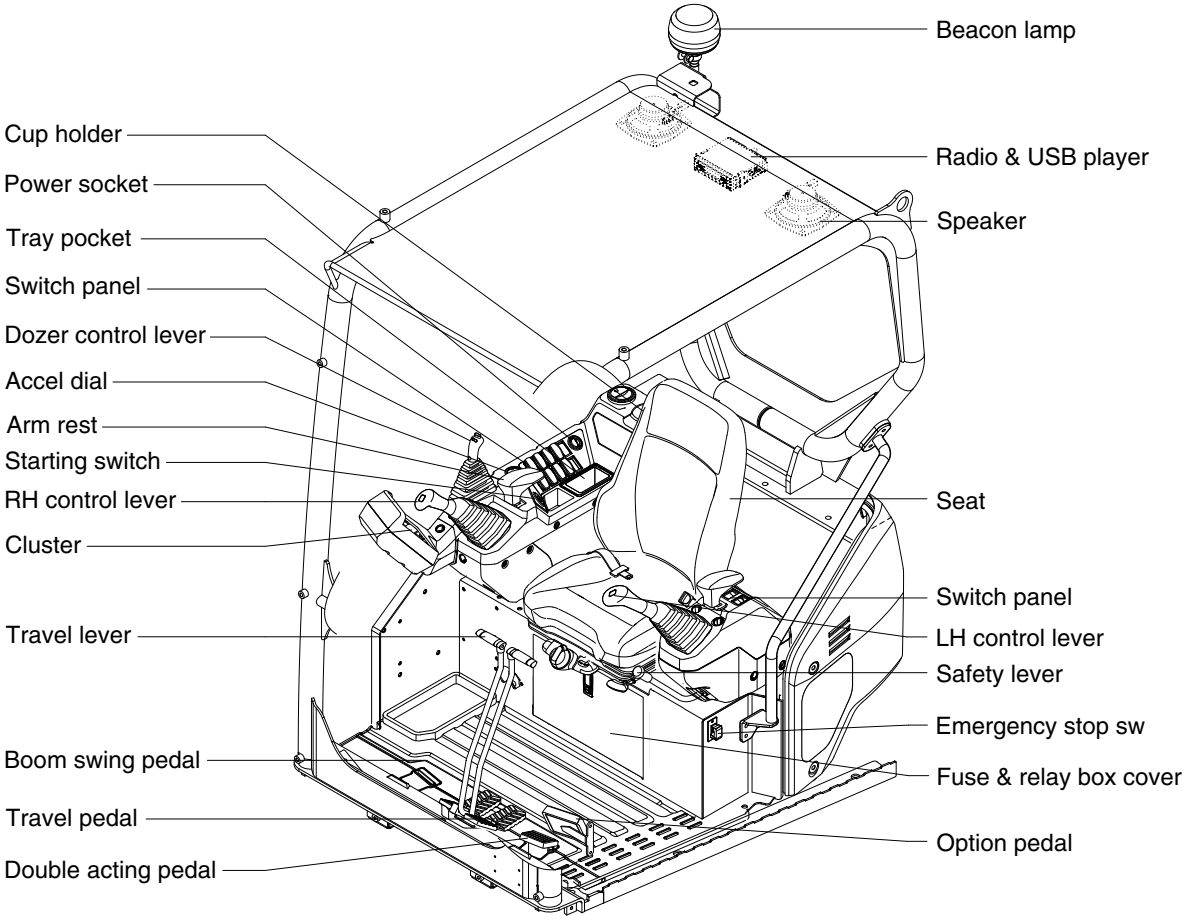
(2) It is equipped with a safety warning system for early detection of machine malfunction.

■ CAB TYPE



35AZ3CD01

■ CANOPY TYPE



35AZ3CD02

2. CLUSTER

1) STRUCTURE

The cluster consists of LCD and switches as shown below. The LCD is to warn the operator in case of abnormal machine operation or conditions for the appropriate operation and inspection.
The LCD is to display for monitoring, manage and display set with the switches.

※ **The cluster installed on this machine does not entirely guarantee the condition of the machine. Daily inspection should be performed according to chapter 6, Maintenance.**

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

Warning lamps (see page 3-6)

Gagues (see page 3-4)

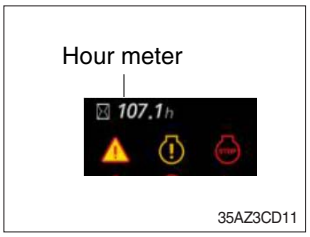
Pilot lamps (see page 3-12)

Switches (see page 3-17)

48AZ3CD10

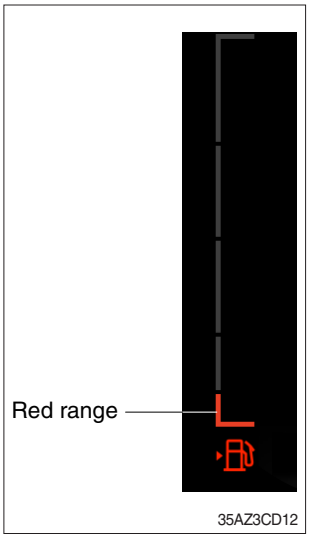
2) GAUGES AND DISPLAYS

(1) Hour meter



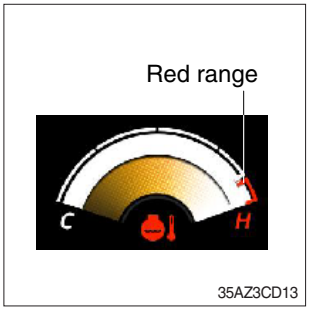
① This meter shows the total operation hours of the machine.
② Always ensure the operating condition of the meter during the machine operation.
Inspect and service the machine based on hours as indicated in chapter 6, maintenance.

(2) Fuel gauge



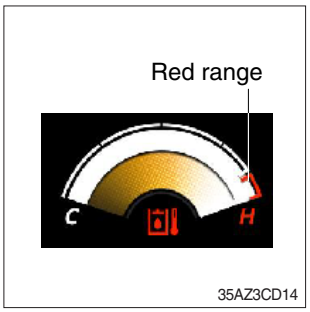
① This gauge indicates the amount of fuel in the fuel tank.
② Fill the fuel when in the red range or warning lamp ON.
※ **If the gauge illuminates the red range or warning lamp ON even though the machine is in the normal condition range, check the electric device as this can be caused by poor connection of sensor.**

(3) Engine coolant temperature gauge



① This indicates the temperature of coolant.
· Red range : Above 110°C (230°F)
② When the red range pointed or warning lamp ON, engine do not abruptly stop but run it at medium speed to allow it to cool gradually, then stop it.
Check the radiator and engine.
※ **If the engine is stopped without cooled down running, the temperature of engine parts will rise suddenly, this could cause severe engine trouble.**
※ **If the gauge indicates the red range or warning lamp ON in red even though the machine is in the normal condition range, check the electric device as this can be caused by poor connection of sensor.**

(4) Hydraulic oil temperature gauge



① This gauge indicates the temperature of hydraulic oil.
· Red range : Above 105°C (221°F)

② If the indicator is in the red range or lamp ON in red, reduce the load on the system. If the gauge stays in the red range, stop the machine and check the cause of the problem.

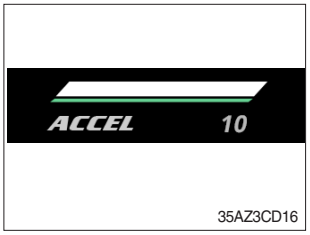
※ If the gauge indicates the red range or warning lamp ON in red even though the machine is in the normal condition range, check the electric device as this can be caused by poor connection of sensor.

(5) Engine rpm gauge and clinometer

① This displays the engine speed.

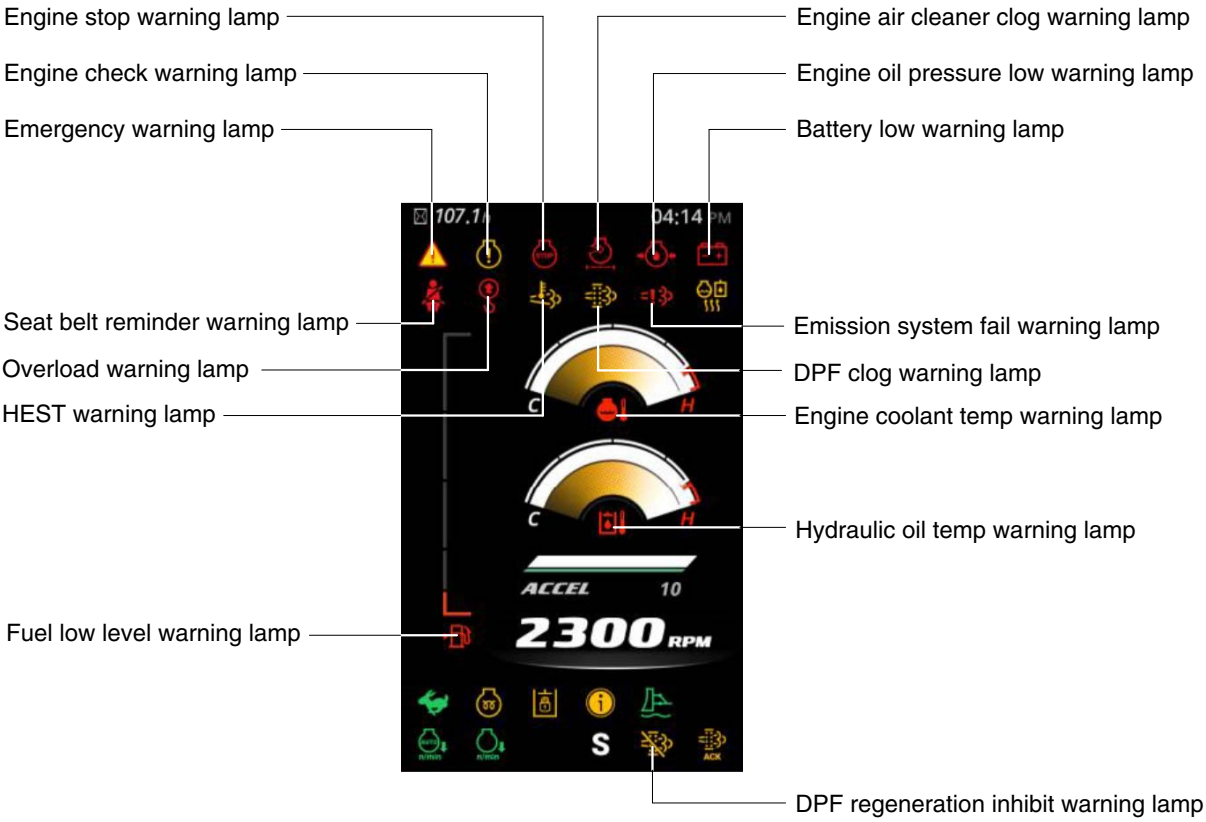
② This displays the tilt of machine.

(6) Accel dial gauge



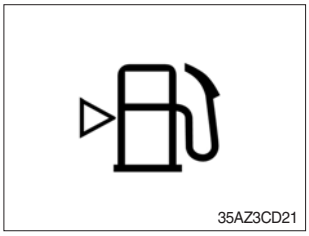
① This gauge indicates the level of accel dial from 0 to 10 step.

3) WARNING LAMPS



48AZ3CD20

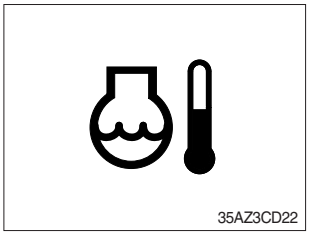
(1) Fuel low level warning lamp



35AZ3CD21

① This lamp lights up and buzzer sounds when the level of fuel is below 18.9 ℓ (5.0 U.S. gal).
② Fill the fuel immediately when the lamp ON.

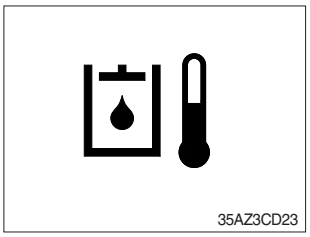
(2) Engine coolant temperature warning lamp



35AZ3CD22

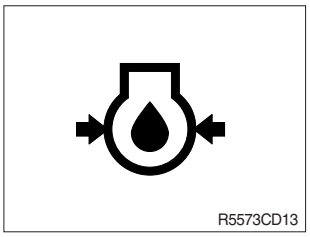
① This lamp lights up and buzzer sounds when the temperature of coolant is over the normal temperature 115°C (239°F).
② Check the cooling system when the lamp ON.

(3) Hydraulic temperature warning lamp



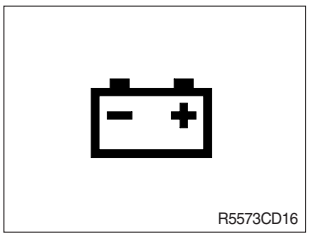
① This lamp lights up and buzzer sounds when the temperature of coolant is over the normal temperature 105°C (221°F).
② Check the cooling system when the lamp ON.

(4) Engine oil pressure low warning lamp



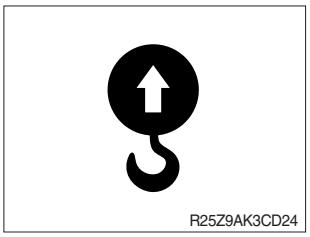
① This lamp lights up and buzzer sounds after starting the engine because of the low oil pressure.
② If the lamp ON during engine operation, shut OFF engine immediately. Check oil level.

(5) Battery low warning lamp



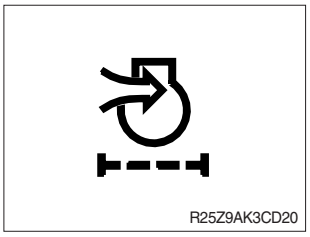
① This lamp lights up and buzzer sounds when the starting switch is ON, it is turned OFF after starting the engine.
② Check the battery charging circuit when this lamp blinks during engine operation.

(6) Overload warning lamp



① When the machine is overloaded, this lamp blinks and buzzer sounds.
② Reduce the machine load.

(7) Air cleaner clog warning lamp



① This lamp lights up and buzzer sounds when the element of the air cleaner is clogged.
② Check, clean or replace element.

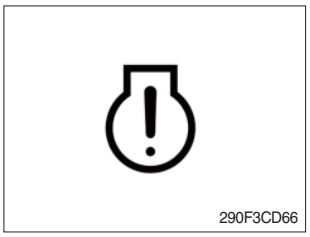
(8) Emergency warning lamp

① This lamp pops up and the buzzer sounds when each of the below warnings occurs.
- Hydraulic oil temperature high warning lamp ON
- Engine coolant temperature high warning lamp ON
- Communication error with ECU

※ **The pop-up warning lamp moves to the original position and lights up when the buzzer stop switch is pushed or pop-up is touched. The buzzer will stop.**
This is same as following warning lamps.

② When this warning lamp lights up, machine must be checked and serviced immediately.

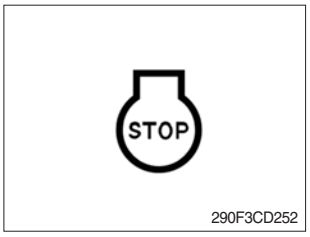
(9) Check engine warning lamp



① This warning lamp lights up and buzzer sounds when the engine must be checked.

※ **When the warning lamp lights up, stop the machine and find the cause for repair.**

(10) Engine stop warning lamp



① If this warning lamp lights up and buzzer sounds, stop the engine immediately and check the engine.

② Check the fault codes on the monitor.

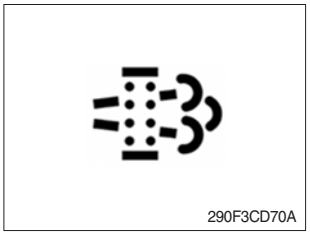
※ **Please contact your Hyundai service center or local dealer.**

(11) Seat belt reminder warning lamp

① When operator does not fasten the operator's the seat belt, the seat belt reminder warning lamp pops up and buzzer sounds.

② Fasten the seat belt.

(12) DPF clog warning lamp



① This warning lamp lights up and the buzzer sounds when the regeneration is needed.

② For details, please refer to the after-treatment system below.

※ DPF : Diesel Particulate Filter

※ After-treatment system

The after-treatment system uses DOG and DPF to satisfy the exhaust regulations.

The oxidation catalyst of DOG reduces the emission of hydrocarbon and carbon monoxide through the catalyst, and the particle materials (PM) discharged from the engine are collected.

DPF regeneration is composed of “forced regeneration” during driving and “manual regeneration” performed by the driver.

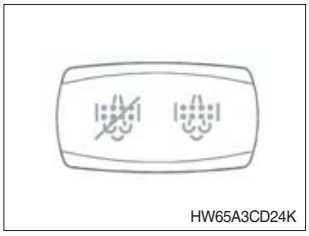
When the regeneration is not performed successfully according to the procedure, warning lamp relevant to the each operating condition is turned ON.

When the warning lamp is turned ON, park the machine on a safe place, and perform the regeneration process manually according to the following procedure.

The warning lamp is turned OFF when the regeneration process is performed successfully.

⚠ Engine power can be reduced when the regeneration process is not performed manually after the warning lamp is turned ON.

※ **Manual (Forced) DPF regeneration method**


HW65A3CD24K

DPF regeneration procedure is activated manually by the driver when the driver selects to initiate the regeneration procedure.
Because the operating condition is inappropriate for the hot engine exhaust temperature (Ex.: Work near the inflammable materials), manual regeneration may be required if the driver prohibited the active regeneration procedure for long period.

① **Manual regeneration condition**

- Coolant (Engine oil) temperature : 40°C or more
- Engine RPM : Low-speed idle run
- Parking brake must be applied (Only relevant to the wheel-type machine)
- When the soot concentration is accumulated to 20% or more

② **Manual (Forced) regeneration procedure**

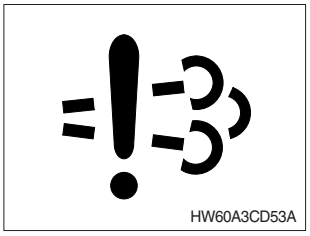
Park the machine on a well-ventilated area, and keep away from inflammable materials to set the machine as shown below.

- Operate the machine until the engine coolant and oil temperature becomes 40°C or more.
- Engine speed is set to low speed.
- Put the gear lever on neutral, and apply the parking brake. (Only relevant to wheel-type machine)
- Safety lever is placed on the locking position.
- When the regeneration mode is in "Prohibit", DPF switch is pressed to the manual regeneration position.

③ Regeneration switch is activated to initiate the regeneration procedure.

※ **Refer to page 3-35 for the DPF switch.**

(13) Exhaust system failure warning lamp



① This warning lamp is turned ON in 3 cases such as when the quantitative distribution is stopped, poor reagent quality and monitoring malfunction, etc.

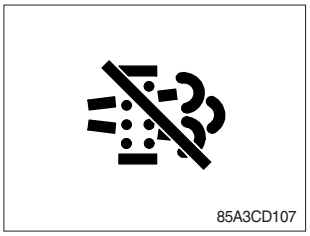
② Please refer to the exhaust gas control system below.

※ **Exhaust gas control system**

This machine is equipped with the engine exhaust gas emission control system that satisfies the exhaust gas emission regulations. The owner/driver has the responsibility of proper operation and maintenance on the exhaust control system provided in the guaranteed provisions related to emission.

The engine exhaust system is mounted on the DPF. DPF is a emission reduction device that reduces the diesel particulate matter or soot from the exhaust gas of the diesel engine. DPF is stored until the particulate matter is combusted. The process of combustion and elimination of the stored particulate matter is referred to as "Regeneration". After the regeneration process is completed, residue is remaining, and it must be removed from the DPF regularly.

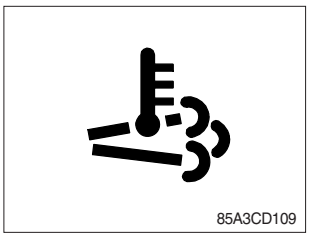
(14) DPF regeneration inhibit warning lamp



① This warning lamp indicates, the DPF switch is pushed to the inhibit position, therefore automatic and manual regeneration can not occur.

※ **Refer to page 3-35 for the DPF switch.**

(15) HEST (High exhaust system temperature) warning lamp



① This warning lamp indicates, when illuminated, that exhaust temperatures are high due to regeneration of the DPF.

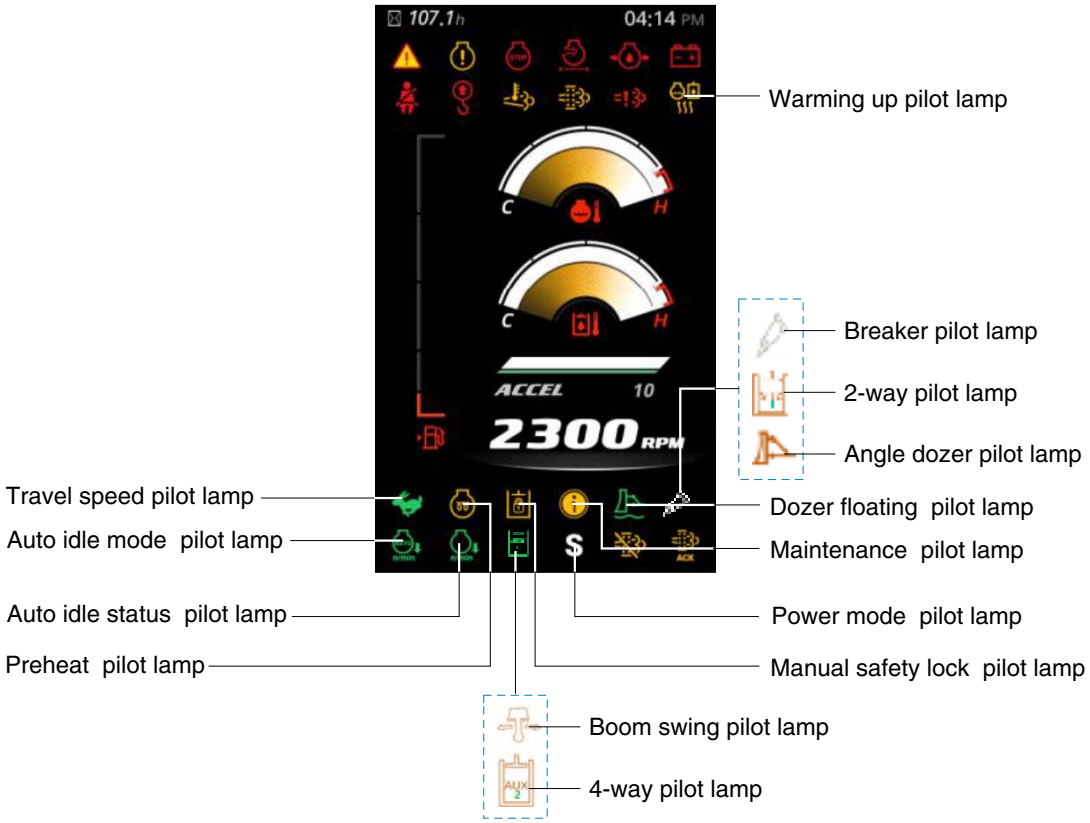
② The lamp will also illuminate during a manual regeneration.

③ When this lamp is illuminated, be sure the exhaust pipe outlet is not directed at any surface or material that can melt, burn, or explode.

⚠ **When this lamp is illuminated, the exhaust gas temperature could reach 600°C [1112°F], which is hot enough to ignite or melt common materials, and to burn people.**

※ **The lamp does not signify the need for any kind of equipment or engine service; It merely alerts the equipment operator to high exhaust temperatures. It is common for the lamp to illuminate on and off during normal equipment operation as the engine completes regeneration cycles.**

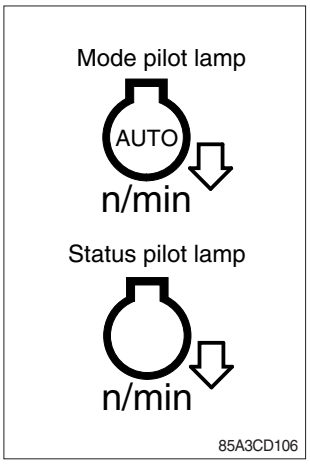
4) PILOT LAMP



(1) Power mode pilot lamp

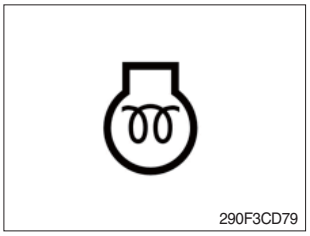
No	Mode	Pilot lamp	Selected mode
1	Power mode	P S	Heavy duty power mode (2000 rpm) Standard power mode (1750 rpm)
2	Travel mode		Low speed traveling High speed traveling

(2) Auto idle status/ mode pilot lamp



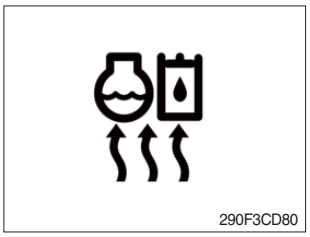
① The auto idle mode pilot lamp will light up when the idle mode is selected.
② The auto idle status pilot lamp will light up when all levers and pedals are at neutral position and the auto idle mode is selected.
③ One of the lever or pedal is operated, the status lamp will go off and the engine speed returns to the previous conditions.

(3) Preheat pilot lamp



① Turning the start key switch to the ON position starts preheating in cold weather.
② Start the engine after this lamp goes OFF.
※ **Refer to page 4-4 for details.**

(4) Warming up pilot lamp



① This lamp lights up when the coolant temperature is below 30°C (86°F).
② The automatic warming up is cancelled when the engine coolant temperature is above 30°C (86°F), or when 10 minutes have passed since starting the engine.

(5) Maintenance pilot lamp

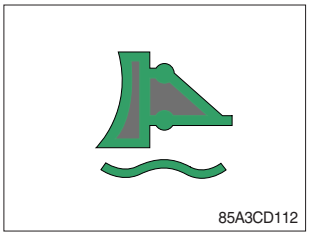
① This lamp lights up when consumable parts are in need of replacement. It means that the change or replacement interval of parts is 30 hours from the required change interval.
② Check the message in maintenance information of main menu. Also, this lamp lights up for 3 minutes when the start switch is switched to the ON position.

(6) Manual safety lock pilot lamp

① This lamp lights up when the safety lever is set to the LOCK position.

※ **Refer to page 3-35 for the safety lever.**

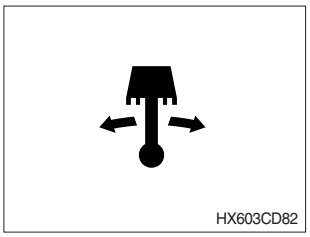
(7) Dozer floating pilot lamp



① This lamp will be light up when the dozer floating lever is pressed.

※ **Refer to the page 3-37.**

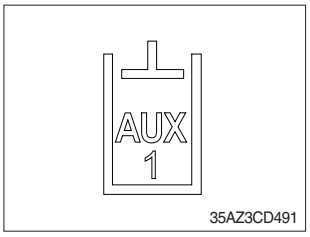
(8) Boom swing pilot lamp



① This lamp lights up when the boom offset switch is pressed.

※ **Refer to the page 3-35.**

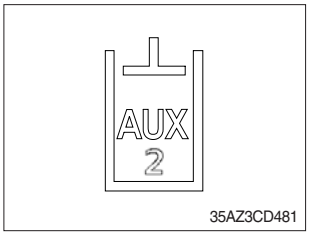
(9) 2-way pilot lamp



① This lamp lights up when the option flow control function is activated in the cluster.

※ **Refer to the page 3-28.**

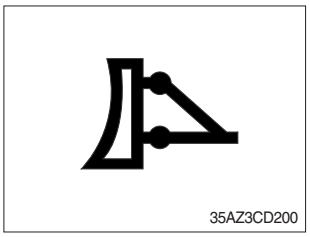
(10) 4-way (rotating) pilot lamp



① This lamp lights up when the boom swing selection switch is set to the rotator (not used boom swing) and the 4-way operation switch on the LH control lever is pressed.

※ **Refer to the page 3-28.**

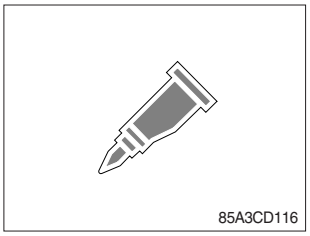
(11) Angle dozer pilot lamp



① This lamp will be light up when the AUX 1 switch is pressed to ANGLE DOZER positions.

※ Refer to pages 3-35.

(12) Breaker pilot lamp



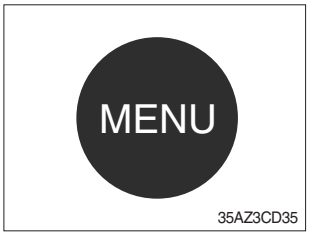
① This lamp will be light up when the breaker select switch is pressed.

※ Refer to pages 3-34.

5) SWITCHES

Sound short beep when each button is pressed.

(1) Menu button



① Go into the menu screen.

※ **Please refer to page 3-17.**

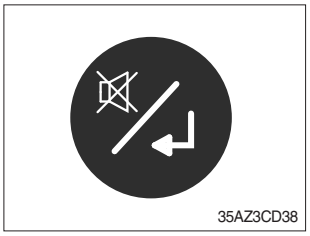
(2) Left/up/(+) and auto idle button

① Move left in sub menu.
② Move up in menu list
③ Increase input value in menu
④ Auto idle ON or OFF in the operation screen

(3) Right/down/(-) button

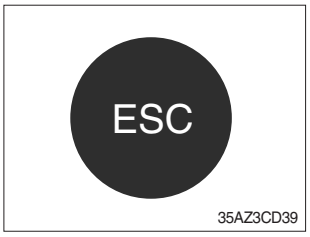
① Move right in sub menu.
② Move down in menu list
③ Decrease input value in menu

(4) Enter and buzzer stop button



① Select menu (enter).
② Stop buzzer sound when press this button more than 1.7 sec.

(5) ESC/ rear camera button



① Escape in the menu.
② Rear camera ON or OFF in the operation screen

6) MAIN MENU

Operation screen

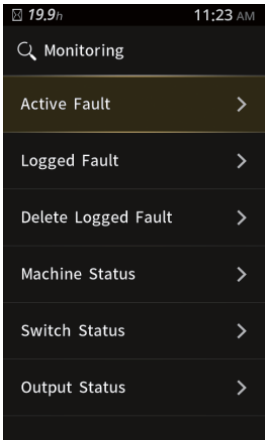
35AZ3CD100

press MENU button

Main menu screen

35AZ3CD106

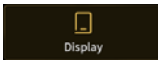
Sub menu screen



35AZ3CD107A

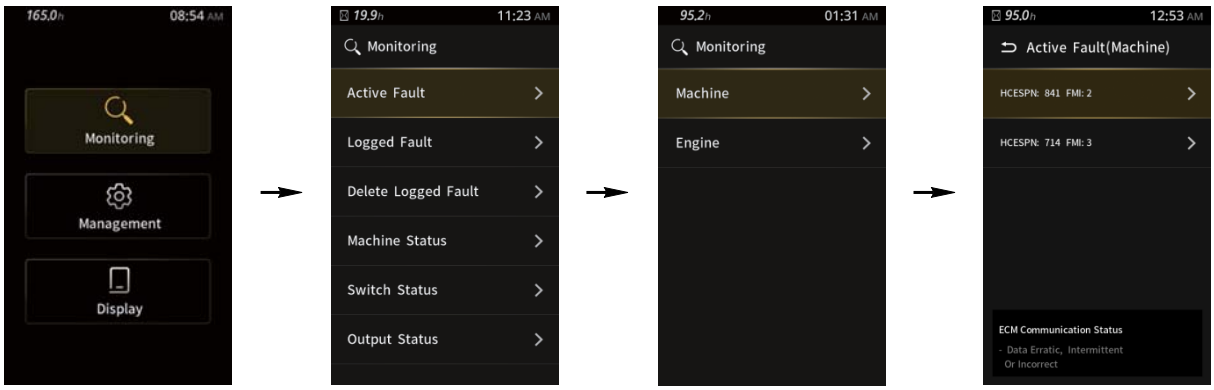
※ Please refer to the switches, page 3-16 for selection and change of menus and input values.
※ In the operation screen, press the menu button to access the sub-menu screen.

(1) Structure

No	Main menu	Sub menu	Description
1	 Monitoring 35AZ3CD103A	Active fault Logged fault Del logged fault Analog Switch Output	Machine, Engine Machine, Engine Machine, Engine Hyd oil temp, Coolant temp, Battery volt Engine speed, Accel dial volt Safety lever, Dozer floating, Seat belt, Travel speed Travel speed sol, Dozer floating sol, Start limit relay, Buzzer
2	 Management 35AZ3CD104A	Operating hours Maintenance Start limit mode Warning setting on/off Change password Machine information A/S phone number Auxilary flow	Operating hours Elapsed time, Change interval, Replacement etc. Disabled, Enable (Always), Enable (Interval) Overload on/off Change password Machine, Engine, CMCU A/S phone number, A/S phone number change Auxilary flow
3	 Display 35AZ3CD105A	Clock Brightness Unit Language	12 Hour, 24 Hour Manual, Auto Temperature, Pressure Korean, English, Turkish

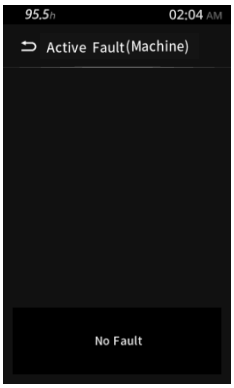
(2) Monitoring

① Active fault



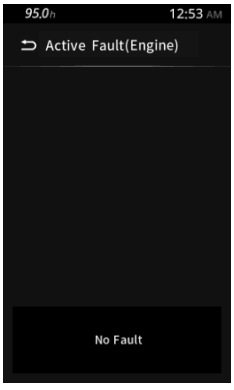
35AZ3CD106 35AZ3CD107A 35AZ3CD108 35AZ3CD110A

- The active fault of the machine and engine can be checked by this menu.



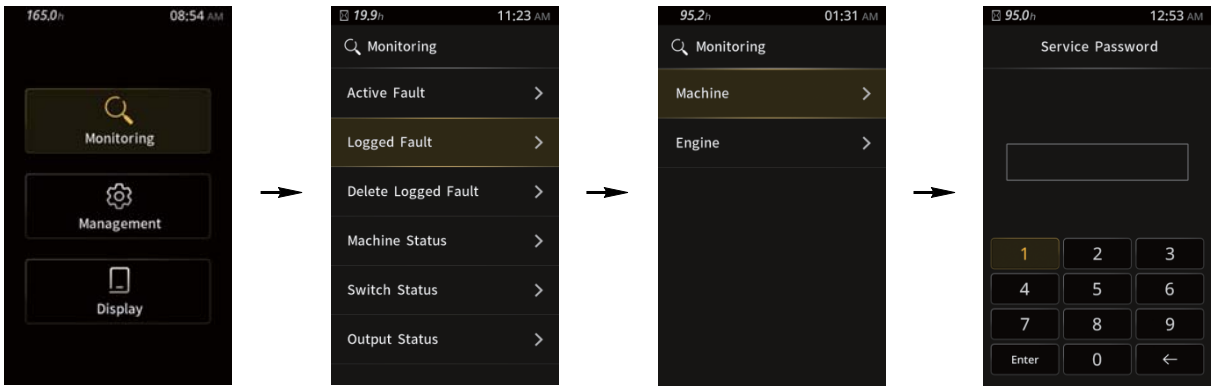
35AZ3CD135A

35AZ3CD109 35AZ3CD111A



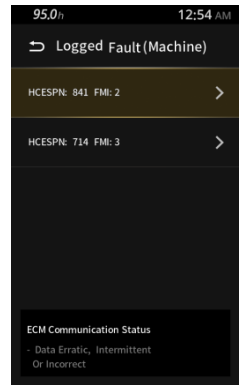
35AZ3CD136A

② Logged fault

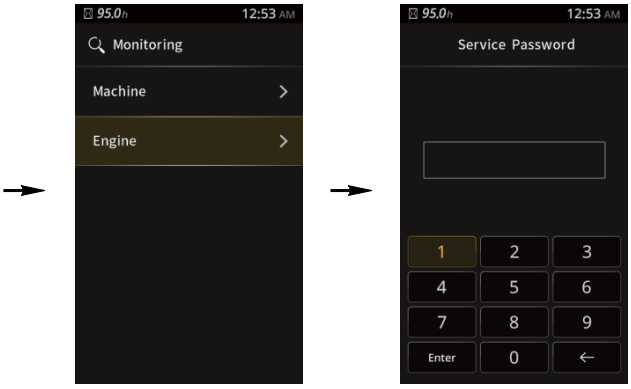


35AZ3CD106 35AZ3CD112A 35AZ3CD108 35AZ3CD113

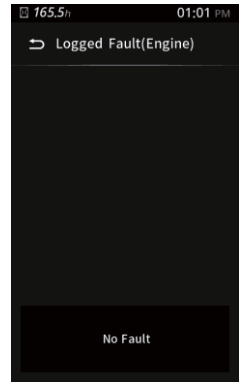
- The logged fault of the machine and engine can be checked by this menu.
- This menu can be used only HD HCE service man.



35AZ3CD114A



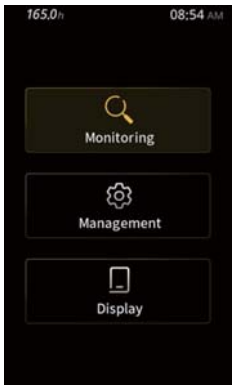
35AZ3CD109 35AZ3CD113



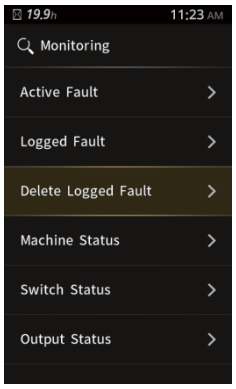
35AZ3CD137A

③ Delete logged fault

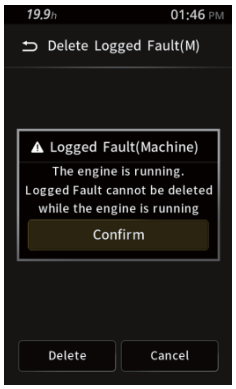
"All logged faults deleted" or "Failure"



35AZ3CD106



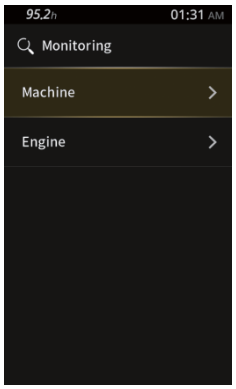
35AZ3CD116A



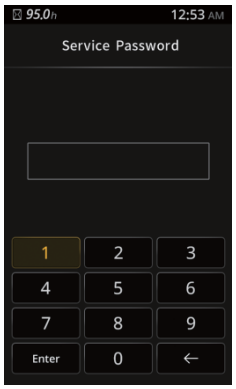
35AZ3CD119A

35AZ3CD118A

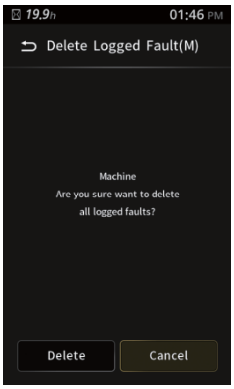
- The logged fault of the machine and engine can be deleted by this menu.
  (It is possible under the engine stop conditions)



35AZ3CD108

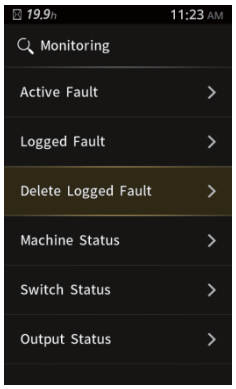


35AZ3CD113

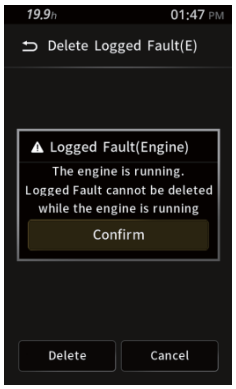


35AZ3CD117A

"All logged faults deleted" or "Failure"

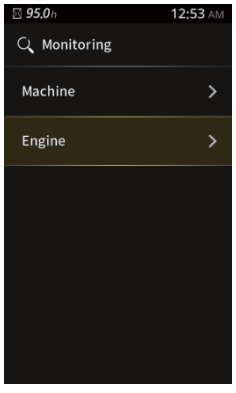


35AZ3CD116A

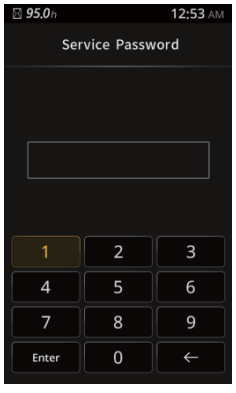


35AZ3CD122A

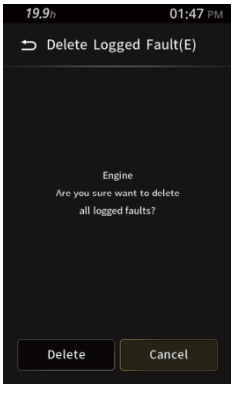
35AZ3CD123A



35AZ3CD109

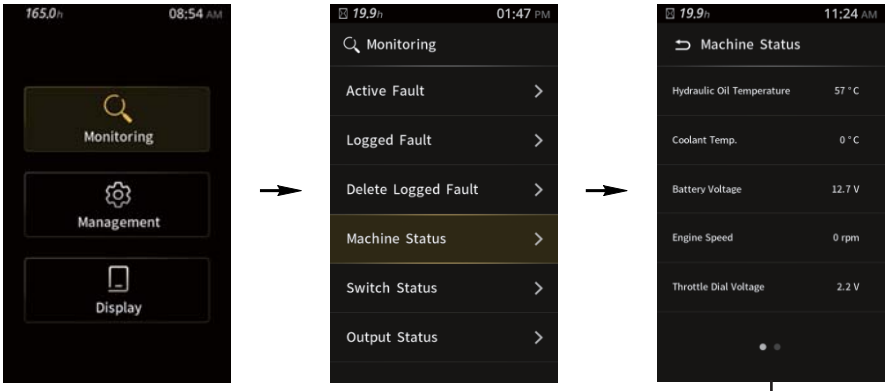


35AZ3CD113



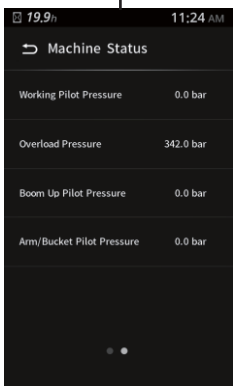
35AZ3CD124A

④ Machine status



35AZ3CD106 35AZ3CD125A 35AZ3CD126A

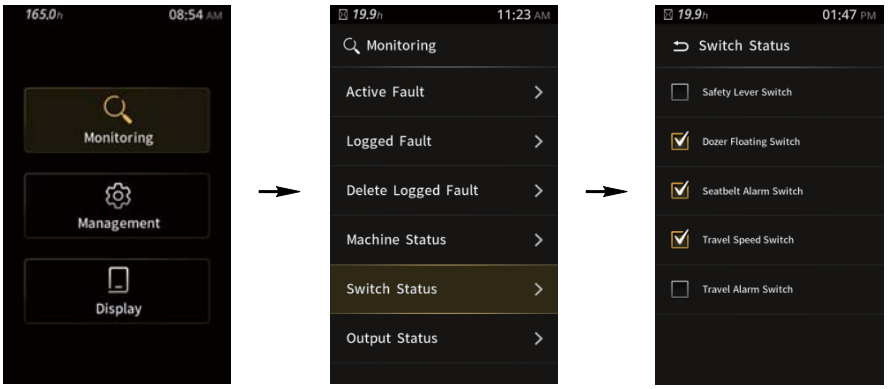
- The machine status such as the engine rpm, oil temperature, voltage and pressure etc. can be checked by this menu.



35AZ3CD127A

⑤ Switch status

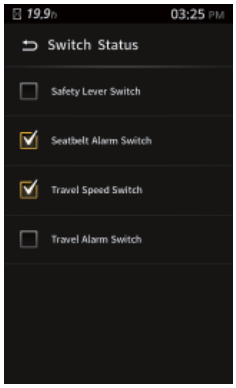
With DPC option



35AZ3CD106 35AZ3CD128A 35AZ3CD129A

Without DPC option

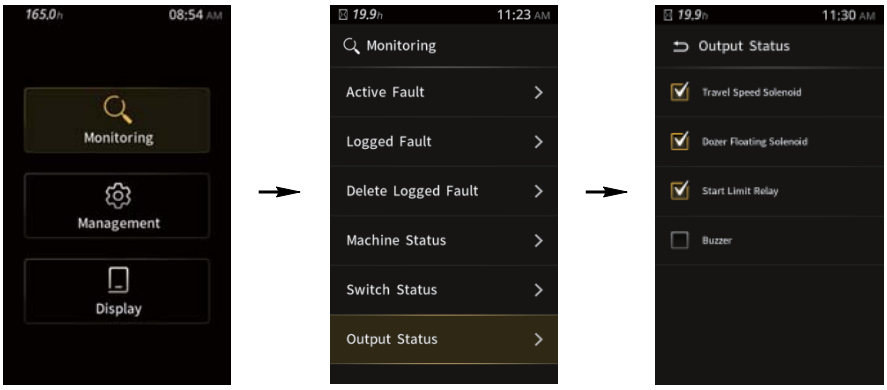
- You can select to display the lamps of the switches on the cluster by this menu.



35AZ3CD229A

⑥ Output statue

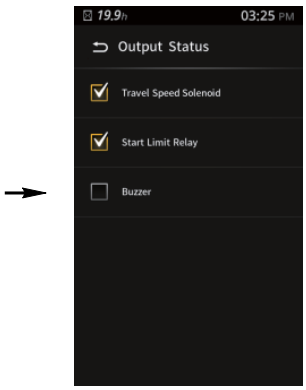
With DPC option



35AZ3CD106 35AZ3CD130A 35AZ3CD131A

- The output status can be confirmed by this menu.

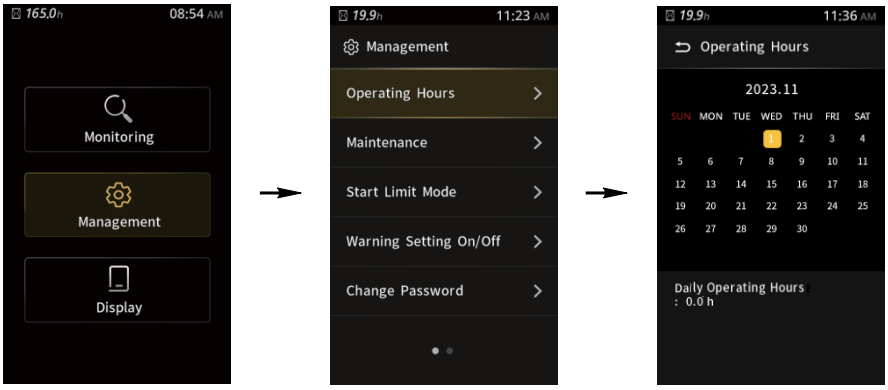
Without DPC option



35AZ3CD231A

(3) Management

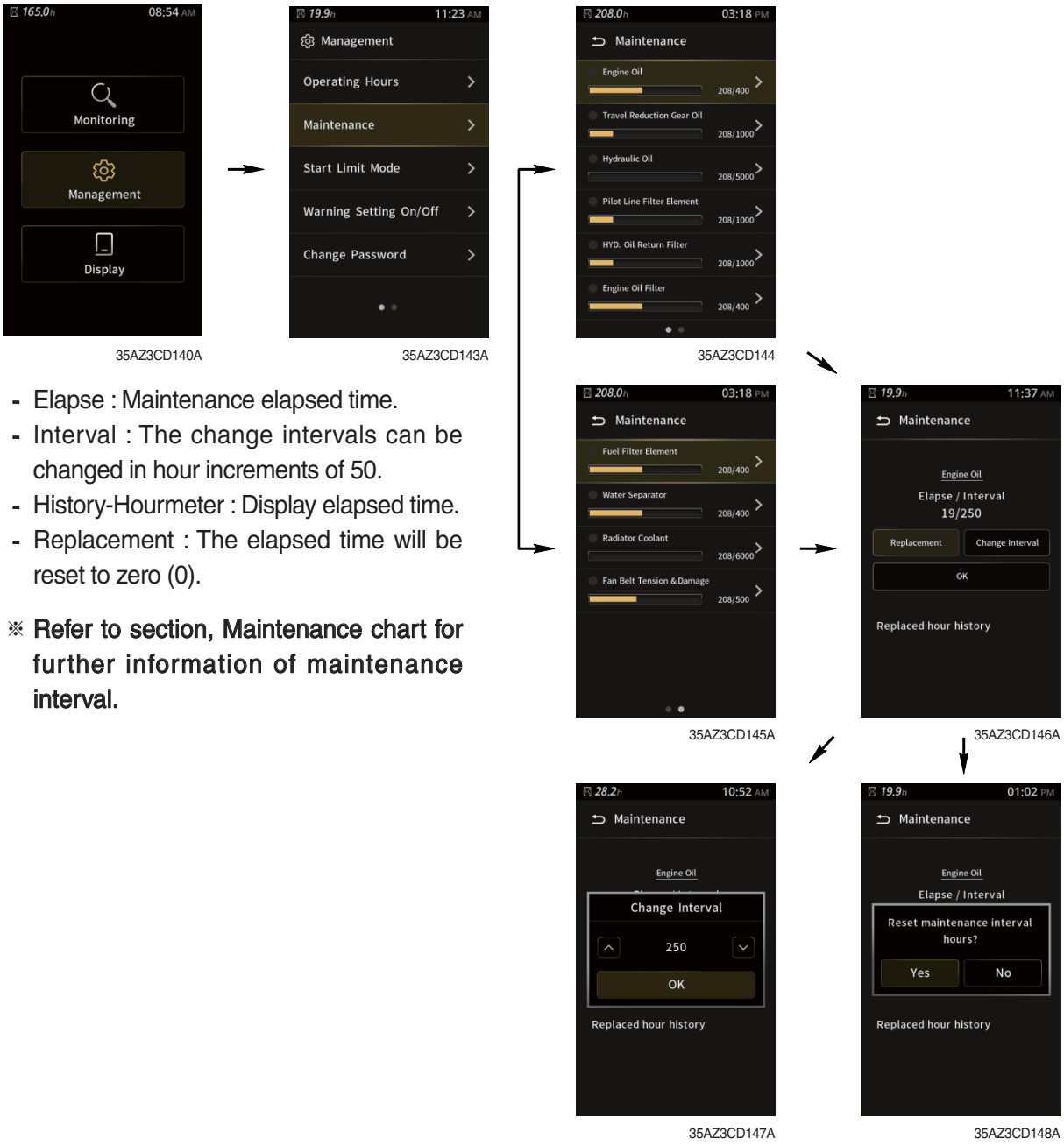
① Operating hours



35AZ3CD140A 35AZ3CD141A 35AZ3CD142A

- You can check the operating hours by this menu.

② Maintenance



35AZ3CD140A 35AZ3CD143A 35AZ3CD144

35AZ3CD145A 35AZ3CD146A

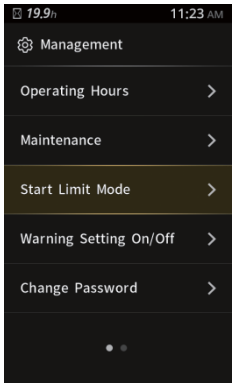
35AZ3CD147A 35AZ3CD148A

- Elapse : Maintenance elapsed time.
- Interval : The change intervals can be changed in hour increments of 50.
- History-Hourmeter : Display elapsed time.
- Replacement : The elapsed time will be reset to zero (0).

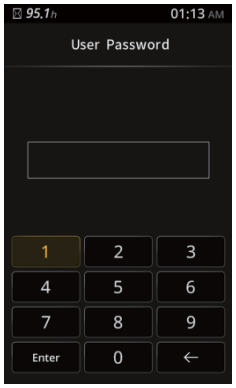
※ **Refer to section, Maintenance chart for further information of maintenance interval.**

③ Start limit mode

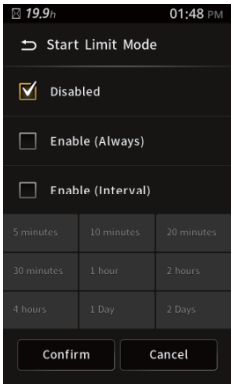
35AZ3CD140A



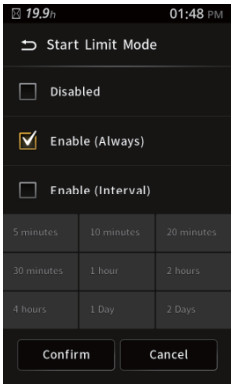
35AZ3CD150A



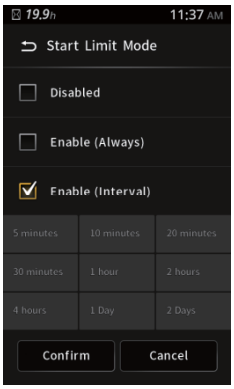
35AZ3CD151



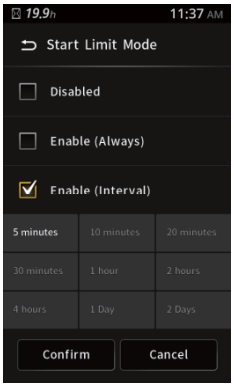
35AZ3CD152A



35AZ3CD153A



35AZ3CD154A

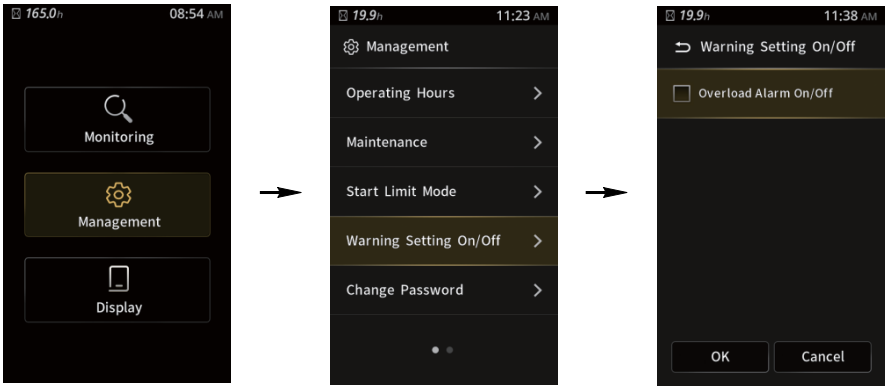


35AZ3CD155A

Start limit mode setting

- Start limit mode is designed to be a theft deterrent or will prevent the unauthorized operation of the machine.
- When you Enable the start limit mode, the password will be required when the starting switch is turned to the on position.
- Machine security
  - Disable : Start limit function is disabled and password is not required to start engine.
  - Enable (Always) : The password is required whenever the operator starts engine.
  - Enable (Interval) : The password is required when the operator starts engine first. But the operator can restart the engine within the interval time without inputting the password. The interval time can be set to a maximum 2 days.

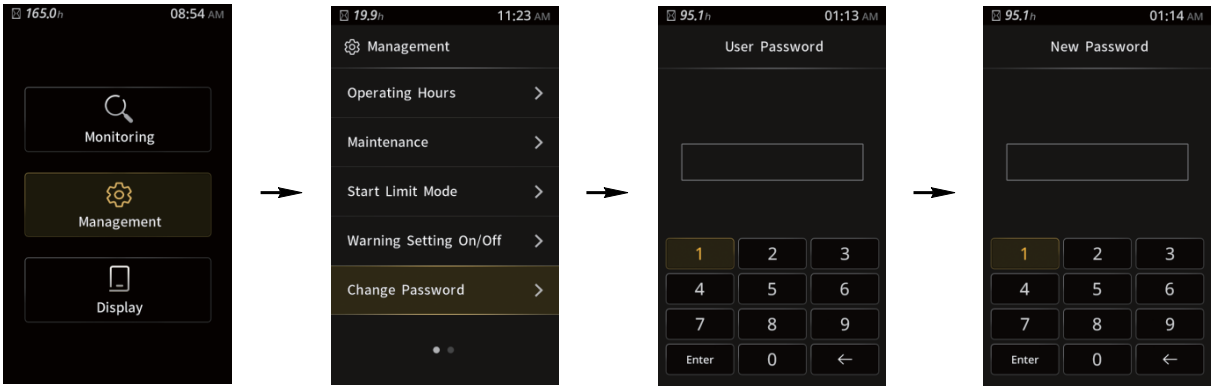
④ Warning setting on/off



35AZ3CD140A 35AZ3CD156A 35AZ3CD157A

- You can set the warning items by this menu.

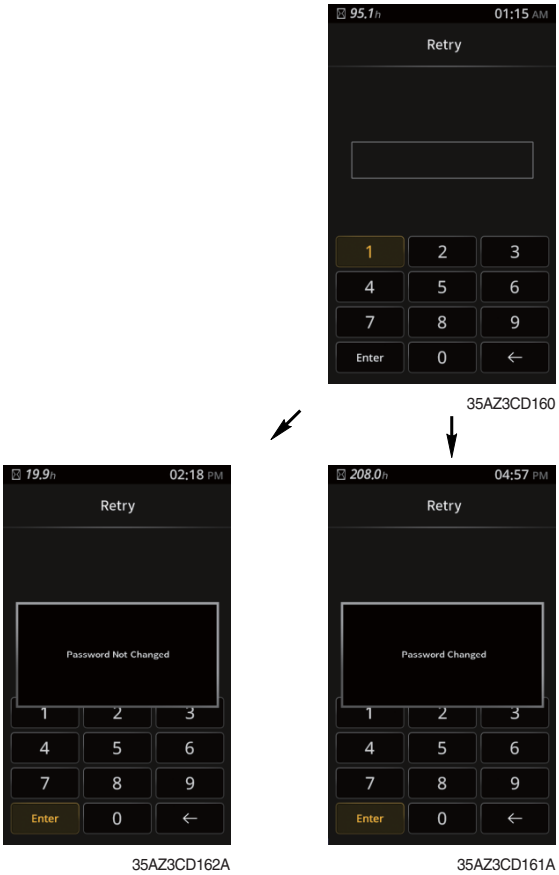
⑤ Change password



35AZ3CD140A 35AZ3CD158A 35AZ3CD151 35AZ3CD159

- The password is 5~10 digits.

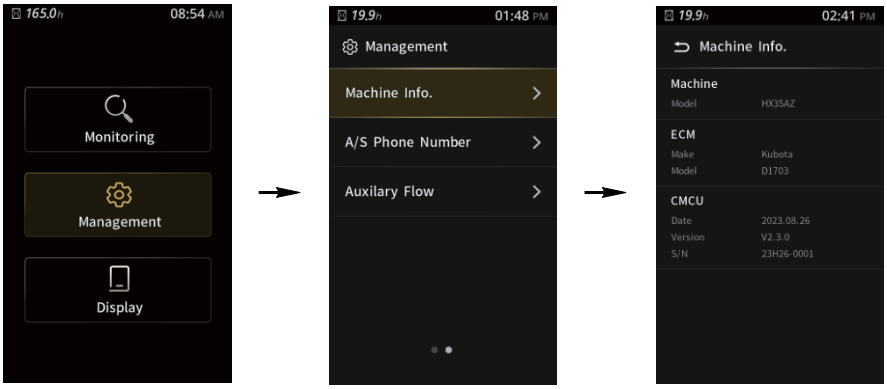
※ **Before first use, please set user password and owner password in advance for machine security.**



35AZ3CD160

35AZ3CD162A 35AZ3CD161A

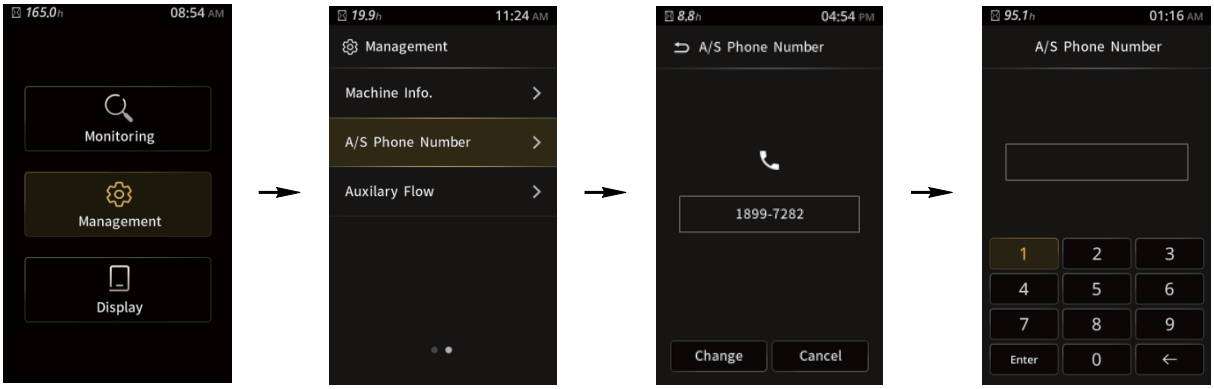
⑥ Machine information



35AZ3CD140A 35AZ3CD163A 35AZ3CD164A

- This can confirm the identification of the machine, engine and cluster.

⑦ Contact



35AZ3CD140A 35AZ3CD165A 35AZ3CD166A 35AZ3CD167

- The A/S phone number can be checked and changed.

⑧ Aux. Flow

- 3 kinds of option attachment can be selected by this menu.
  a. Rotary grapple (4-way)
  b. Grapple (2-way)
  c. Auger (2-way)
- There are two user modes (type A or B) in each option attachment.

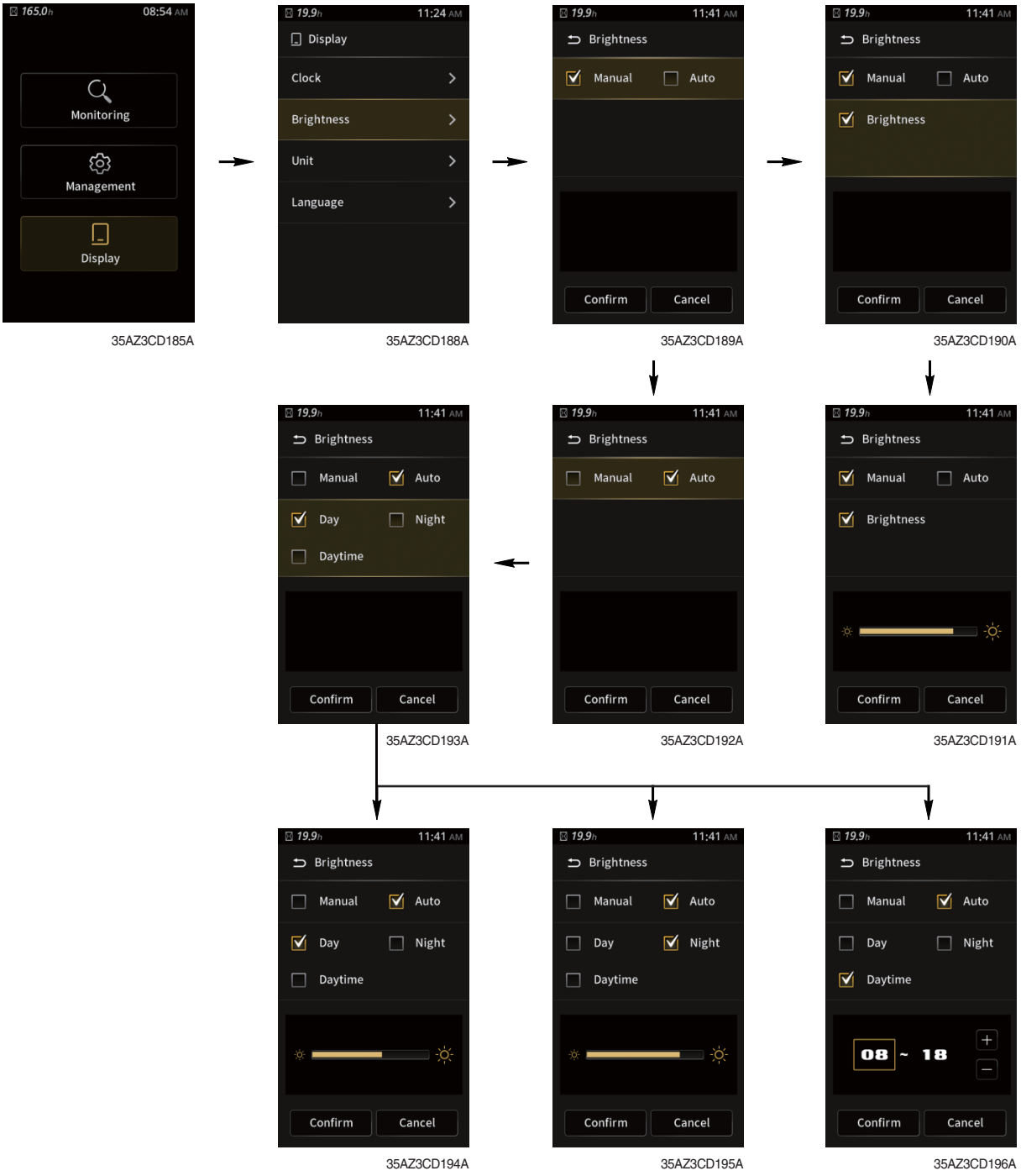
(4) Display set

① Clock

35AZ3CD185A 35AZ3CD186A 35AZ3CD187A

- Set the time (12 hours or 24 hours)

② Brightness



- 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.
  (in figure, black area represents night time while orange shows day time)

③ Unit

35AZ3CD185A 35AZ3CD197A 35AZ3CD198A

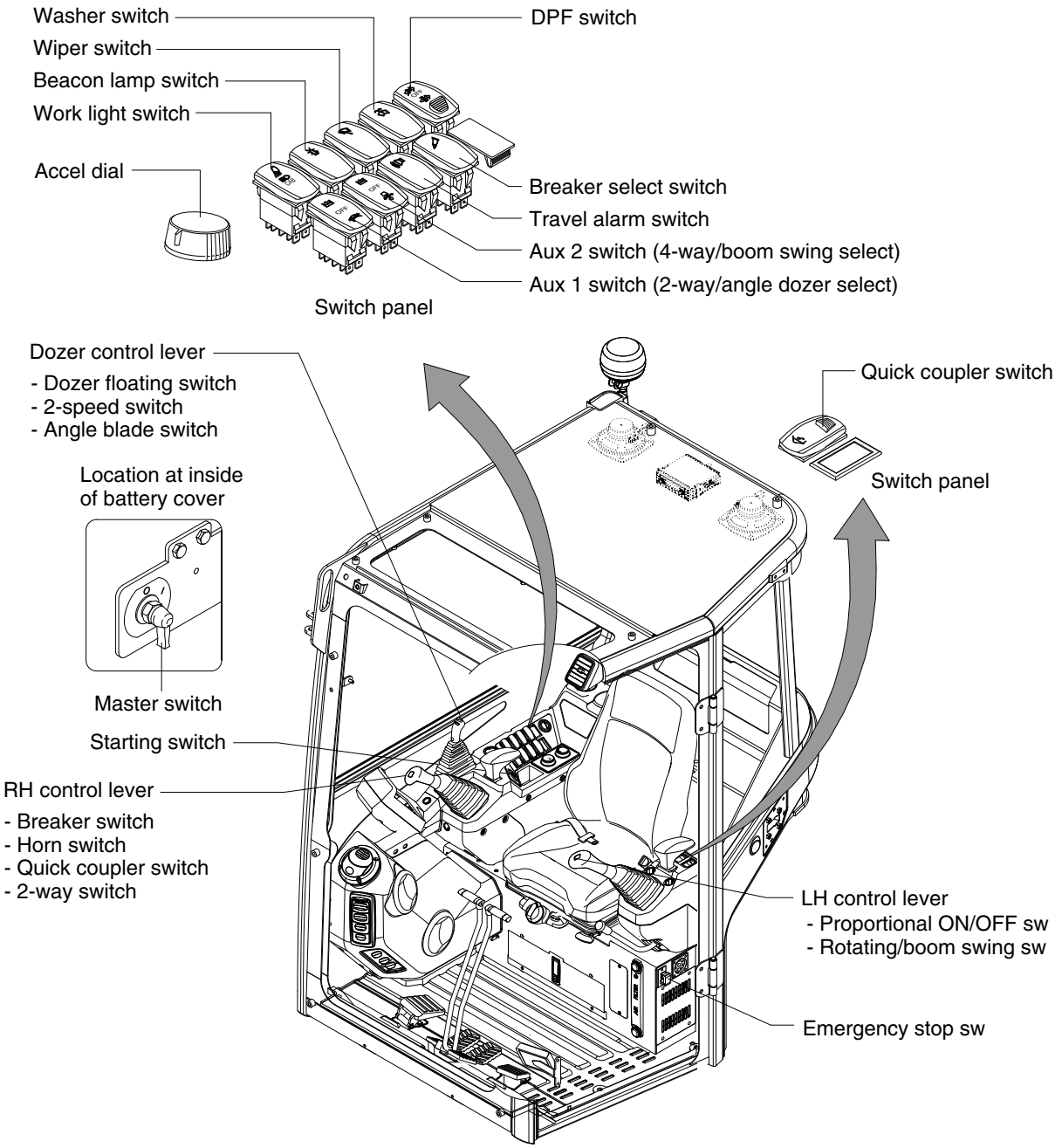
- Temperature : °C ↔ °F
- Pressure : bar ↔ MPa ↔ kgf/cm² ↔ psi

④ Language

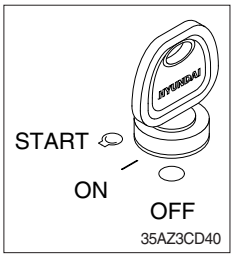
35AZ3CD185A 35AZ3CD199A 35AZ3CD184A

- User can select preferable language and all displays are changed to the selected language (한국어, English or Turkish).

3. SWITCHES



1) STARTING SWITCH



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

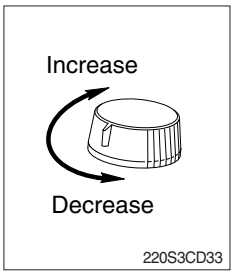
· OFF : None of electrical circuits activate.

· ON : All the systems of machine operate.

· START : Use when starting the engine. Release key immediately after starting.

※ Key must be in the ON position with engine running to maintain electrical and hydraulic function and prevent serious machine damage.

2) ACCEL DIAL SWITCH



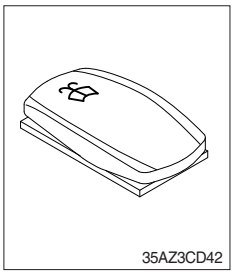
(1) There are 10 dial setting.

(2) Setting 1 is low idle and setting 10 is high idle.
- By rotating the accel to right : Engine speed increase.
- By rotating the accel to left : Engine speed decrease.

3) WORK LIGHT SWITCH

(1) This switch use to operates the illumination lamp and work light by two step.
- First step : Cabin light, A/C controller and switches illumination lamp comes ON.
- Second step : Work light comes ON.

4) WASHER SWITCH (cab type)



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

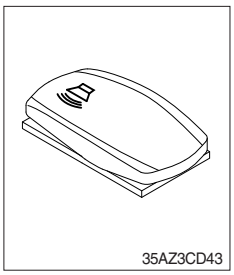
5) WIPER SWITCH (cab type)

(1) This switch is used to operate the wiper.
The wiper operates.

※ Wiper motor does not operate with front sliding door open.

△ If wiper does not operate with the switch in the ON position, turn the switch off immediately. Check the cause. If the switch remains ON, motor failure can result.

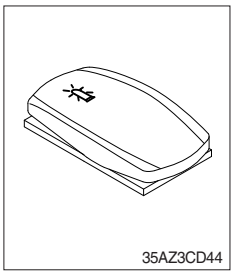
6) TRAVEL ALARM SWITCH (option)



(1) This switch is the signal to alarm surroundings when the machine travels to forward and backward.

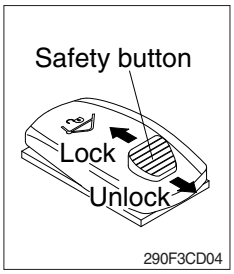
(2) On pressing this switch, the alarm operates only when the machine is traveling.

7) BEACON SWITCH (option)



(1) This switch turns ON the rotary light on the cab.

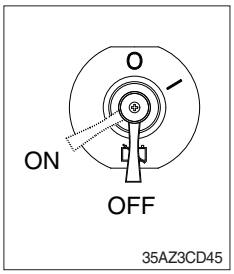
8) QUICK COUPLER SWITCH (option)



(1) This switch is used to engage or disengage the moving hook on quick coupler.

※ **Refer to the page 8-10 for details.**

9) MASTER SWITCH

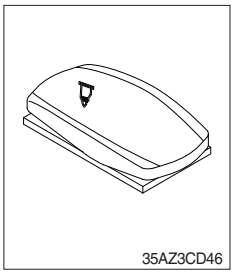


(1) This switch is used to shut off the entire electrical system.

(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. It could result in engine and electrical system damage.**

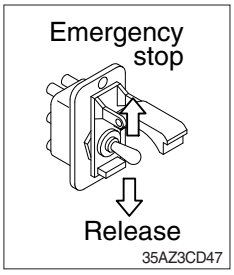
10) BREAKER SELECT SWITCH



(1) This switch is used to select the breaker operation.

※ **Refer to the page 8-4.**

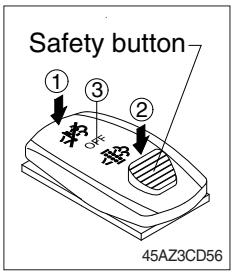
11) EMERGENCY ENGINE STOP SWITCH



(1) This switch is used to emergency stop the engine.

※ **Be sure to keep the emergency switch on the release position when restart the engine.**

12) DPF SWITCH



(1) This switch is used to select the regeneration function of the DPF.

(2) Inhibit position (①)

① The inhibit position disallows any automatic or manual regeneration of the DPF.

② This may be used by operator to prevent regeneration when the machine is operating in a hazardous environment and is concerned about high exhaust temperature.

③ It is strongly recommended that this position is only activated when high temperatures may cause a hazardous condition.

(3) Auto position (③)

This position will initate an automatic regeneration of the DPF.

(4) Manual regeneration position (②)

① This position will only initate a manual regeneration of the DPF when the machine is in non-mission condition, engine must run at low idle speed and DPF soot levels are high enough to allow regeneration.

② HEST lamp will be illuminated during the entire regeneration.

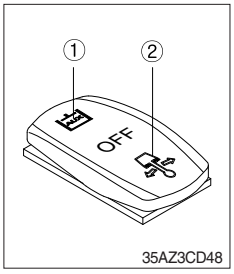
※ **Refer to the page 3-11 for details.**

※ **This switch can be moved to the manual regeneration position (②) only when the safety button is pulled backward.**

※ **Also, this switch returns to the OFF position when released from the manual regeneration position (②).**

※ **DPF : Diesel particulate filter**

13) AUX 2 SWITCH (4-way or boom swing select)



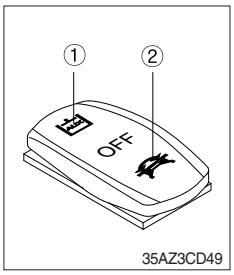
(1) This switch is used to select the 4-way or boom swing operation as below.

① 4-way (rotating)

② Boom swing

※ **Refer to page 3-36.**

14) AUX 1 SWITCH (2-way or angle dozer select)



(1) This switch is used to select the 2-way or angle dozer operation as below.

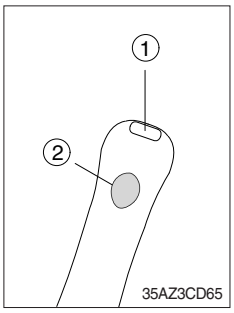
① 2-way

② Angle dozer

※ **Refer to page 3-37.**

15) LH RCV LEVER SWITCH

(1) Without proportional type

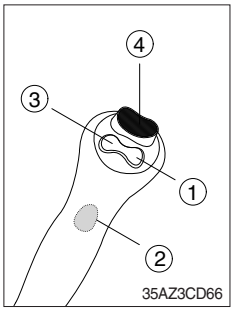


(1) The switches on the LH RCV lever are function as below.

① : None

② : None

(2) With proportional type



(1) The switches on the LH RCV lever are function as below.

① : None

② : None

③ **Proportional ON/OFF switch**

This switch is used to actuate or cancel for the proportional function.

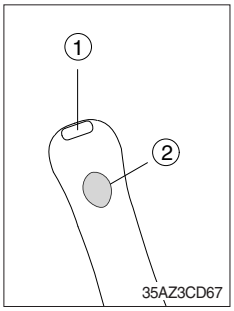
④ **Rotating or swing switch**

This switch is used to rotate the clamshell or swing the boom when the proportional switch is in the on position.

※ **Refer to the page 3-35.**

16) RH RCV LEVER SWITCH

(1) Without proportional type



(1) The switches on the RH RCV lever are function as below.

① **Horn switch**

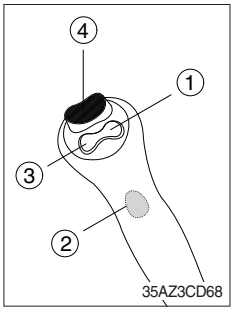
When this switch is pressed, the horn will sound.

② **Quick coupler switch**

This switch is used to engage or disengage the moving hook on quick coupler.

※ **Refer to the page 8-10.**

(2) With proportional type



(1) The switches on the RH RCV lever are function as below.

① **Horn switch**

When this switch is pressed, the horn will sound.

② **Breaker switch**

When this switch is pressed, the breaker will only operate when the breaker operation mode is selected.

③ **Quick coupler switch**

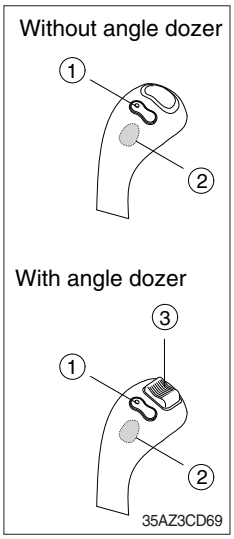
This switch is used to engage or disengage the moving hook on quick coupler.

※ **Refer to the page 8-10.**

④ **2-way switch**

This switch is used to clamp or release for the shear when the proportional switch is in the on position

17) DOZER CONTROL LEVER



① Dozer floating switch
② 2-speed travel switch
③ Angle dozer switch

(1) Dozer floating switch

① The dozer floating feature activates when the dozer floating switch is pressed.
- First step : Press the dozer floating button.
- Second step : Push the dozer lever until the end.
- Third step : The lever is fixed even if the dozer lever is released. (Detent function)

② Floating release method.
- First step : Press the dozer floating button again.
- Second step : Pull back the fixed dozer lever.

(2) 2-speed travel switch

① This switch is to control the travel speed which is changed to high speed by pressing the switch and low speed by pressing it again.

② When the machine travel high speed, the travel speed pilot lamp lights up.

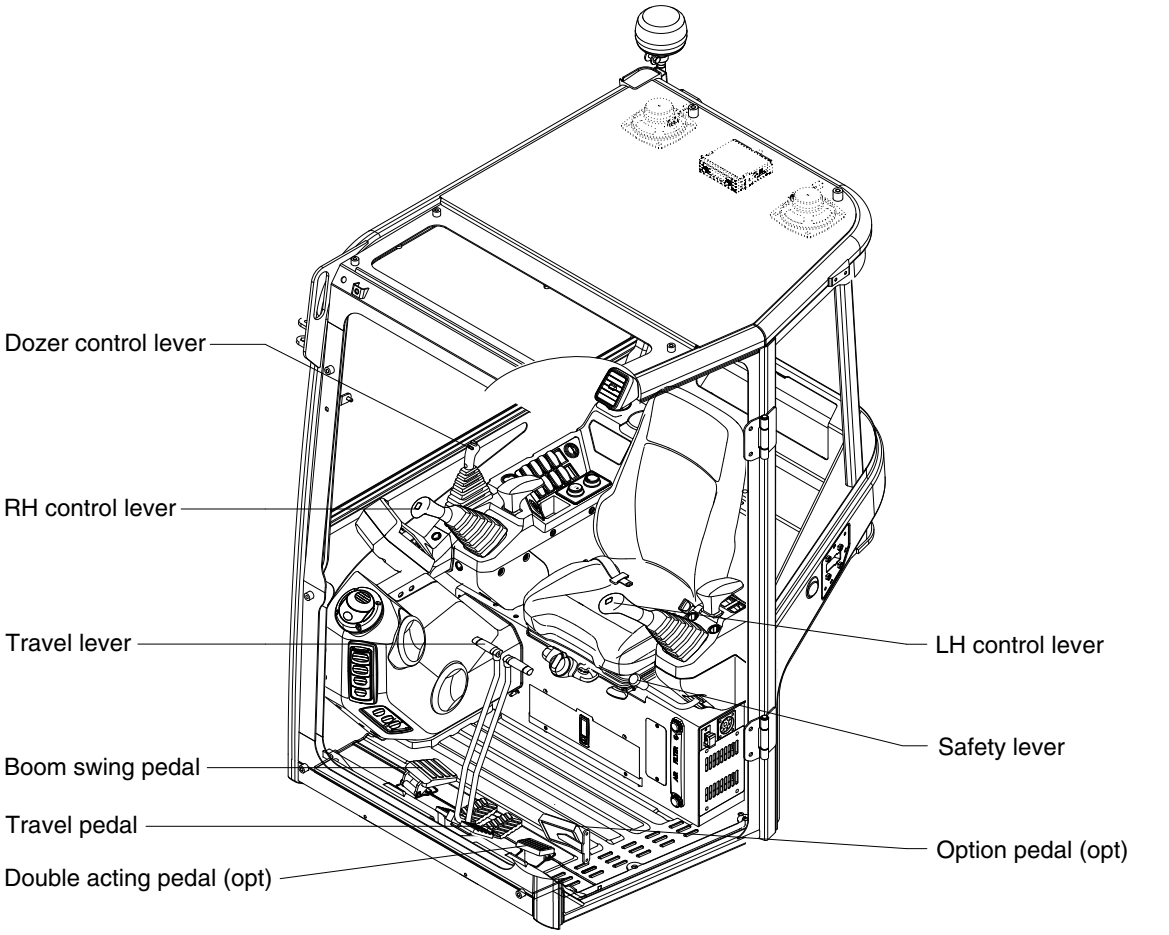
(3) Angle dozer switch

This switch is used to swing the angle dozer to left or right direction.

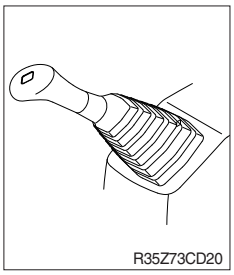
※ **Do not angle blade up with the angle blade placed at an angle.**

※ **Refer to the page 3-35.**

4. LEVERS AND PEDALS



1) LH CONTROL LEVER



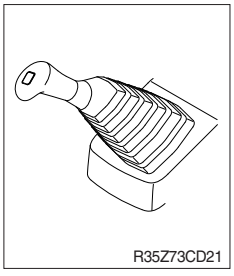
(1) This joystick is used to control the swing and the arm.

(2) Refer to operation of working device in chapter 4 for details.

(3) The proportional on/off switch and rotating/boom swing switch are installed on the control lever (option).

※ **Refer to page 3-36 for details of the switch function.**

2) RH CONTROL LEVER



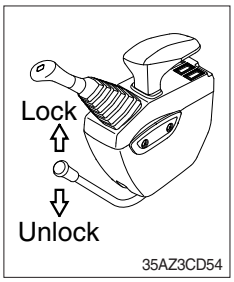
(1) This joystick is used to control the boom and the bucket.

(2) Refer to operation of working device in chapter 4 for details.

(3) The breaker switch, horn switch, quick coupler switch and 2-way switch are installed on the control lever (option).

※ **Refer to page 3-36, 37 for details of the switch function.**

3) SAFETY LEVER



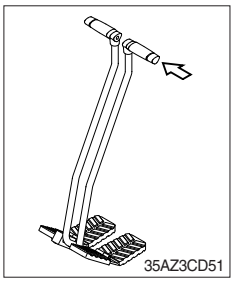
(1) All control levers are disabled from operation by locating the lever to lock position as shown.

※ **Be sure to raise the lever to LOCK position when leaving from operator's seat.**

(2) By pushing lever to UNLOCK position, machine is operational.

※ **Do not use the safety lever for handle when getting on or off the machine.**

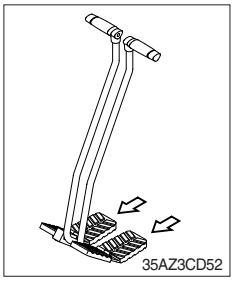
4) TRAVEL LEVER



(1) This lever is mounted on travel pedal and used for traveling by hand. The operation principle is same as the travel pedal.

(2) Refer to traveling of the machine in chapter 4 for details.

5) TRAVEL PEDAL

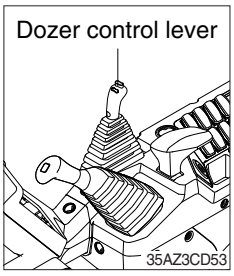


(1) This pedal is used to move the machine forward or backward.

(2) If left side pedal is pressed, left track will move.
If right side pedal is pressed, right track will move.

(3) Refer to traveling of machine in chapter 4 for details.

6) DOZER CONTROL LEVER



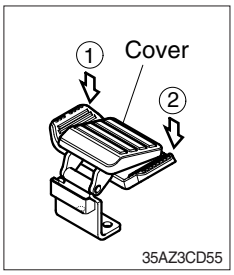
(1) This lever is used to operate the dozer blade.

(2) If the lever is pushed forward, the dozer blade will be going down.
If the lever is pulled back, the dozer blade will be going up.

(3) The dozer floating switch, 2-speed travel switch and angle dozer switch are installed on the dozer control lever.

※ **Refer to page 3-37 for details of the switch function.**

7) BOOM SWING PEDAL

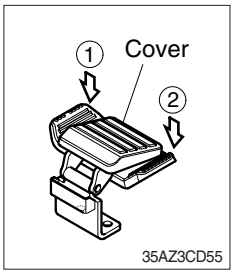


(1) This pedal is used to swing the boom to the right and left direction.

(2) Move the cover to unlock position by foot.

(3) The pedal is pressed to left side (②), boom will swing to the left direction.
The pedal is pressed to right side (①), boom will swing to the right direction.

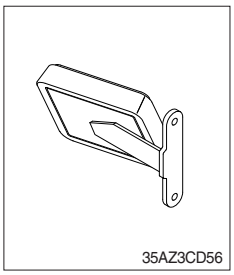
8) DOUBLE ACTING PEDAL (OPT)



(1) This pedal is used to operate the shear.

(2) Move the cover to unlock position by foot.
The pedal is pressed to left side (②), the shear is closed.
The pedal is pressed to right side (①), the shear is opened.

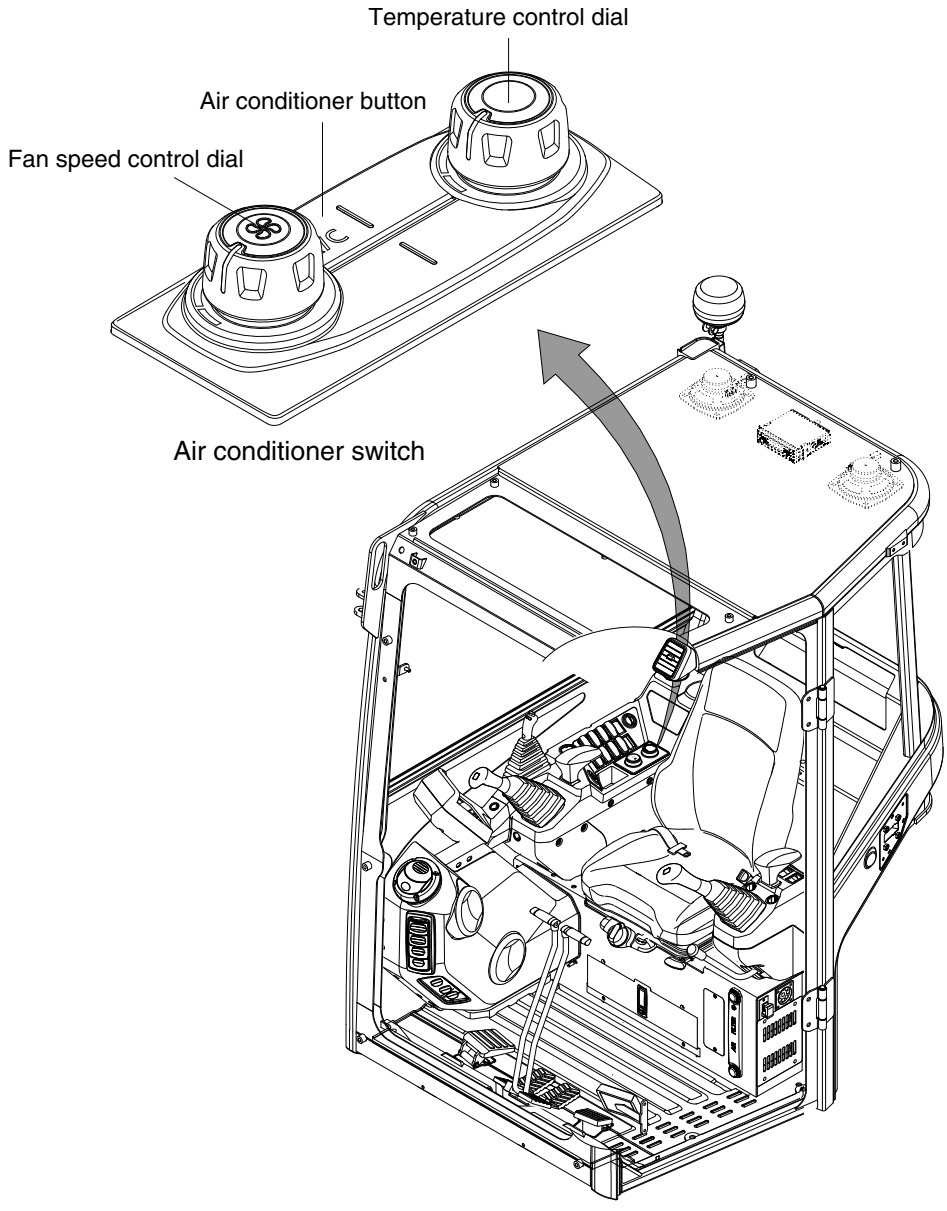
9) OPTION PEDAL (OPT)



(1) This pedal is used to operate the optional attachment.

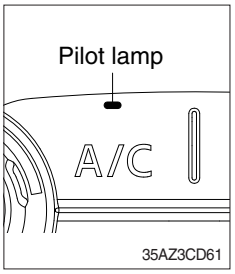
5. AIR CONDITIONER AND HEATER (CAB TYPE)

Air conditioner and heater are equipped for pleasant operation against outside temperature.



35AZ3CD06A

1) AIR CONDITIONER BUTTON

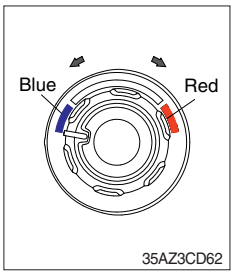


(1) When you push this button, air conditioner system is operated.

(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 pilot lamp does not light up when the fan speed control dial is 0 step.

2) TEMPERATURE CONTROL DIAL

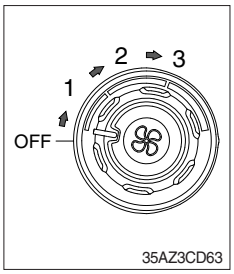


(1) This control dial regulates the temperature of output air.

(2) Anti-clockwise (blue zone) - Cool down air temperature

(3) Clockwise (red zone) - Heat up air temperature

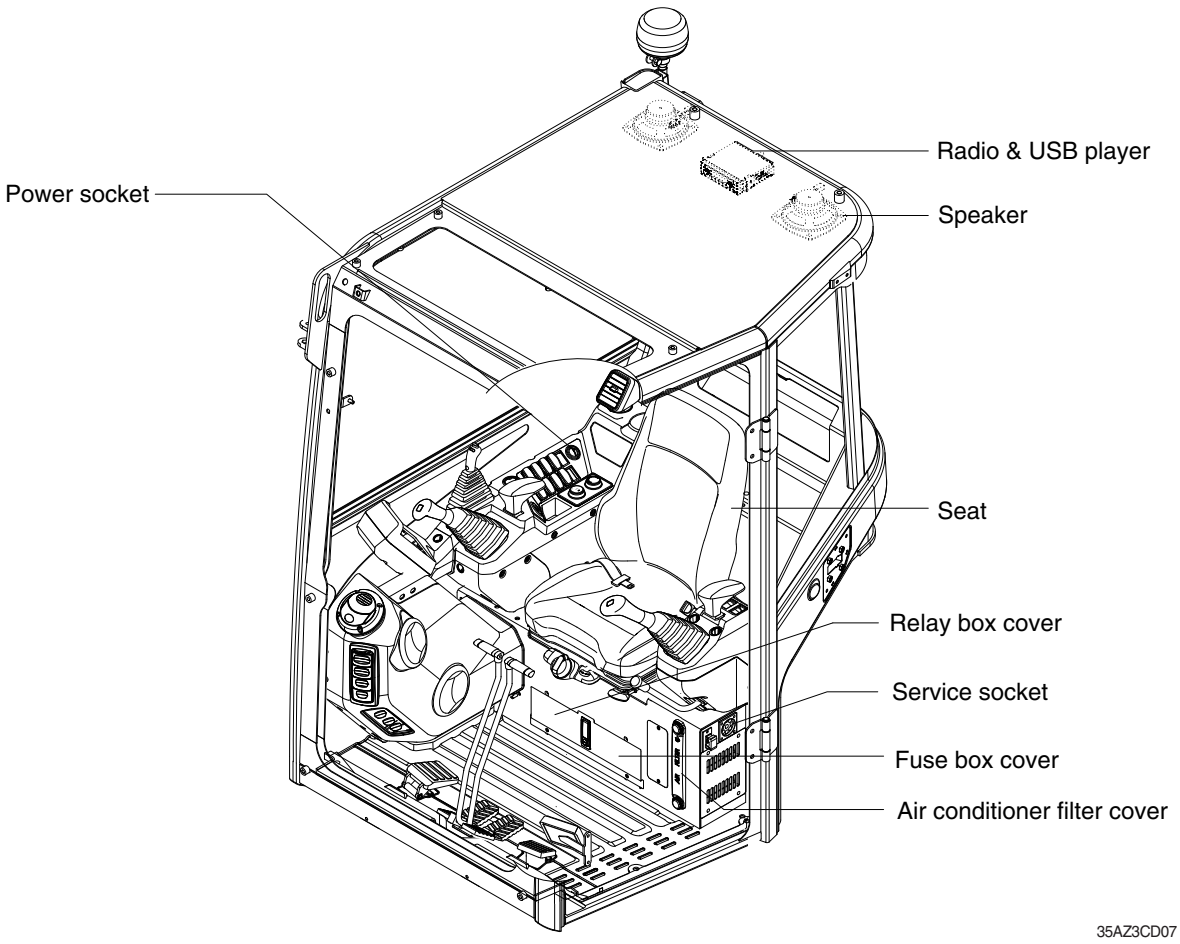
3) FAN SPEED CONTROL DIAL



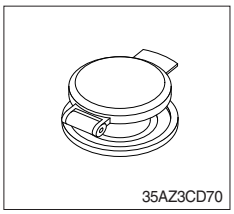
(1) This control dial controls fan speed as below.

- 0 : Off
- 1 : Low
- 2 : Medium
- 3 : High

6. OTHERS

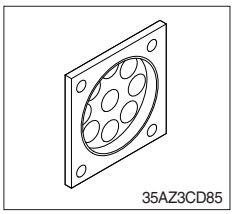


1) POWER SOCKET



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

2) SERVICE SOCKET



(1) Machine control units communicates the machine data with Laptop computer through service socket.

- Cluster program dump
- Machine data monitoring

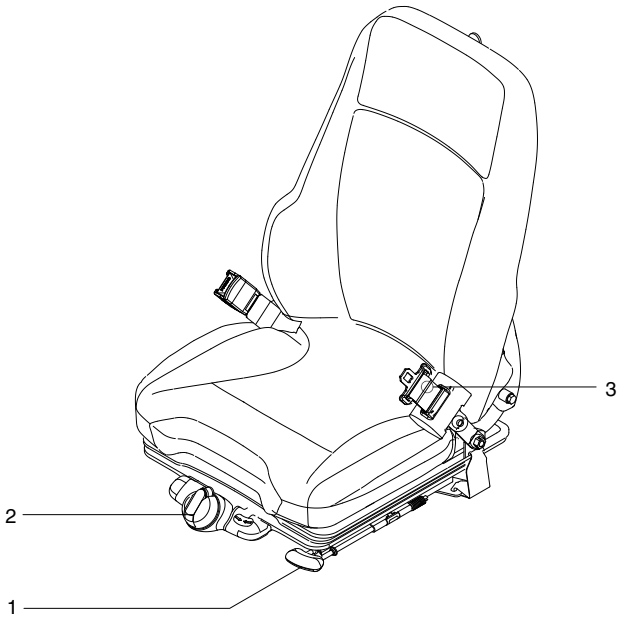
(2) ECU communicates the engine data through service socket.

- ECU fault code check
- Engine data monitoring

3) SEAT

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

※ The seat belt reminder warning lamp pops up and the buzzer sounds until seat belt is fastened.



35AZ3CD71

1 Seat top fore and after positioning adjustment
2 Weight adjustment
3 Back cushion angle adjustment

① Seat top fore and after positioning adjustment

35AZ3CD75

a. Lift handle and move the seat top forward or rearward.
b. Release the handle at one of several positions.

② Weight adjustment

35AZ3CD78

a. Push on button suspension will shifting and can fit for heavier operators.
b. Pull the button will release and fit for lighter operator.

③ Back cushion angle adjustment

35AZ3CD81

a. Lift handle and let back cushion spring forward,or lean backward into the cushion.
b. Release the handle at the desired position.

※ **Maintenance**

① **Lubricate seat slides semi-annually**

Adjust seat rearward until it stops,apply a good quality dry lubricant to the upper front of the seat slides. Then move seat forward until it stops,and lubricate the lower rear of the seat slides. Move the seat forward and rearward to the stops several times to the distribute the lubricant,completing the procedure.

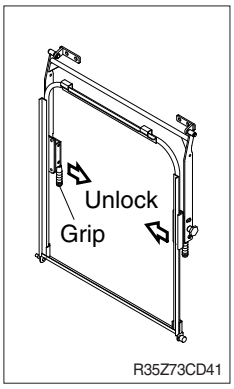
② **Seat belts**

Inspect seat belts and mounting hardware before use. Replace if worn or damaged;
Replace after three three years of use regardless of appearance.

③ **Armrest mechanism**

With mechanism in top position and armrest tilted up,spray in between halves of mechanism structure with silicone spray or dry lubricant. This procedure should be done semi-annually.

4) UPPER WINDSHIELD



(1) Perform the following procedure in order to open the upper windshield.

① Hold both grips that are located both side of the windshield frame.

② Move grips to inside in order to release the lock latches.
Hold both grips and push the windshield upward.

③ Hold both grips and back into the storage position.
Release both grips carefully until lock latches are into the locking position.

④ Hold both grips and back into the storage position.

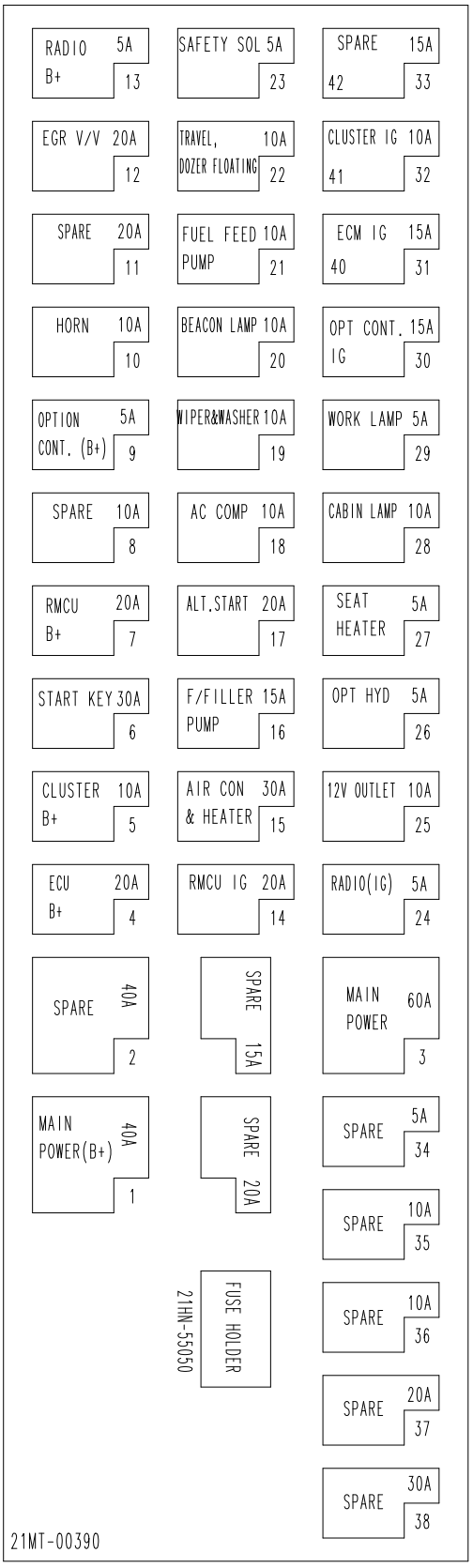
⑤ Release both grips carefully until lock latches are into the locking position.

⚠ When working, without having locked the windshield by the auto lock (by pushing the windshield to the rear untill it's completely fixed), please be careful as it can cause personal injury if the windshield is not fixed or falls off.

(2) Perform the following procedure in order to close the upper windshield.
Reverse step ① through step ⑤ in order to close the upper windshield.

5) FUSE BOX

Fuse box



21MT-00390-01

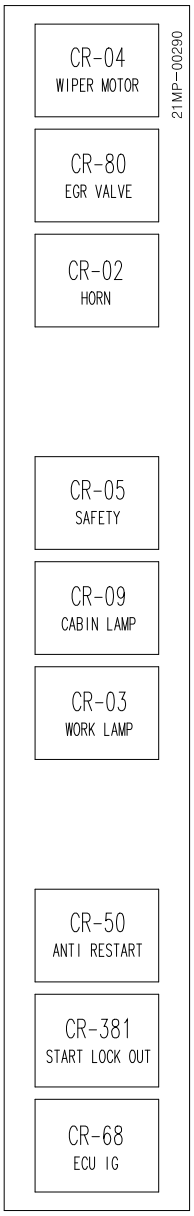
(1) The fuses protect the electrical parts and wiring from burning out.

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

※ When replacing a fuse or relay, always use one of the same capacity.

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

Relay box



21MP-00290

6) RADIO AND USB PLAYER, CAB TYPE

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

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 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 little 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

① This button can adjust the sound effect 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

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

(2) Manual tuning button

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

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

(4) Station preset button

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

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

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 no mp3 or wma files in USB device, it will convert to the previous mode after display NO FILE.

(2) Track Up / Down button

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

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

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

- 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

- 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

- 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 random play the tracks in current folder.
- RANDOM off : Simply press it again to cancel RANDOM feature.

(8) ID3 v2 (DISP)

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-CAED 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.

※ The temperature below -10 Celsius, the audio unit with USB hook up would be affected to 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.

■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 

simultaneously for about 5 seconds. (without Bluetooth)

② 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 heat er, 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