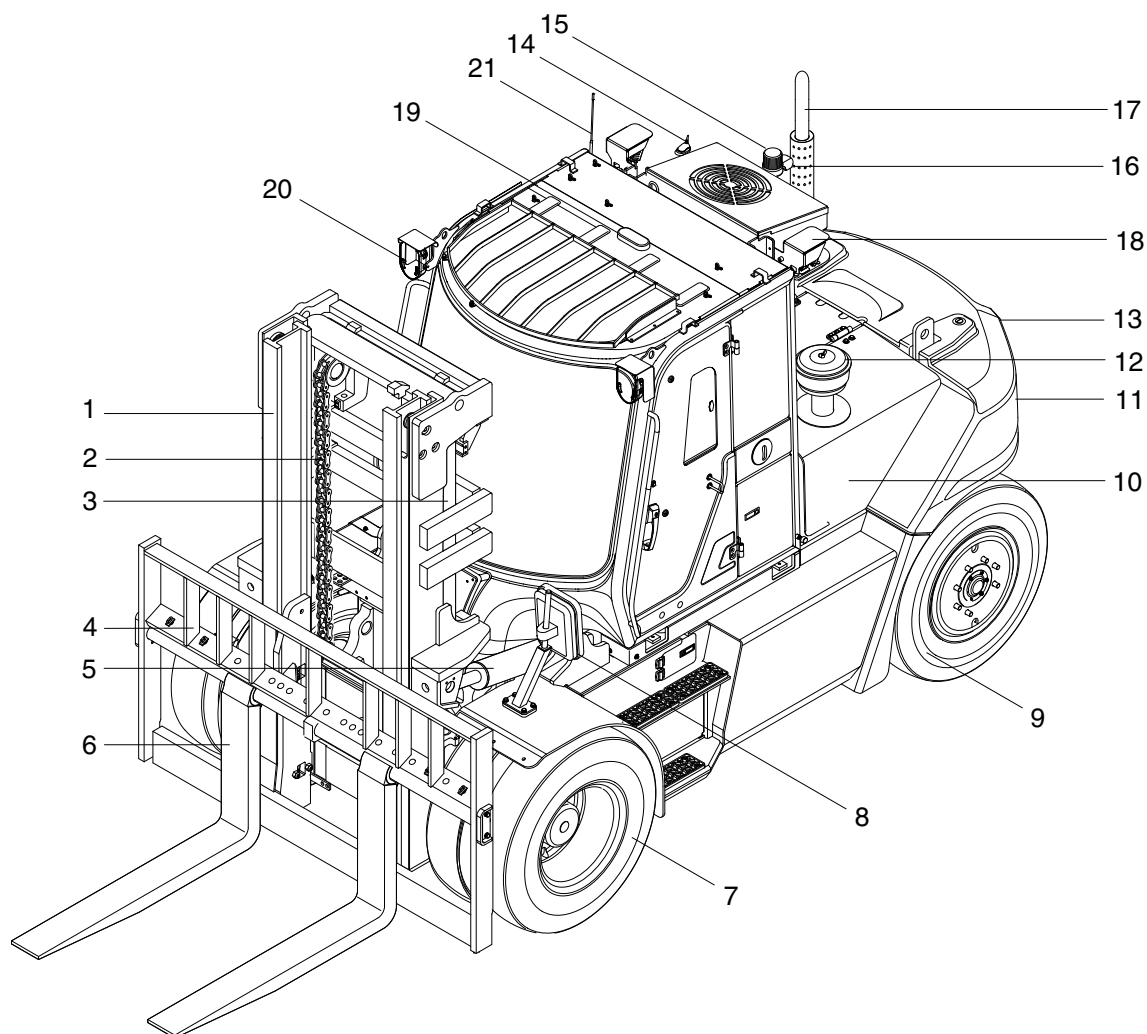


3. KNOW YOUR TRUCK

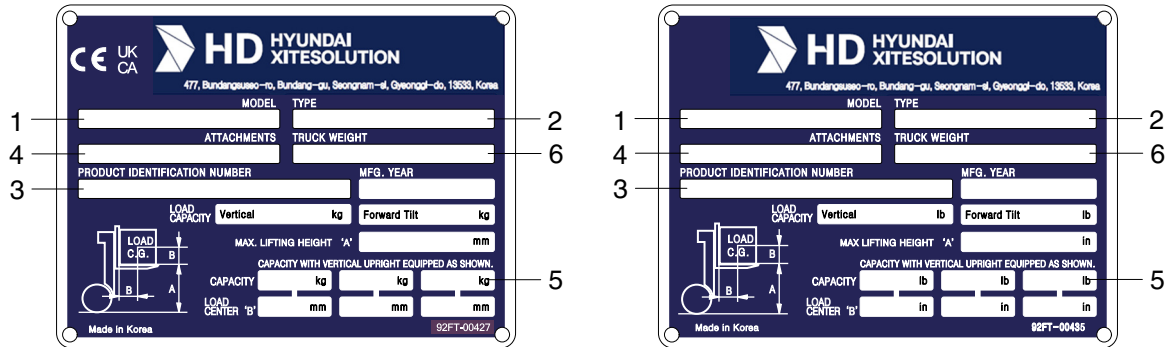
1. GENERAL LOCATIONS



100D9V3CD10

- | | | |
|-------------------------|--------------------------|------------------------------|
| 1 Mast | 8 Rear view mirror | 15 Beacon lamp (option) |
| 2 Lift chain | 9 Rear wheel | 16 Camera (option) |
| 3 Lift cylinder | 10 Body wing cover | 17 Silencer |
| 4 Carriage and backrest | 11 Rear combination lamp | 18 Rear work lamp |
| 5 Tilt cylinder | 12 Preclenaer | 19 Cabin |
| 6 Fork | 13 Counterweight | 20 Head and turn signal lamp |
| 7 Front wheel | 14 Mobile antenna | 21 Antenna |

2. NAME PLATE



92FT-00427A

1) TRUCK MODEL NUMBER OR REGISTERED NAME

2) TRUCK TYPE

The type is indicated a type of the truck such as diesel, LPG or battery.

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.

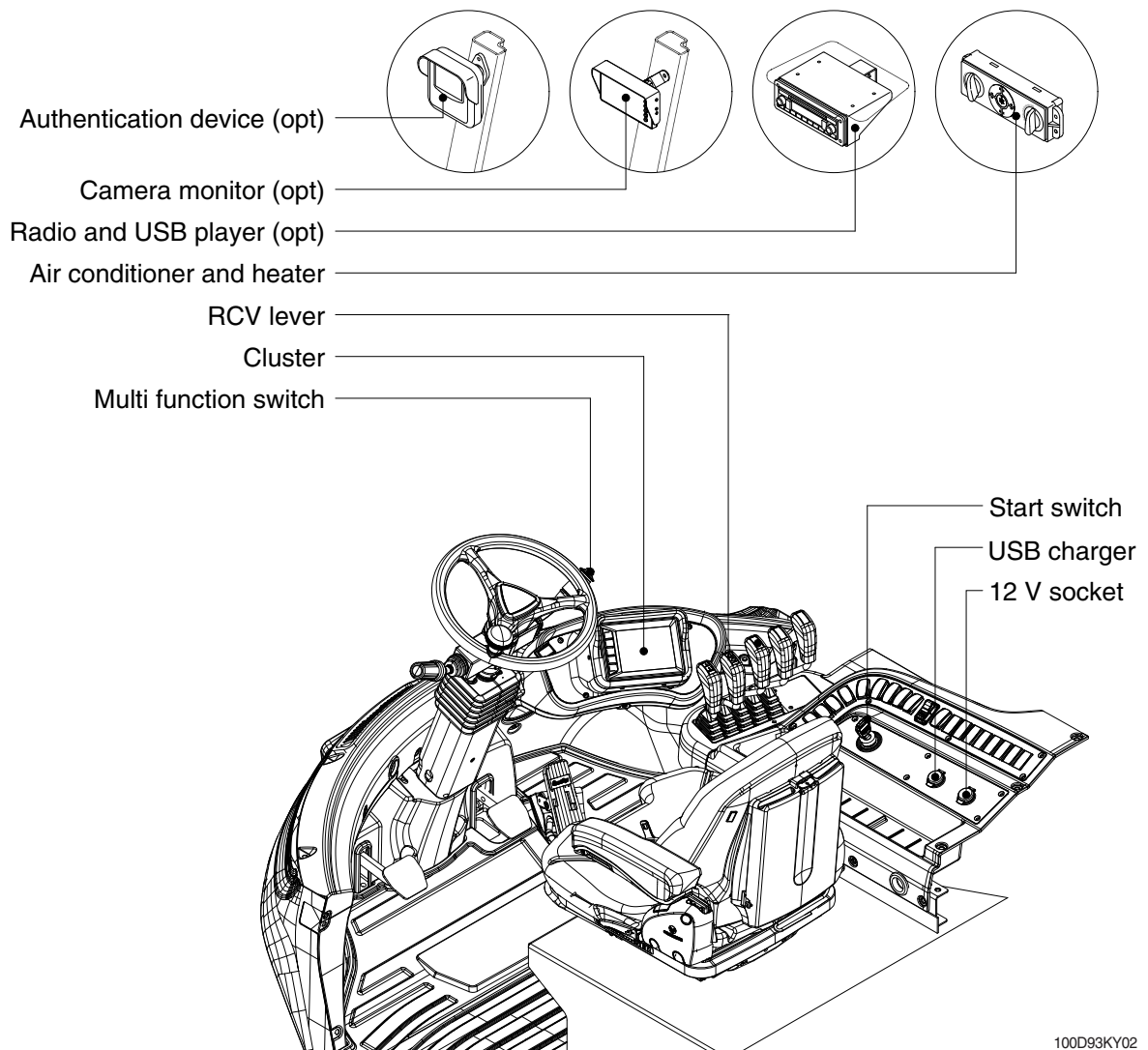
▲ Before modifications that affect the stability of safety systems are made written approval from HYUNDAI. Contact your authorized HYUNDAI dealer for a new nameplate showing the revised capacity.

3. CAB DEVICES

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

2) ELECTRONIC MONITOR SYSTEM

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



100D93KY02

4. CLUSTER

1) STRUCTURE

Like following figure, cluster is consisted of LCD and buttons. LCD will indicate the operation and abnormal status of truck to the driver in order to use and maintenance. Also, LCD allows to set and indicate the various modes, monitoring, and gadgets.

- ※ 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.



2) GAUGE

(1) Operation screen

Operating screen will be displayed if turn on the start switch.



35D9VB3KY04

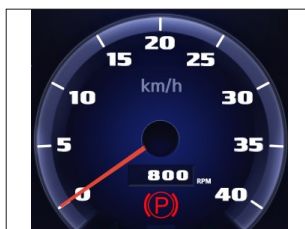
1 Speed meter

3 Coolant temperature gauge

2 Fuel gauge

4 Clock

(2) Speed meter

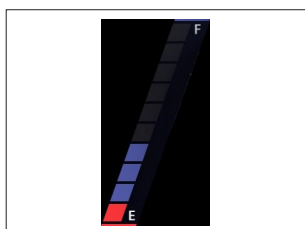


100D9V3KY30


- It indicates the speed of truck and calibrated in miles per hour (mph) or kilometer per hour (km/h).

※ Speed unit can be set in the speed unit menu of display set up at page 3-32.

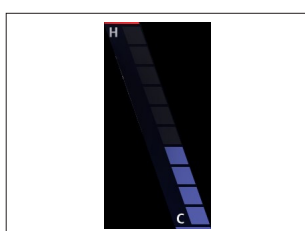
(3) Fuel gauge




35D9VB3KY05

- Fuel gauge displays the approximate amount of fuel remaining in the fuel tank.
- It shall be obtained fuel as soon as warning lamp  lights on.

(4) Coolant temperature gauge



35D9VB3KY06

- It indicates the temperature of the engine coolant.
 - White zone : 40 ~ 120 °C (104 ~ 248 °F)
 - Red zone : Over 120 °C (248 °F)
 - Warning lamp on : Over 115 °C (239 °F)
- If the gauge display in the red zone, or warning lamp  comes on, please stop the engine and inspect the coolant system.

(5) Clock



- It displays current time.
- The time can be adjusted at display Set Up > Time Set Up menu.

3) WARNING LAMPS

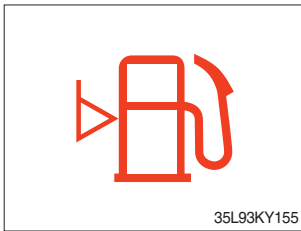


35D9VB3KY08

※ Warning and indicator lamp will display only items that were set as ON, and all warning and indicator except fuel level warning and coolant temperature warning will be displayed in order from the left of screen. And directional indicator lamp will display at the center.

No.	Warning lamp		No.	Warning lamp	
1		Fuel Level warning lamp	10		Clutch protection warning lamp
2		Coolant temperature warning lamp	11		Communication error warning lamp
3		Engine oil pressure warning lamp	12		Brake fail warning lamp
4		Air cleaner warning lamp	13		Seat belt reminder lamp
5		Water in fuel warning lamp	14		Fingertip warning lamp (NA)
6		Engine check warning lamp	15		Transmission warning lamp
7		Engine stop warning lamp	16		FSCU Communication error warning lamp
8		Battery charge warning lamp	17		FSCU warning lamp
9		Transmission oil temperature warning lamp	-	-	-

(1) Fuel level warning lamp



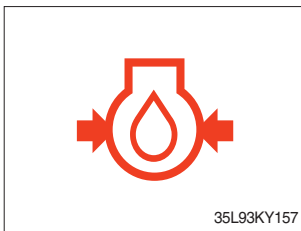
- Warning lamp will be displayed if fuel level is low.
- Please refuel immediately if the lamp is ON.

(2) Coolant temperature warning lamp



- Coolant temperature warning will be lit up when temperature is over 115 °C (239 °F).
- If the warning lamp is on continuously, please inspect the coolant system.

(3) Engine oil pressure warning lamp



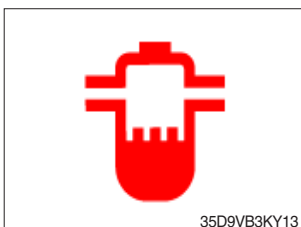
- This warning lamp will be lit up when engine oil pressure is low.
- Stop the engine immediately if the warning lamp is lit up. Please check the engine oil.

(4) Air cleaner warning lamp



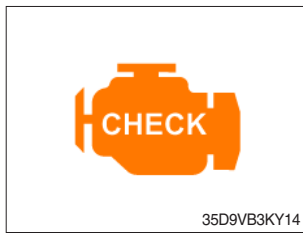
- This warning lamp is lit when air cleaner element is clogged up.
- Please clean up or replace the element.

(5) Water in fuel warning lamp



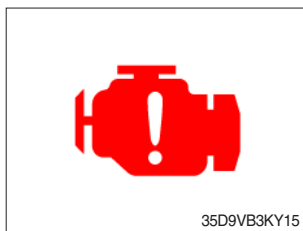
- Light up when water in fuel.
- Stop the engine and please drain the water of the fuel filter.

(6) Engine check warning lamp



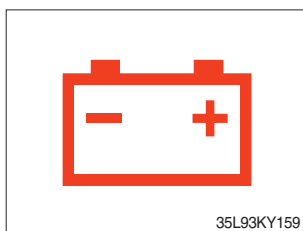
- When the engine is ON, it blinks for about 3 seconds. If the warning light remains on after 3 seconds, there is something wrong with the engine control, fuel supply and so on.
- Check the failure code of cluster.
- ※ **Some engine controls may not start if there is a problem.**
- ※ **Continued operation with the engine warning lamp ON or flashing can damage the exhaust control system, which affects operating performance and fuel consumption. You may also be subject to sanctions related to emission regulations, so be sure to check.**

(7) Engine stop warning lamp



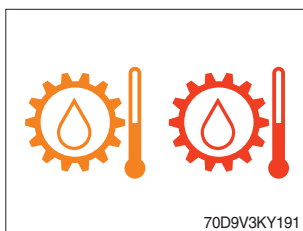
- If the lamp lights on, stop the engine immediately and check the engine.
- ※ **Please contact your Hyundai service center or local dealer.**

(8) Battery charge warning lamp



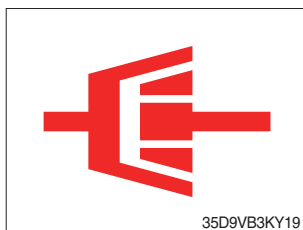
- This warning lamp is lit when battery charging voltage is low.
- Please inspect the battery charging circuit if the warning lamp is lit.

(9) Transmission oil temperature warning lamp



- Transmission oil temperature warning is consisted of two indications.
 - 110 °C (230 °F) or higher : Amber is light up
 - 120 °C (248 °F) or higher : Red is flashing
- When the red lamp lights up during operation, stop the engine and check the truck.

(10) Clutch protection warning lamp



- Warning lamp will be displayed if transmission oil pressure is not enough or while inching operation.
- Please check the transmission when the lamp is displayed without inching operation. If not, the brake performance can be decreased until the problem is resolved.

(11) Communication error warning lamp



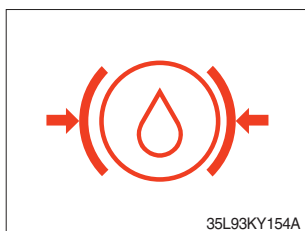
- This warning lamp will be lit up if the communication between cluster-CI and ECU is fail.
- Please check the communication line if the warning lamp is lit up.

(12) FSCU communication error warning lamp (option)



- This warning lamp will be lit up if the communication between MCU and FSCU is fail.
- Please check the communication line between MCU and FSCU if the warning lamp is lit up.

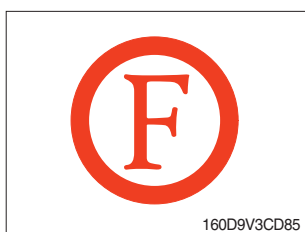
(13) Brake fail warning lamp



- The lamp lights ON when the oil pressure of service brake drops below the normal range.
- When the lamp is ON, stop the engine and check for its cause.

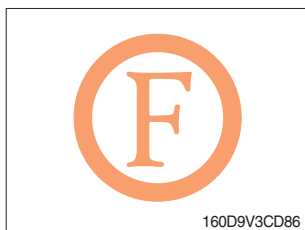
※ **Do not operate until the problems are corrected.**

(14) Fingertip red warning lamp (NA)



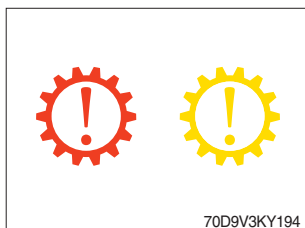
- This lamp lights ON when the forklift truck is in a condition that is serious enough to stop it.
- If the warning light is lit while driving, stop the engine and check the forklift.

(15) Fingertip amber warning lamp (NA)



- This lamp lights ON when there is a problem with the forklift truck system, but the vehicle does not need to be stopped immediately.

(16) Transmission warning lamp



- If the lamp lights on, check the transmission.
- If the red warning light is lit while driving, stop the engine and check the forklift.

(17) Seat belt reminder lamp



- This lamp will be blinked 5 times, after key on.
- If not wearing a seat belt, this reminder lamp will be displayed (option). (If driving over 4 km/h, it will be activated with buzzer)
- ※ If reminder lamp still displayed after wearing seat belt, Please check the seat belt wiring.

(18) FSCU warning lamp (option)



- If this warning light is lighted, check the failure code of FSCU. (with activating buzzer)
- ※ If the red warning light is lit while driving, stop the engine and check the forklift.

4) INDICATOR LAMPS



35D9VB3KY24

※ Warning and indicator lamps will display only items that were set as ON, and all warning and indicator except turning indicator lamp and driving indicator lamp will be displayed in order from the left of screen.

No.	Indicator lamp		No.	Indicator lamp	
1		Consumables management indicator lamp	8	N	Driving indicator lamp
2		Engine warning up indicator lamp	9	F F1 F2 F3	
3		Fuel warmer indicator lamp	10	R R1 R2 R3	
4		Parking brake indicator lamp	11	SIDE 	Side mirror heated pilot lamp (option)
5	TILT LOCK	Tilt lock indicator lamp (if installed)	12		DrivingHigh beam indicator lamp
6	OP SS	OPSS indicator lamp	13		Shift mode indicator lamp
7		Driving turn lamp	14		Inching switch on indicator lamp

(1) Consumables management indicator lamp



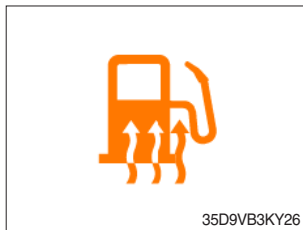
- Light up if consumables which must be replaced are exist.
- The indicator lamp will light up only 3 minutes since start switch ON, and then light OFF.
- Please check the consumables management list in maintenance menu.

(2) Engine warm-up indicator lamp



- The truck senses the engine coolant temperature and warms-up engine when needed.
- When it is happening, the indicator lamp is ON.

(3) Fuel warmer indicator lamp



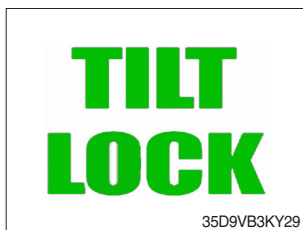
- Light up when fuel warmer is operating. (Controlled by ECU)

(4) Parking brake indicator lamp



- Light up when parking brake is ON.

(5) Tilt lock indicator lamp (if installed)



- The Indicator lamp will be lit up if the tilt lock switch (option) is entered.
- Tilt action will be limited if this Indicator lamp is lit up and the mast is located at 90 degrees.

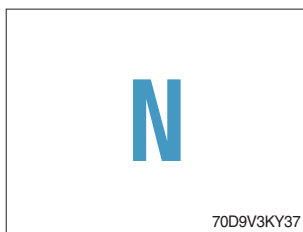
(6) OPSS indicator lamp



- Light up if driver leave seat during operation.
 - Truck driving and/or mast control will be blocked if lamp is lit up.
- ※ Please refer to page 0-12 for details.

(7) Driving indicator lamp

① Neutral



- This indicator lamp will be lit up when gear selector lever is located in neutral.

② Forward



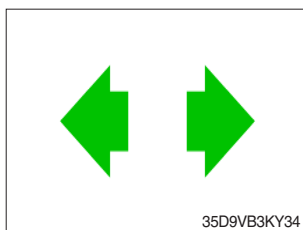
- This indicator lamp will be lit up if the forward gear is selected.

③ Reverse



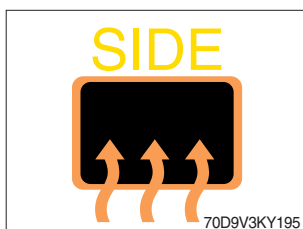
- This indicator lamp will be lit up if the reverse gear is selected.

(8) Driving turn lamp



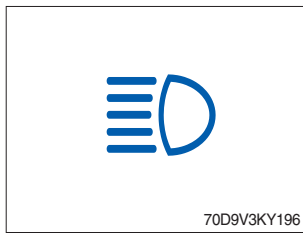
- This indicator lamp will flash if turns on the right or left turn signal.

(9) Side mirror heated indicator lamp (option)



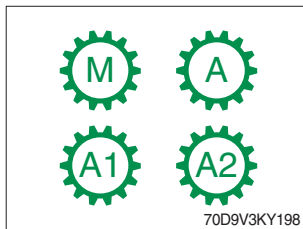
- ① When the heated mirror is operating, the lamp lights ON.

(10) High beam indicator lamp



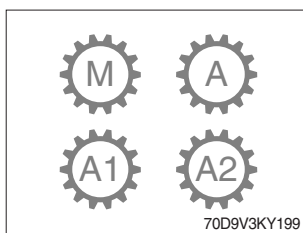
- This indicator is displayed when the vehicle's high beam is on.

(11) Shift mode indicator lamp 1



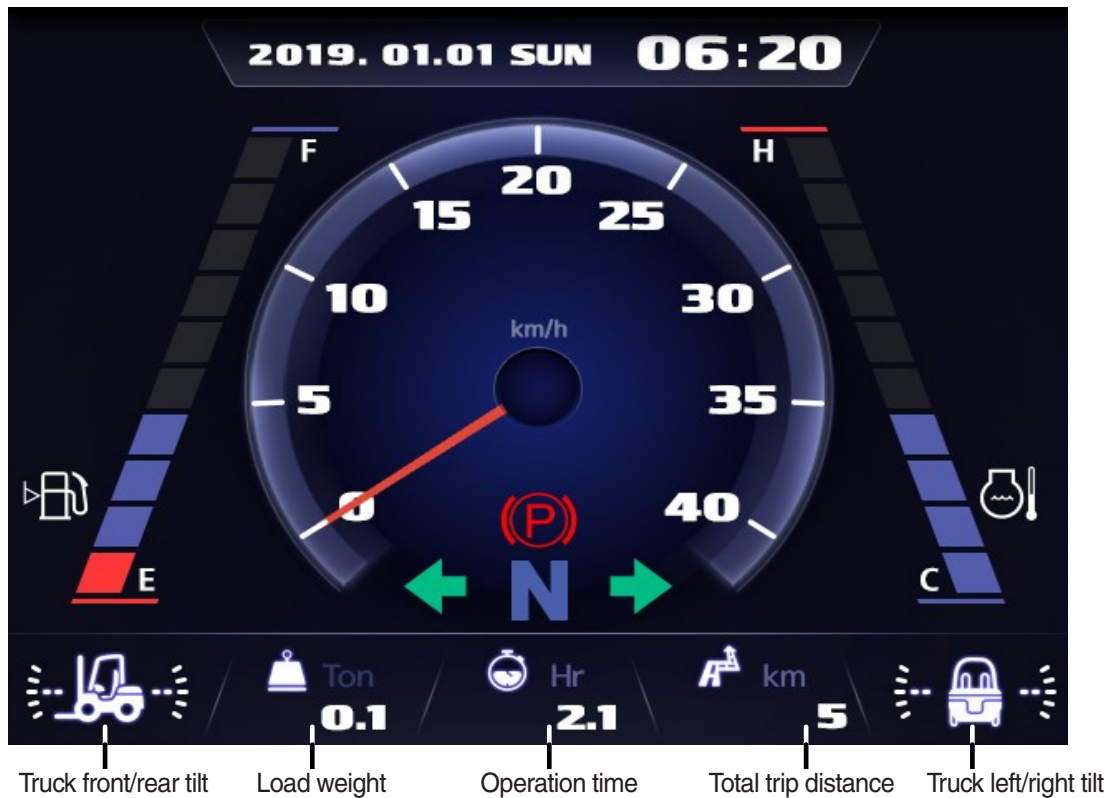
- This indicator shows the current vehicle's shift mode, A1 and A2 are indicated on vehicles with 2nd gear or higher.

(12) Shift mode indicator lamp 2



- This indicator shows the shift mode when activating the 2nd FNR, A1 and A2 are indicated on vehicles with 2nd gear or higher.

5) INFORMATION DISPLAY



35D9VB3KY35

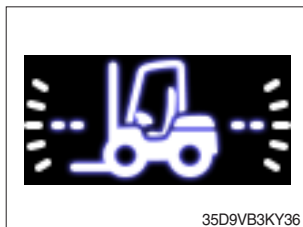
(1) Mast front/rear tilt



70D9V3KY41

- Display the real time tilt of mast.

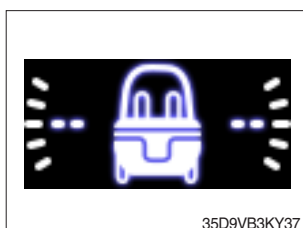
(2) Truck front/rear tilt



35D9VB3KY36

- Display the front and rear tilt of truck in real time.
- The red warning symbol turned on condition.
 - Stop : Tilt angle is higher than 2.3°
 - Driving : Tilt angle is higher than 10.2°

(3) Truck left/right tilt



35D9VB3KY37

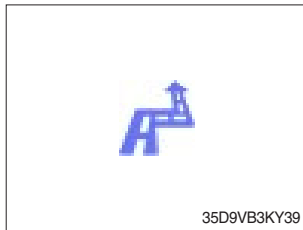
- Display the left and right tilt of truck in real time.
- The red warning symbol turned on condition.
 - Stop : Tilt angle is higher than 3.4°
 - Driving : Tilt angle is higher than 28.0°

(4) Load weight (option)



- Display the load weight.
- Screen will display blurry if the weight sensor has not been mounted.

(5) Total trip distance



- Display total trip distance of the truck.
- Unit of distance is kilometer.

(6) Operation time



- Display the used time of the truck.

(7) Explanation of warning lamp and indicator lamp



- When warning lamp or indicator lamp comes on, please press the enter button to check detailed explanation.
- During pressing the enter button, it keeps the screen to be shown explanation for warning lamp or indicator.

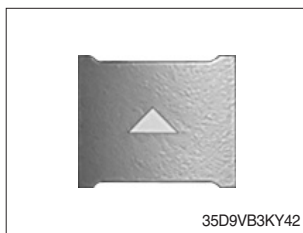
6) BUTTONS

(1) Camera



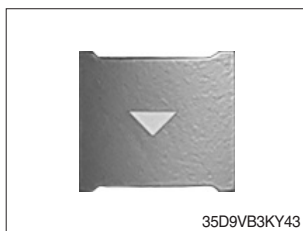
- This switch displays rear camera images. (if the camera is mounted)

(2) UP/Left



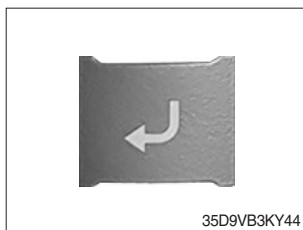
- This switch is used to move upward or leftward in menu or increase the value.

(3) Down/Right



- This switch is used to move downward or rightward in menu or decrease the value.

(4) Enter (select)



- This switch is used to enter into the menu or to select.

(5) Cancel (ESC)



- This switch is used to cancel or move to upper menu.

7) MAIN MENU

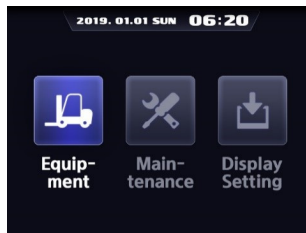
(1) Structure

Menus consist of main menu and sub-menu.

Operation Screen






Main Menu Screen



Sub-Menu Screen



70D9VB3KY42

No.	Main menu screen	Sub menu	Explanation
1	 <p>35D9VB3KY47</p>	<ul style="list-style-type: none"> Model select Tilt setting ESL setting Weight sensor setting (option) Camera setting (if installed) Fingertips setting (option, NA) CSC setting (if installed) Auto shift setting (if installed) DCSR setting (if installed) HAC setting (if installed) Vehicle Max speed limit Zero start setting (if installed) Clutch protection beep (if installed) ZF TCU calibration (if installed) Seat belt interlock (option) Cluster-CI info 	<ul style="list-style-type: none"> Diesel, LPG Truck tilt initialize ESL setting, Engine start limit, Delay time Enter the cylinder cross section area, Adjust load weight, Weight display setup Reverse gear interworking DCSR on, Cut-off driving speed, Restore driving speed Maximum speed limitation Cluster-CI information
2	 <p>35D9VB3KY48</p>	<ul style="list-style-type: none"> Failure history Consumables management I/O information 	<ul style="list-style-type: none"> Engine, Transmission failure history Change oil and filter replacement cycle Analog, Digital signal
3	 <p>35D9VB3KY49</p>	<ul style="list-style-type: none"> LCD brightness adjustment User setting A/S phone No. Password change Consumables management 	<ul style="list-style-type: none"> Automatic, Manual Time, Unit, Language Change A/S contact Engine starting password connect Maintenance parts management

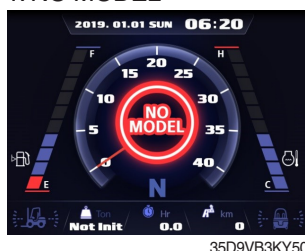
(2) Equipment menu

① Model Select (a required setting)

Check under the start switch ON status. Selection will be canceled if press the cancel button.

- ※ This is a required setting. Some functions may not be worked properly if you do not select the model.
- ※ If you want to move back to previous page, please enter ESC button in any stage.
- ※ It shall be selected right model to prevent malfunction of truck.

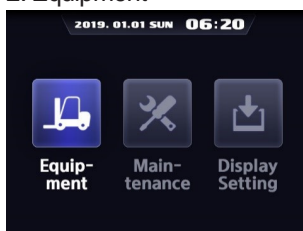
1. NO MODEL



35D9VB3KY50

Select the your model.

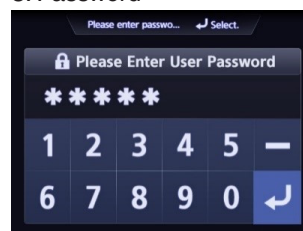
2. Equipment



35D9VB3KY47

Enter to Equipment.

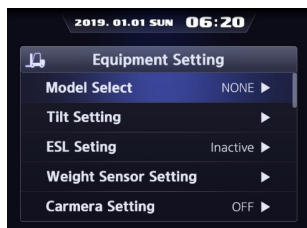
3. Password



35D9VB3KY51

Enter the password.
Default password is "00000".
Password length must be 5~10 digits.

4. Model select



70D9V3KY54

Choose Model Select and enter.

5. Diesel or LPG



35D9VB3KY53

Please select the fuel type.

6. Truck weight



70D9V3KY44

Please select the truck weight level.

7. Truck model



70D9VB3KY45

Please select the exact model name.

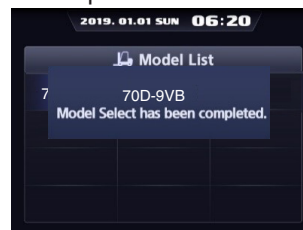
8. Confirm



70D9VB3KY46

Confirm the model which you select.

9. Completion



70D9VB3KY47

Model selection is completed.

10. Check



35D9VB3KY58

Check the status which is not shown 'NO MODEL' in main display.

② Tilt Setting

a. Setting (Check under the start switch ON status.)

※ The tilt sensor has already been initialized when deliver the truck from factory.

※ Tilt reset if the tilt sensor figure or truck tilt is not horizontal in the flatland.

⚠ You must set tilt in the flatland since this is a horizontal set up.

※ If tilt sensor for mast is mounted (option), locates the mast vertically.

※ Mast maximum angle depends on the truck.

· Truck that has not applied the mast angle sensor

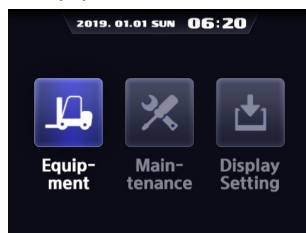


· Truck that has applied the mast angle sensor (option)



70D9VB3KY59

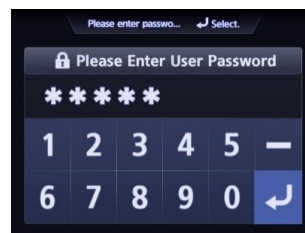
1. Equipment



35D9VB3KY47

Enter to Equipment.

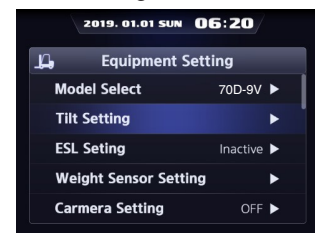
2. Password



35D9VB3KY51

Enter the password.

3. Tilt setting



70D9V3KY50

Choose Tilt Setting and enter.

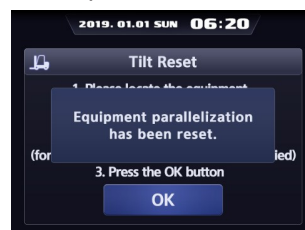
4. Instruction



70D9V3KY51

Follow the instruction showing in the screen.

5. Completion



70D9V3KY52

Setting has been completed.

b. Check functions

a) Check the real time operation by changing angles of truck tilt and mast tilt.

b) Auto-leveling (if installed)

(a) Tilt mast forward or backward.

(b) Start tilting mast toward its vertical position, pushing the auto tilt leveling switch.

(c) Check if the mast stops traveling when it becomes vertical to ground.

c) Forward or backward truck tilt warning (red)

· Stop : $\pm 2.3^\circ$ (1.5 ~ 5 tons)

· Driving : $\pm 10.2^\circ$ (1.5 ~ 5 tons)

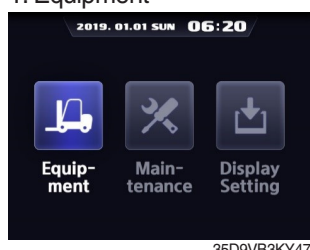
d) Left or right truck tilt warning (red)

- Stop : $\pm 3.4^{\circ}$ (1.5 ~ 5.0 tons)
- Driving

Truck weight	Warning angles (red)
1.5 ~ 2.0 tons	$\pm 20.3^{\circ}$
2.2 ~ 3.3 tons	$\pm 20.8^{\circ}$
3.5 ~ 4.5 tons	$\pm 24.2^{\circ}$
5.0 tons ~	$\pm 28.0^{\circ}$

③ ESL (Engine Start Limit) Setting : Default is 'Inactive'

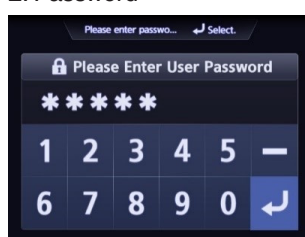
1. Equipment



35D9VB3KY47

Enter to Equipment.

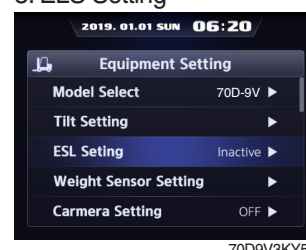
2. Password



35D9VB3KY51

Enter the password.

3. ELS Setting

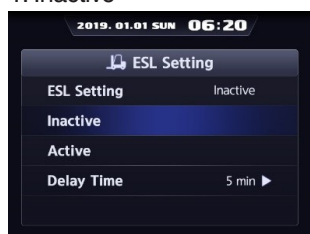


70D9V3KY55

Choose ESL setting and enter.

a. Setting

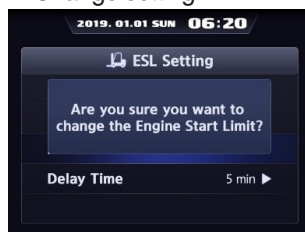
1. Inactive



35D9VB3KY85

Choose Inactive.

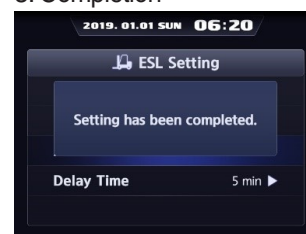
2. Change setting



35D9VB3KY86

If you want to change setting, press enter button.

3. Completion

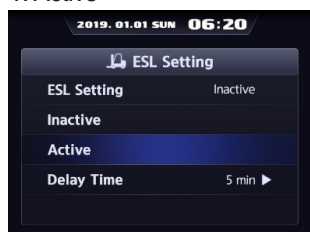


35D9VB3KY87

Setting has been completed.

b. Active

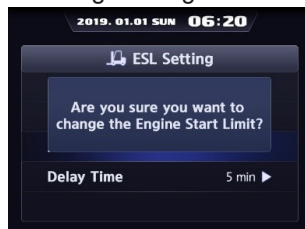
1. Active



35D9VB3KY88

Choose Active.

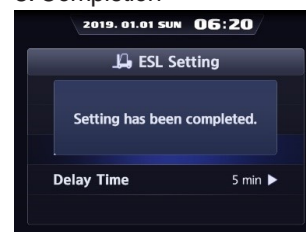
2. Change setting



35D9VB3KY89

If you want to change setting, press enter button.

3. Completion



35D9VB3KY87

Setting has been completed.

b. Check functions

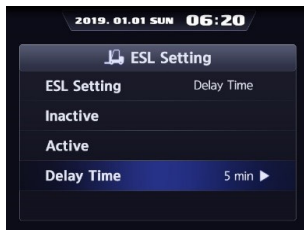
- (a) Set the mode as active and start switch OFF.
 - (b) Upon start switch ON, the password screen pops up and starting is prohibited until the right password has been offered. (But, driver still can start the vehicle if starts within 10 seconds from start switch OFF)
 - (c) Set the mode as 5 min of delay time and start switch OFF.
 - (d) check if vehicle can start within 5 min and start switch OFF.
 - (e) check if vehicle requests password after 5 min.
- ※ **Start switch ON screen (When startup control mode is ON)**



35D9VB3KY90

c. Delay time

1. Delay time



35D9VB3KY91

Choose delay time.

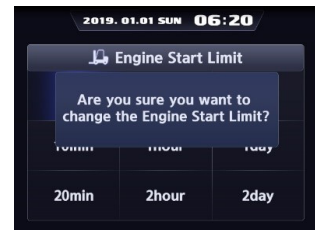
2. Select value



35D9VB3KY92

Select value you want to apply.

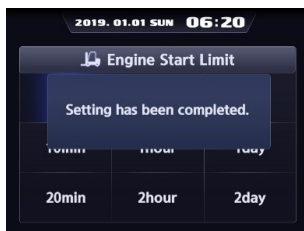
3. Change setting



35D9VB3KY93

If you are sure to change ESL, press enter.

4. Completion



35D9VB3KY94

Setting has been completed.

④ Weight Sensor Setting (option)

Check under the start switch ON status. There are three settings (unload, load, reset) for weight sensor.

※ The weight sensor has already been set when deliver the truck from factory.

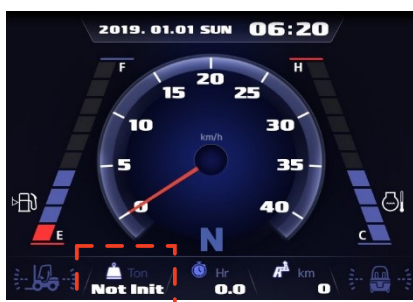
a. Setting Cylinder Cross-Section

※ Cylinder cross-section value

unit : cm^2

Model	Mast type	V-mast	TS-mast
100D-9	V300~500	113.49	141.76
	TS450~500		
	V550~600	141.76	190.07
	TS550~750		

· Truck that has not applied the weight sensor

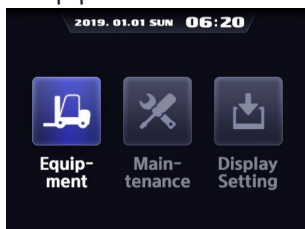


· Truck that has applied the weight sensor (option)



70D9VB3KY63

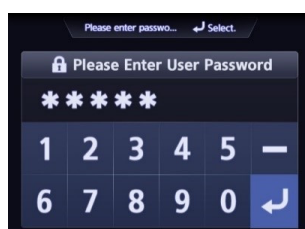
1. Equipment



35D9VB3KY47

Enter to Equipment.

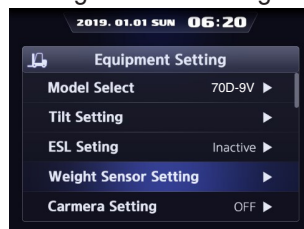
2. Password



35D9VB3KY51

Enter the password.

3. Weight Sensor Setting



70D9V3KY56

Choose Weight Sensor Setting and enter.

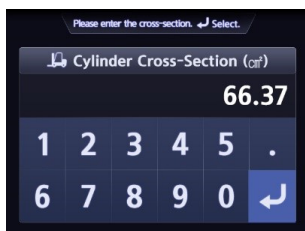
4. Cylinder Cross-Section



70D9V3KY57

Choose Cylinder Cross-Section. If cylinder cross-section is already set up, setting value is shown in initial screen.

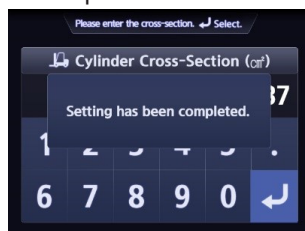
5. Value



35D9VB3KY66

Enter cylinder cross-section value using up or down buttons.

6. Completion



35D9VB3KY67

Setting has been completed.

7. Check

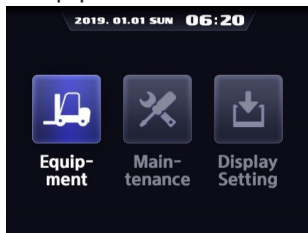


70D9V3KY58

Check the value whether it is right.

b. Unloaded status adjustment

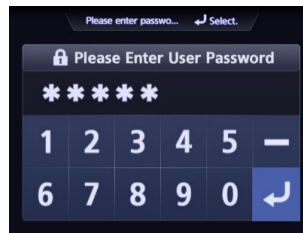
1. Equipment



35D9VB3KY47

Enter to Equipment menu

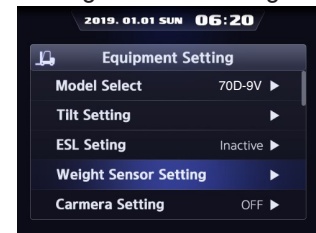
2. Password



35D9VB3KY51

Enter the password

3. Weight Sensor Setting



70D9V3KY56

Choose Weight Sensor Setting

4. Load Weight Adjustment



70D9V3KY59

Choose Load Weight Adjustment and enter.

5. Unloaded Status Adjustment



70D9V3KY60

Choose Unloaded Status Adjustment and enter.

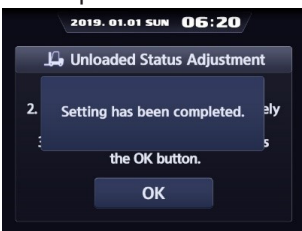
6. Instruction



35D9VB3KY71

Follow the instruction showing in the screen. After finish setting and press enter button

7. Completion



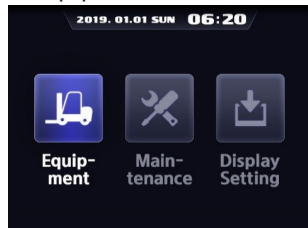
35D9VB3KY72

Setting has been completed.

c. Loaded status adjustment

- ※ Must be prepared to lift up by locating the load on the fork before enter the weight.
- ※ MCU (Main Control Unit) recognizes the weight automatically by detecting the pressure change.
- ※ Must be performed within 30 seconds of the lift task. If it is not completed within 30 seconds, this process will be canceled automatically.
- ※ Accurate weight value is not recognized if other pressure changes that are occurred besides salvage work.
- ※ Perform again, if the measurement malfunction is occurred.

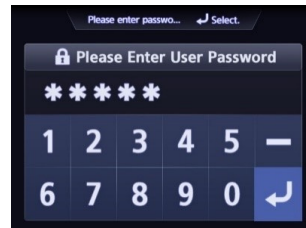
1. Equipment



35D9VB3KY47

Enter to Equipment menu

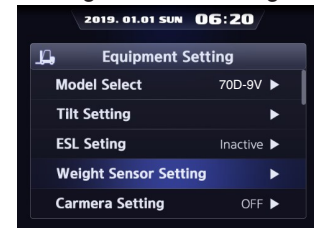
2. Password



35D9VB3KY51

Enter the password

3. Weight Sensor Setting



70D9V3KY56

Choose Weight Sensor Setting

4. Load Weight Adjustment



70D9V3KY59

Choose Load Weight Adjustment and enter.

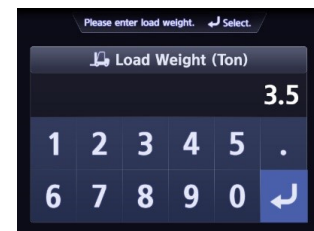
5. Loaded Status Adjustment



70D9V3KY61

Choose Load Weight Adjustment and enter.

6. Value



35D9VB3KY74

Enter load weight using up or down buttons.

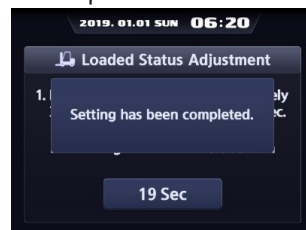
7. Instruction



35D9VB3KY75

Follow the instruction showing in the screen. After finish setting and press enter button. Please proceed the operation within 30 seconds.

8. Completion



35D9VB3KY76

Setting has been completed.

d. Reset

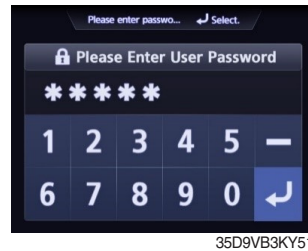
Initialize the all values of 'Unloaded and Loaded Status Adjustment' that were entered previously. (Cylinder cross-sectional area is not initialized.)

1. Equipment



Enter to Equipment menu

2. Password



Enter the password

3. Weight Sensor Setting



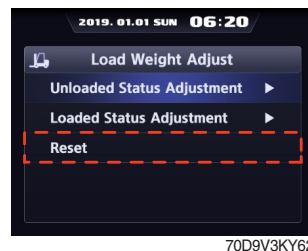
Choose Weight Sensor Setting

4. Load Weight Adjustment



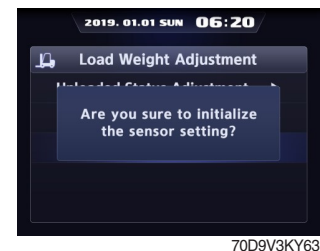
Choose Load Weight Adjustment and enter.

5. Reset



Enter to Reset.

6. Check



Press the enter button.

7. Completion

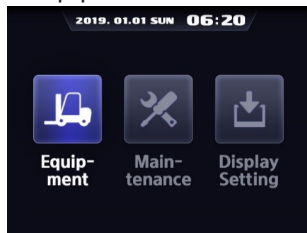


Reset has been completed.

e. Weight Display Setting

Enable to adjust the digit-number fo weight of main screen.

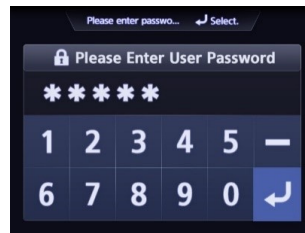
1. Equipment



35D9VB3KY47

Enter to Equipment menu

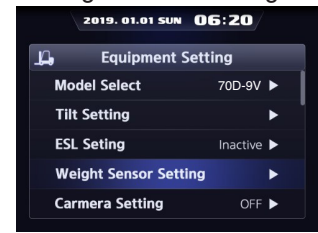
2. Password



35D9VB3KY51

Enter the password

3. Weight Sensor Setting



70D9V3KY56

Choose Weight Sensor Setting

4. Weight Display Setting



70D9V3KY65

Choose weight sensor setting and enter.

5. Unit



35D9VB3KY81

Choose unit what you want to use.

6. Completion



35D9VB3KY80

Setting has been completed.

· 100 kg unit



35D9vB3KY83

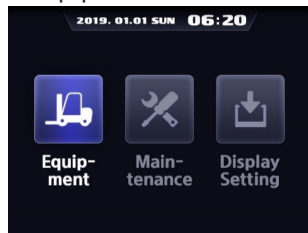
· 10 kg unit



35D9vB3KY83

f. Overload Alarm

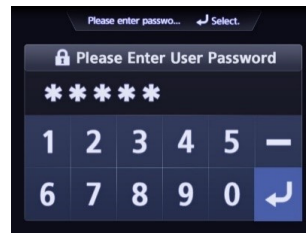
1. Equipment



35D9VB3KY47

Enter to Equipment menu

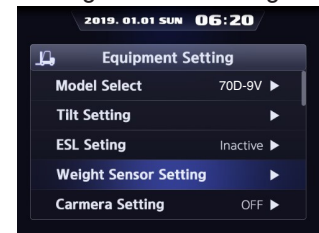
2. Password



35D9VB3KY51

Enter the password

3. Weight Sensor Setting



70D9V3KY56

Choose Weight Sensor Setting

4. Overload alarm



70D9V3KY68

Enter to Overload alarm.

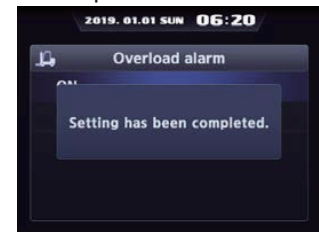
5. Select



35D9VB3KY81

Select ON or OFF.

6. Completion



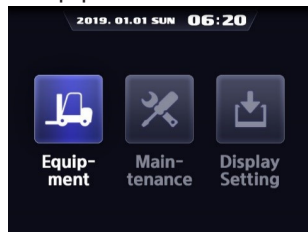
100D9VB3KY80

Setting has been completed.

⑤ Camera Setting (if installed)

- Device setup → Camera setup
- After set the reverse gear interoperation as ON, the screen will be changed from main screen to camera mode if put gear into reverse, and if the gear is changed, screen will be back to the main screen.

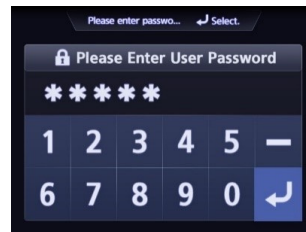
1. Equipment



35D9VB3KY47

Enter to Equipment.

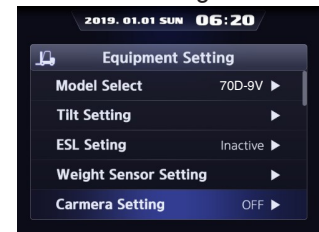
2. Password



35D9VB3KY51

Enter the password

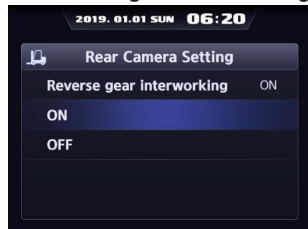
2. Camera Setting



70D9V3KY69

Choose Camera Setting and enter.

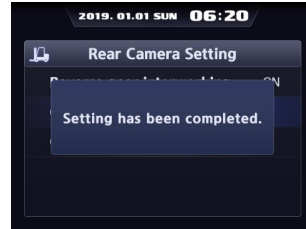
3. Reverse gear interworking



70D9V3KY70

Select ON or OFF.

4. Completion



70D9V3KY71

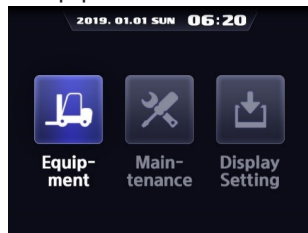
Setting has been completed.



35D9VB3KY98

⑥ FingerTips Setting (option, NA)

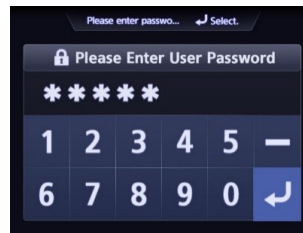
1. Equipment



35D9VB3KY47

Enter to Equipment.

2. Password



35D9VB3KY51

Enter the password

3. FingerTips Setting



70D9V3KY72

Choose FingerTips Setting and enter.

a. Lever Position Setting

1. Lever Position Setting



70D9V3KY73

Choose Lever Position Setting and Enter

2. Setting



70D9V3KY74

Set minimum and maximum value.

b. Lever Dead Zone Setting

1. Lever Dead Zone Setting



70D9V3KY75

Choose Lever Dead Zone Setting and enter.

2. Setting



70D9V3KY76

Set lever dead zone range.

c. Valve setting

3-3. Valve Setting



70D9V3KY77

Choose Valve Setting and enter.

4. Lift Section Valve



70D9V3KY78

In the Valve Setting, you can set the lift, tilt, AUX1, or AUX2 section valves

5. Setting.

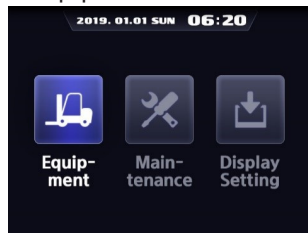


70D9V3KY79

For each valve value, you can adjust the current value and time on the above screen

⑦ CSC (Curve Speed Control) Setting (if installed)

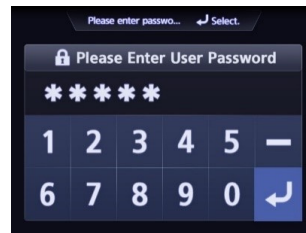
1. Equipment



35D9VB3KY47

Enter to Equipment.

2. Password



35D9VB3KY51

Enter the password

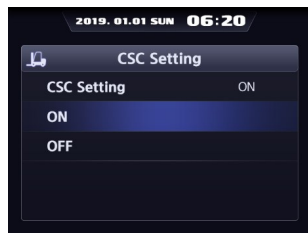
3. CSC Setting



70D9V3KY80

Choose CSC setting and enter.

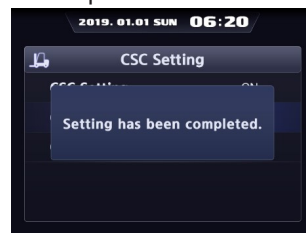
4. Select



70D9V3KY81

Select ON or OFF.

5. Completion



70D9V3KY82

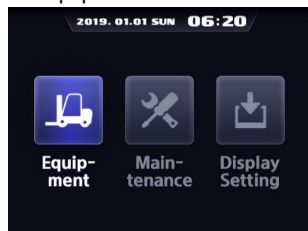
Setting has been completed.

⑧ Auto Shift Setting (if installed)

Enable to turn the function ON or OFF or change the shift speed.

a. Mode Select

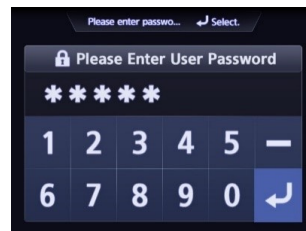
1. Equipment



35D9VB3KY47

Enter to Equipment.

2. Password



35D9VB3KY51

Enter the password

3. Auto Shift Setting



70D9V3KY83

Choose Auto Shift setting and enter.

4. Mode Select



70D9V3KY84

Choose Mode Select.

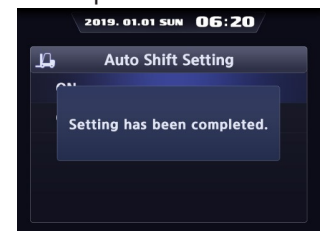
5. Select



70D9V3KY85

Select ON or OFF.

6. Completion



70D9V3KY86

Setting has been completed.

b. Speed Setting

- In case of 1st gear → 2nd gear, it is possible to set up to 7 ~ 10 km/h.
- In case of 2nd gear → 1st gear, it is possible to set up to 4 ~ 5 km/h.

※ Depending on the model, the function can be turned on/off only by an external switch.

3-2. Speed Setting



70D9V3KY87

Choose Speed Setting and enter.

4. Adjustment



70D9V3KY88

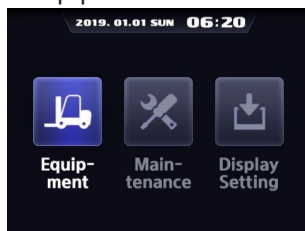
Change the speed value after selecting the shift point that needs to be changed

⑨ DCSR (Direction Change Shock Relief) setting (if installed)

- Set the mode ON. Below is how this feature functions.
- If you are driving at over the block drive speed and then change gear from forward to reverse (or reverse to forward), the gear stays as neutral until the truck reaches the restore drive speed.
- The truck changes direction and starts to travel.

※ Restore drive speed can not be set over the block drive speed.

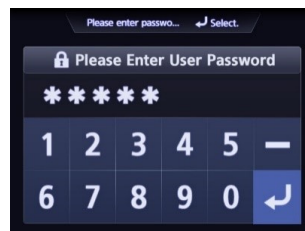
1. Equipment



35D9VB3KY47

Enter to Equipment.

2. Password



35D9VB3KY51

Enter the password

3. DCSR Setting



70D9V3KY89

Choose DCSR setting and enter.

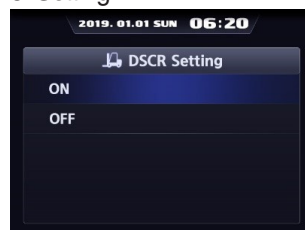
4. Mode Select



35D9VB3KY108

Select Mode Select.

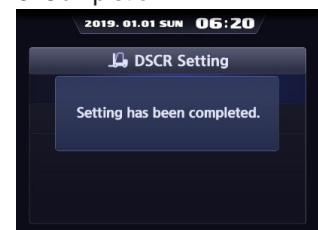
5. Setting



35D9VB3KY109

Select ON or OFF.

6. Completion



35D9VB3KY110

Setting has been completed.

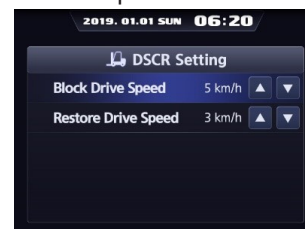
7. Speed Setting



35D9VB3KY111

If you want to change speed setting, enter Speed Setting.

8. Drive Speed



35D9VB3KY112

Change speed.

⑩ HAC (Hill Assist Control) Setting (if installed)

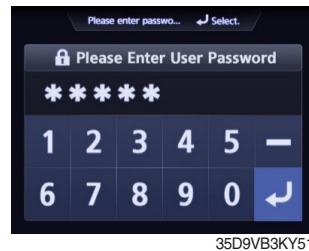
If you are trying to drive in stop status on the hill, the truck does not move backward when the HAC setting is ON.

1. Equipment



Enter to Equipment.

2. Password



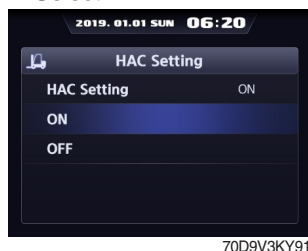
Enter the password

3. HAC Setting



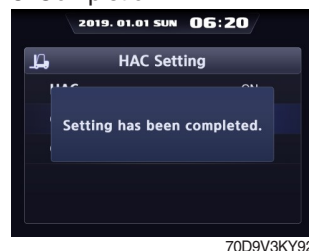
Choose DCSR setting and enter.

4. Select



Select ON or OFF.

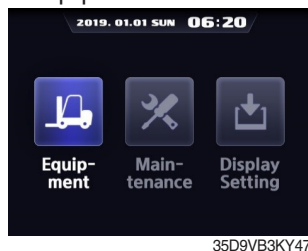
5. Completion



Setting has been completed.

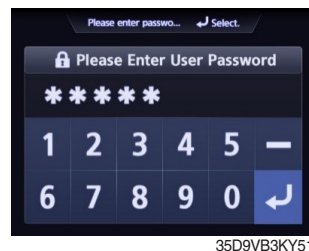
⑪ Vehicle Max Speed Limit

1. Equipment



Enter to Equipment.

2. Password



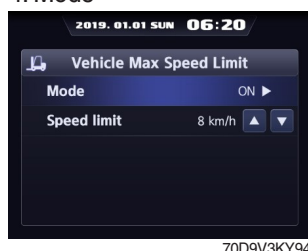
Enter the password

3. Vehicle Max Speed Limit



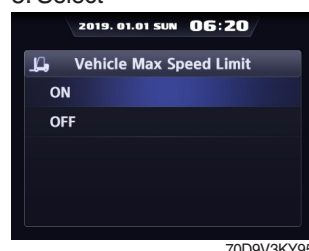
Choose Vehicle Max Speed Limit and enter.

4. Mode



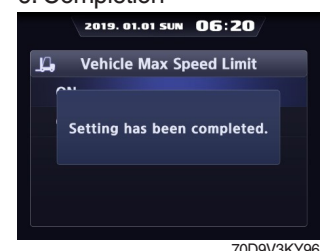
Enter to Mode.

5. Select



Select ON or OFF.

6. Completion



Setting has been completed.

· Limit speed : 10 km/h



The truck does not exceed the limit speed.

⑫ Zero Start Setting (if installed)

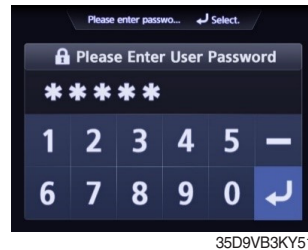
1. Equipment



35D9VB3KY47

Enter to Equipment.

2. Password



35D9VB3KY51

Enter the password

3. Zero Start Setting



70D9V3KY98

Choose Zero Start Setting and enter.

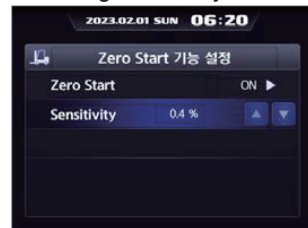
4. Select Sensitivity



100D9V3KY99

Select Sensitivity and press the enter.

5. Setting Sensitivity



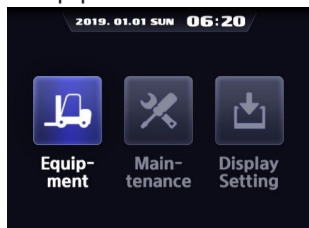
100D9V3KY10

Change value using up/down button and press the enter

※ Default Sensitivity is 0.4% and it can be changed to maximum 4.8%

⑬ Clutch Protection Beep (if installed)

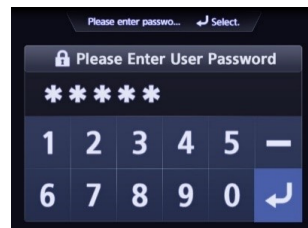
1. Equipment



35D9VB3KY47

Enter to Equipment.

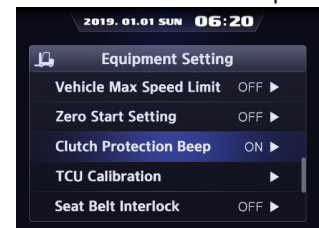
2. Password



35D9VB3KY51

Enter the password

3. Clutch Protection Beep



70D9V3KY101

Choose Clutch Protection Beep and enter.

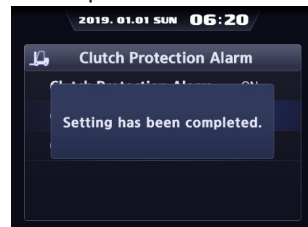
4. Select



70D9V3KY102

Select ON or OFF.

5. Completion



70D9V3KY103

Setting has been completed.

⑭ ZF TCU Calibration (if installed)

Enable to calibrate the inching and clutch of the transmission.

※ Depending on the model, the initial conditions for calibration may be different or the procedure may be automatically skipped.

a. Inching Calibration

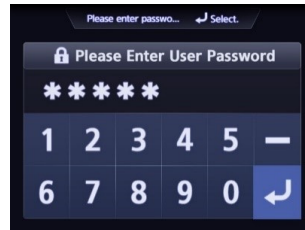
1. Equipment



35D9VB3KY47

Enter to Equipment.

2. Password



35D9VB3KY51

Enter the password

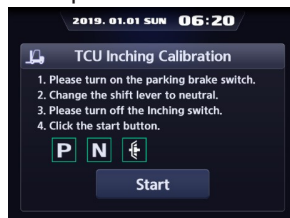
3. ZF TCU Calibration



70D9V3KY127

Choose ZF TCU Calibration and enter.

4. Prepare for Calibration



70D9V3KY128

Before starting calibration, turn on the parking switch, the gear neutral, and the inching switch off.

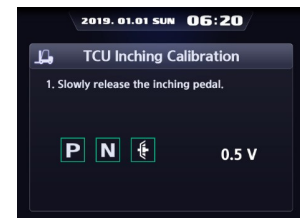
5. Calibration 1



70D9V3KY129

Fully press the inching pedal.

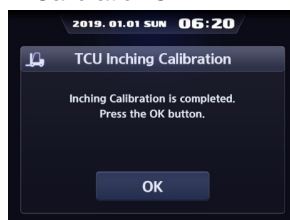
6. Calibration 2



70D9V3KY130

Take your foot off the inching pedal.

7. Calibration 3



70D9V3KY131

Confirm the completion of calibration and press the ESC button or OK button to exit to the menu

b. Clutch Calibration

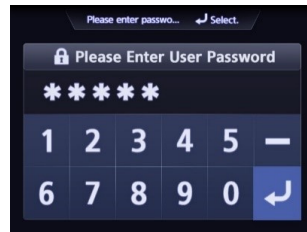
2-1. ZF TCU Calibration



70D9V3KY127

Choose ZF TCU Calibration and enter.

2. Password



35D9VB3KY51

Enter the password

3. ZF TCU Calibration



70D9V3KY127

Choose ZF TCU Calibration and enter.

4. Prepare for Calibration



70D9V3KY185A

Before starting calibration, must be satisfied with 5 conditions.

※ Conditions

- 1) Engine RPM 800 to 1100
- 2) T/M temperature 60°C to 90°C
- 3) Truck speed 0 km/h (stop)
- 4) Gear neutral
- 5) Parking switch ON

5. Calibration 1



70D9V3KY186

Wait until the next button is ON.

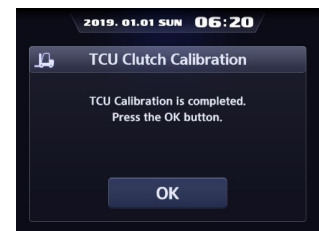
6. Calibration 1



70D9V3KY187

Enter the next button.

7. Calibration 2



70D9V3KY188

Confirm the completion of calibration and press the ESC button or OK button to exit to the menu

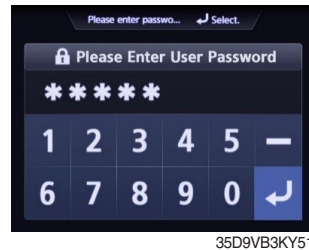
⑮ Seat Belt Interlock (option)

1. Equipment



Enter to Equipment.

2. Password



Enter the password (applied master password)

3. Seat Belt Interlock



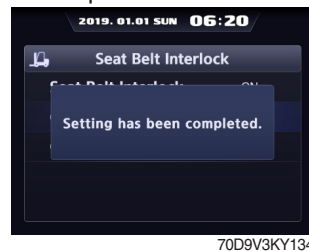
Choose Seat Belt Interlock and enter.

4. Select



Select ON or OFF.

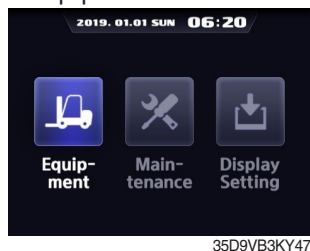
5. Completion



Setting has been completed.

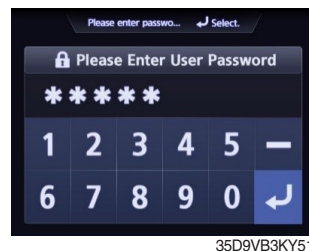
⑯ Cluster-CI

1. Equipment



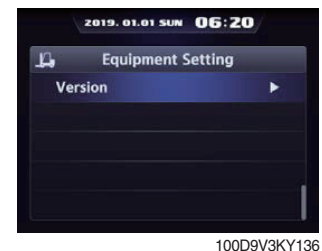
Enter to Equipment.

2. Password



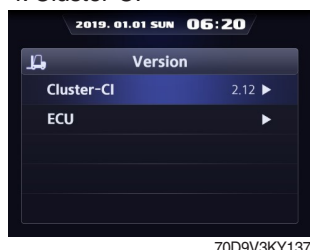
Enter the password

3. Version



Choose Version and enter.

4. Cluster-CI



Choose Cluster-CI and enter.

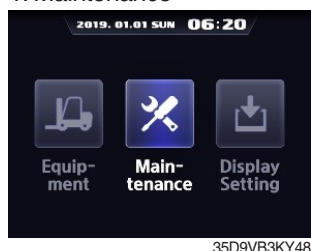
5. Check Version



(2) Maintenance

① Failure History

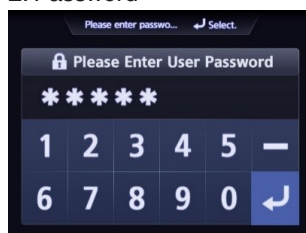
1. Maintenance



35D9VB3KY48

Enter to Maintenance.

2. Password



35D9VB3KY51

Enter the password

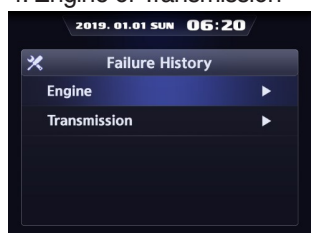
3. Failure History



70D9V3KY138

Choose Failure History and enter.

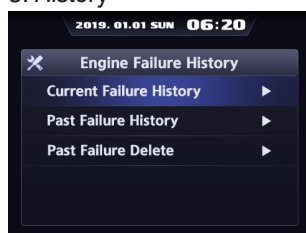
4. Engine or Transmission



70D9V3KY139

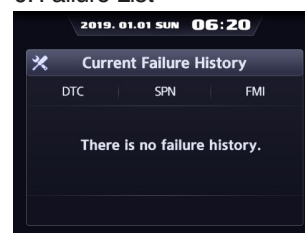
Choose what needs to check.

5. History



70D9V3KY140

6. Failure List



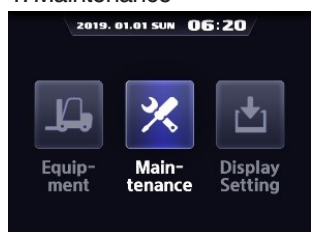
70D9V3KY141

② Consumables Management

- If the consumables replacement cycle has been passed, alarm will be displayed as ON.
- Press the 'Consumables replacement' if replaced the consumables.
- Information about recent replacement (maximum 9) will be displayed.
- If you want to change the cycle, please press the 'Change' button.

※ Refer to page 7-12 about periodic replacement parts.

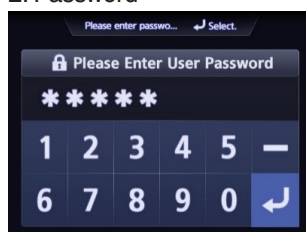
1. Maintenance



35D9VB3KY48

Enter to Maintenance.

2. Password



35D9VB3KY51

Enter the password

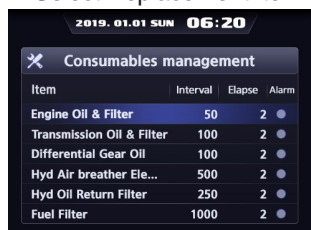
3. Consumables Management



70D9V3KY142

Choose Consumables Management and enter.

4. Select Replacement Item



70D9V3KY143

Select the replaced item.

5. Replacement History



70D9V3KY144

Select Replacement History.

6. Check.



70D9V3KY145

Check history.

7. Replacement



70D9V3KY146

Select Replacement.

8. Confirm



70D9V3KY147

Press enter button.

9. Change



70D9V3KY148

Select Change.

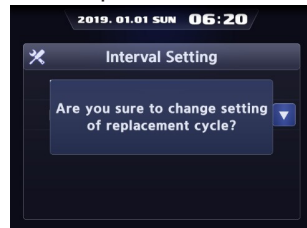
10. Setting Cycle



70D9V3KY149

Change properly the interval.

11. Completion

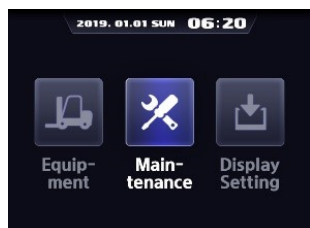


70D9V3KY150

Setting has been completed.

③ I/O Information

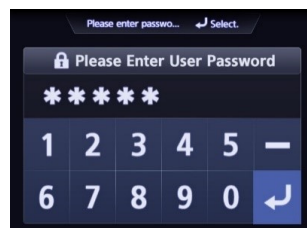
1. Maintenance



35D9VB3KY48

Enter to Maintenance.

2. Password



35D9VB3KY51

Enter the password

3. I/O Information



70D9V3KY151

Choose I/O Information and enter.

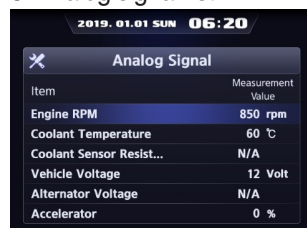
4. Analog signal



35D9VB3KY139

Enter to Analog Signal.

5. Analog signal list



70D9V3KY152

Check the analog signal list.

6. Digital signal



35D9VB3KY141

Enter to Digital Signal

7. Digital signal list



70D9V3KY153

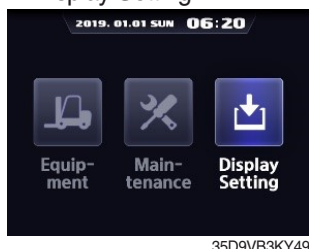
Check the digital signal list.

(3) Display setting

① LCD Brightness Adjustment

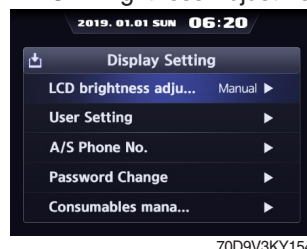
- LCD brightness has two options. (Automatic and Manual modes)
- Manual mode always keeps the selected brightness.
- Brightness : Daytime 100%, Nighttime 50%
- Daytime/Nighttime time zone : 06 ~ 18

1. Display Setting



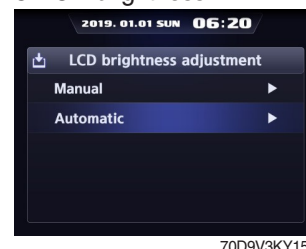
Enter to Display Setting.

2. LCD Brightness Adjustment



Choose LCD Brightness Adjustment and enter.

3. LCD brightness



Select Manual or Automatic.

4. LCD Brightness (Day/Night)



Set day and night brightness in the manual mode.

5. LCD Brightness

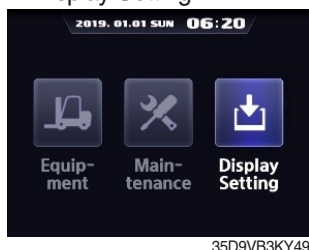


Set LCD brightness in the manual mode.

② User Setting

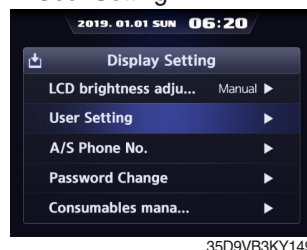
Enable to set time, unit, and language.

1. Display Setting

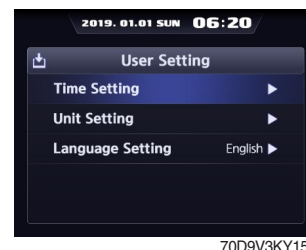


Enter to Display Setting.

2. User Setting



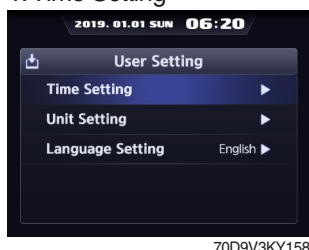
Choose User Setting and enter.



Select Time Setting.

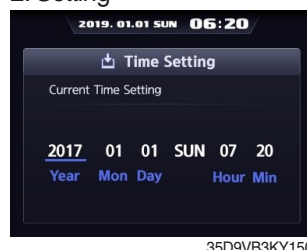
a. Time Setting

1. Time Setting



Select Time Setting.

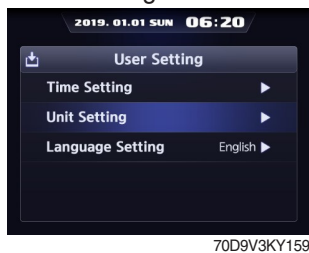
2. Setting



Set time.

b. Unit Setting

1. Unit Setting



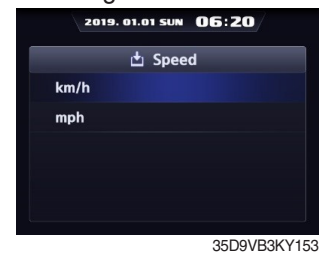
Select Unit Setting.

2. Unit Setting List



Enable to set the unit of speed, weight, temperature and pressure.

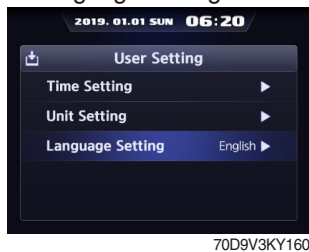
3. Setting



Set unit.

c. Language Setting

1. Language Setting



Select Language Setting.

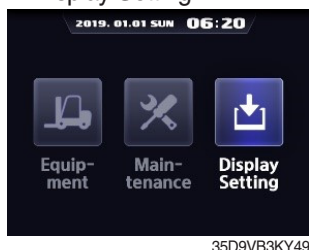
2. Setting



Choose a language.

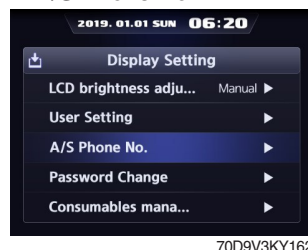
③ A/S Phone No.

1. Display Setting



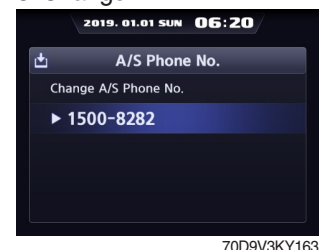
Enter to Display Setting.

2. A/S Phone No.



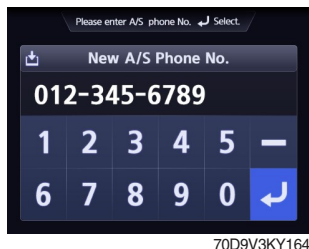
Choose A/S Phone No. and enter.

3. Change



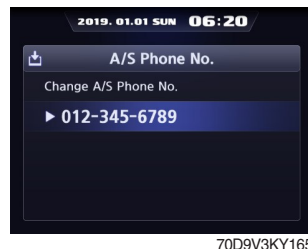
Select phone number if you want to change.

4. New A/S Phone No.



Enter new phone number using up or down buttons and press the enter button.

5. Finish



Contact will be displayed as the modified number.

④ Password Change.

- This function is to allow to change password from default password to user defined password.
- Password length must be 5~10 digits.

※ Since, if you forget the password, you must request the A/S, do not forget the password.

1. Display Setting



35D9VB3KY49

Enter to Display Setting.

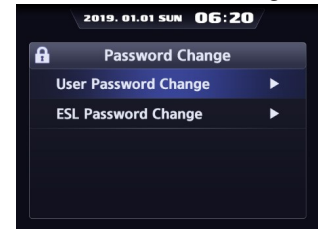
2. Password Change



70D9V3KY166

Choose Password Change and enter.

3. User Password Change

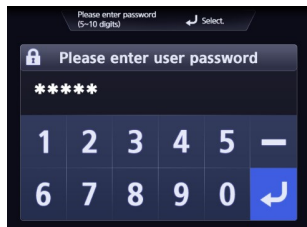


70D9V3KY167

Select User Password Change.

a. User Password Change

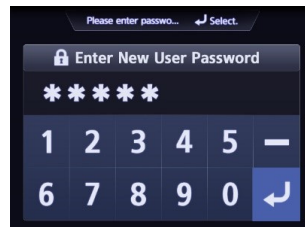
1. Current User Password



70D9V3KY168

Enter the current user passwr.

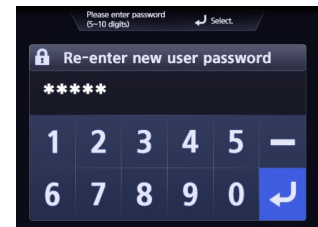
2. New User Password



35D9VB3KY144

Enter a new user password.

3. Re-enter

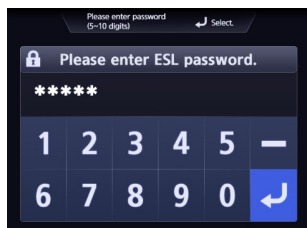


70D9V3KY169

Enter a new user password again.

b. ESL Password Change

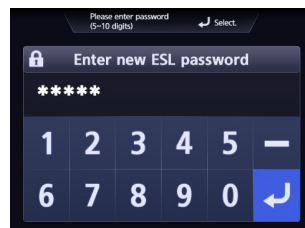
1. Current User Password



70D9V3KY166

Enter the current user password.

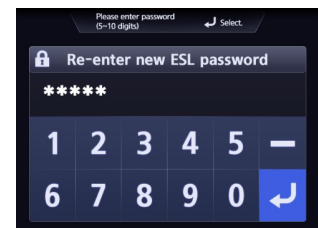
2. New User Password



70D9V3KY167

Enter a new user password.

3. Re-enter



70D9V3KY168

Enter a new user password again.

⑤ Consumables Management

1. Display Setting



35D9VB3KY49

Enter to Display Setting.

2. Conusmables Management



70D9V3KY174

Choose Consumables Management and enter.














3. List



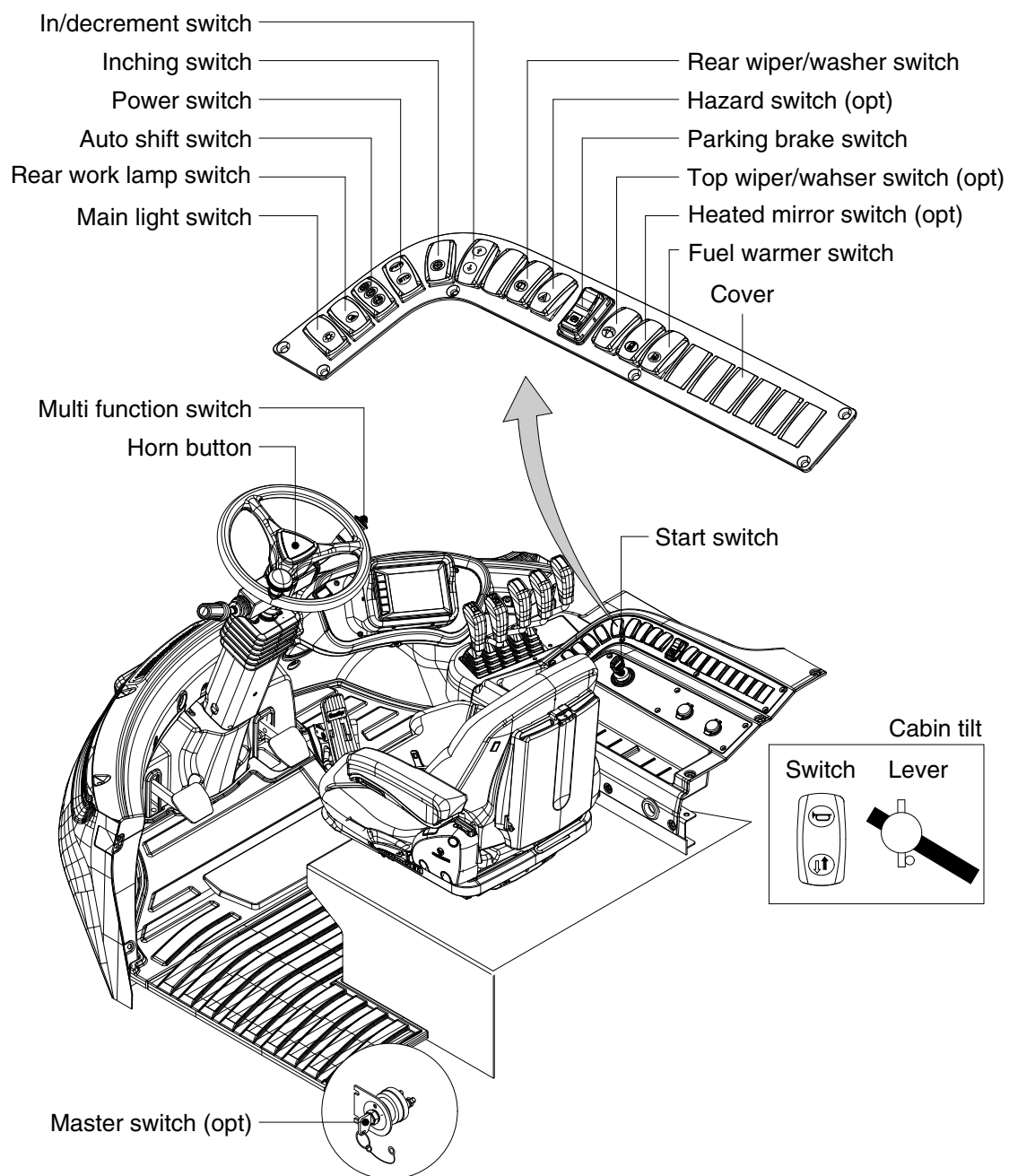
70D9V3KY143

8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
1	Engine oil pressure warning		Engine oil pressure warning lamp	Engine oil pressure is low. Please fill the engine oil
2	Engine warm-up indicator		Engine warm-up indicator lamp	Warm-up will be started.
3	Air cleaner warning		Air cleaner warning lamp	Replace the air cleaner filter.
4	Water in fuel warning		Water in fuel warning lamp	Please drain the water of the fuel filter.
5	Engine check warning		Engine check warning lamp	Check the failure code of cluster.
6	Engine stop warning		Engine stop warning lamp	Check the failure code of cluster.
7	Fuel warmer indicator		Fuel warmer indicator lamp	Warming up the fuel.
8	Transmission oil temperature warning		Transmission oil temperature warning lamp	T/M oil is over temperature condition. 110 °C (230 °F) or higher : Amber 120 °C (248 °F) or higher : Red
9	Parking brake indicator		Parking brake indicator lamp	Parking brake is the operational status.
10	Battery charging warning		Battery charging warning lamp	Battery is not being charged. Please check alternator and wiring.
11	Tilt lock indicator (if installed)		Tilt lock indicator lamp	Auto-leveling is the operational status.
12	OPSS indicator		OPSS indicator lamp	OPSS is working : Driving, lifting, and tilting is locked or the truck is parked status.

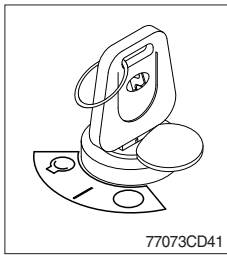
No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
13	Fuel level warning		Fuel level warning lamp	Fuel level is low. Please fill the fuel.
14	Coolant temperature warning		Engine coolant temperature warning lamp	Engine coolant is over temperature condition.
15	Clutch protection warning		Clutch protection warning lamp	Clutch protection warning operation
16	Consumables replacement indicator		Consumables replacement indicator lamp	Consumables replacement cycle has been passed.
17	LH Turn indicator		LH Turning indicator lamp	-
18	RH Turn indicator		RH Turning indicator lamp	-
19	Forward gear		Forward gear, 1 gear, 2 gear, and 3 gear indicator lamp	-
20	Reverse gear		Reverse gear, 1 gear, 2 gear, and 3 gear indicator lamp	-
21	Communication error warning (ECU)		Communication error warning lamp	Communication between cluster-CI and ECU has been failed. Check communication line.
22	Communication error warning (FSCU)		Communication error warning lamp	Communication between cluster-CI and FSCU has been failed. Check communication line.
23	Brake fail warning		Brake fail warning lamp	Stop the engine and check for its cause.
24	Side mirror heated indicator		Side mirror heated pilot lamp	Side mirror heated operation
25	Seat belt reminder		Seat belt reminder lamp	Please wear seat belt

5. SWITCHES



100D93KY03

1) START SWITCH



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

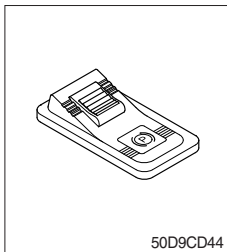
- ○ (OFF) : Position to stop the engine. Insert or remove the ignition key from this position.
- | (ON) : The operation of the electrical device. It is located right next to the OFF position clockwise.
- ⦿ (START) : Engine ignition position. It is located clockwise from the ON position.

※ Release the ignition key after the engine is ignited to automatically return to the ON position.

※ To switch the engine back on, return the key to the OFF position and then turn it to the START position.

※ If the gear selector lever is not in the neutral position, the engine will not ignite.

2) PARKING BRAKE SWITCH

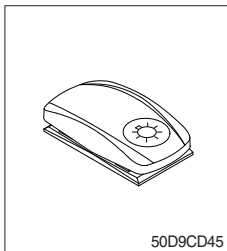


(1) This switch is used to parking brake lock or release.

(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.

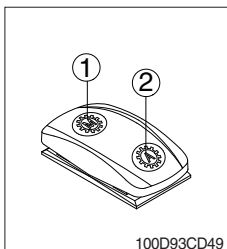
3) MAIN LIGHT SWITCH



(1) This switch is used to operate the head light by one steps.

- ① First step : Tail lamp comes ON.
- ② Second step : Head lamp comes ON.

4) AUTO SHIFT SWITCH



(1) Manual mode (①)

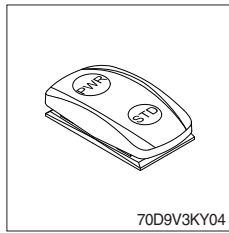
Press the top of the switch for the manual mode of the autoshift function. The operator selects the desired speed and the desired direction in the manual mode with the gear selector lever.

(2) Automatic mode (②)

- Press the bottom of the switch for the automatic mode of the autoshift function.

※ Autoshift function changing from 1st to 2nd forward gear shift mode only. (not for rear gear)

5) POWER SWITCH



- (1) This switch offers two selectable operating mode.

The operator can adjust the truck's performance with this selection switch.

(2) Function

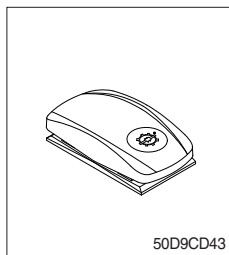
① STD MODE

This mode provides maximum fuel efficiency for general loading.

② PWR MODE

This mode provides maximum power output for heavy loading or hill climb.

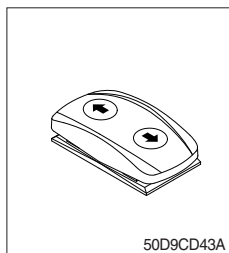
6) INCHING SWITCH



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

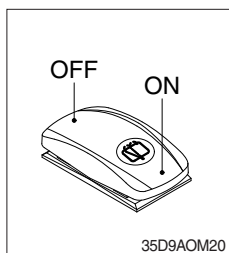
- (2) Also, the inching lamp on the cluster is illuminated.

7) IN/DECREMENT SWITCH



- (1) When engine running, the low rpm of engine increase or decrease by 25 rpm by operating this switch.

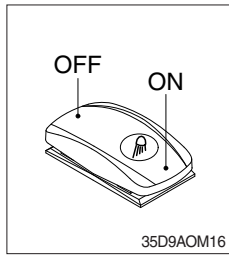
8) REAR WIPER AND WASHER SWITCH



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

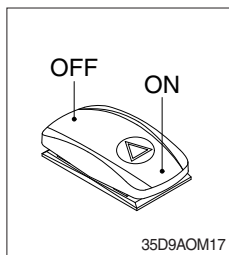
- (2) The washer liquid is sprayed and the wiper is operated only while pressing this switch.

9) REAR WORK LAMP SWITCH



- (1) This switch is used to operate the work lamps. Press this switch to turn on work lamps.

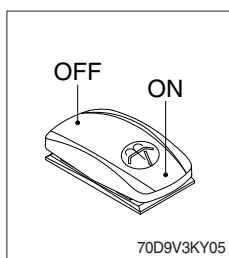
10) HAZARD SWITCH (OPTION)



- (1) Use for parking, or loading truck.

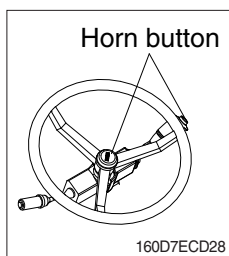
※ If the switch is left ON for a long time, the battery may be discharged.

11) TOP WIPER AND WASHER SWITCH (OPTION)



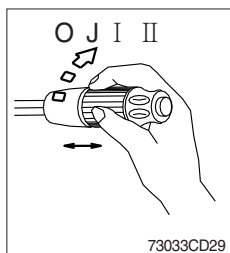
- (1) This switch is used to operate the wiper and washer on the top of the cab.
(2) The washer liquid is sprayed and the wiper is operated only while pressing this switch.

12) HORN BUTTON



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

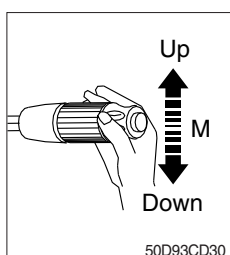
13) MULTI FUNCTION SWITCH



(1) Front wiper and washer switch

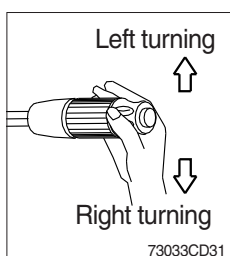
- ① When the switch is in J position, the wiper moves intermittently.
- ② When placed in I or II position, the wiper moves continuously.
- ③ If you push the grip of the lever, washer liquid will be sprayed and the wiper will be activated 2-3 times.

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



(2) Dimmer switch

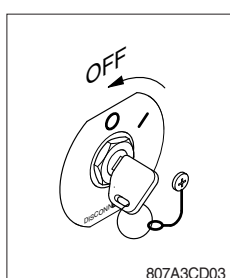
- ① This switch is used to turn the head light direction.
- ② **Switch positions**
 - Up : To flash for passing
 - Middle : Head light low beam ON
 - Down : Head light high beam ON
- ③ If you release the switch when it's in up position, the switch will return to middle.



(3) Turning switch

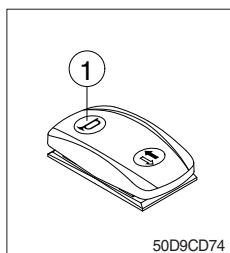
- ① This switch is used to warn or signal the turning direction of the truck to other trucks or equipment.
- ② Push the lever up for turning left, pull the lever down for turning right.

14) MASTER SWITCH (option)



- (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.**

15) CABIN TILT SWITCH



(1) Horn (🔊)

By pressing position ①, the horn sounds and by releasing, the horn stops.

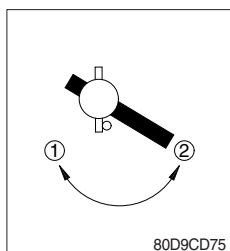
▲ Sound the horn to warn near by personnel, before tilting the cabin.

(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 7-16 for the tilting method of the cabin.

16) HAND PUMP LEVER

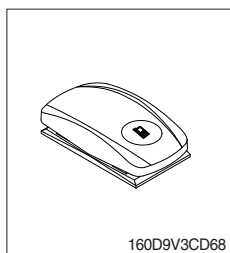


(1) This lever is used when tilting the cabin.

(2) Turn the hand pump lever to clockwise direction (①), the cabin shall be tilted to right side by the cabin tilt switch.

(3) Turn the hand pump lever to counterclockwise direction (②), the cabin shall be returned to original location by the cabin tilt switch.

17) HEATED MIRROR SWITCH (option)

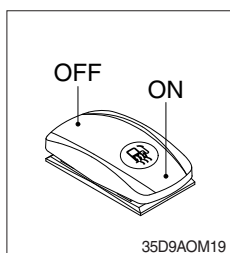


(1) This switch is used to supply heating to side mirrors.

(2) Turn off the switch when ten minutes elapsed from the switch on or press the switch once more.

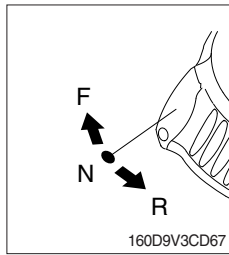
※ When the heated mirror is operating, the lamp lights ON.

18) FUEL WARMER SWITCH



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

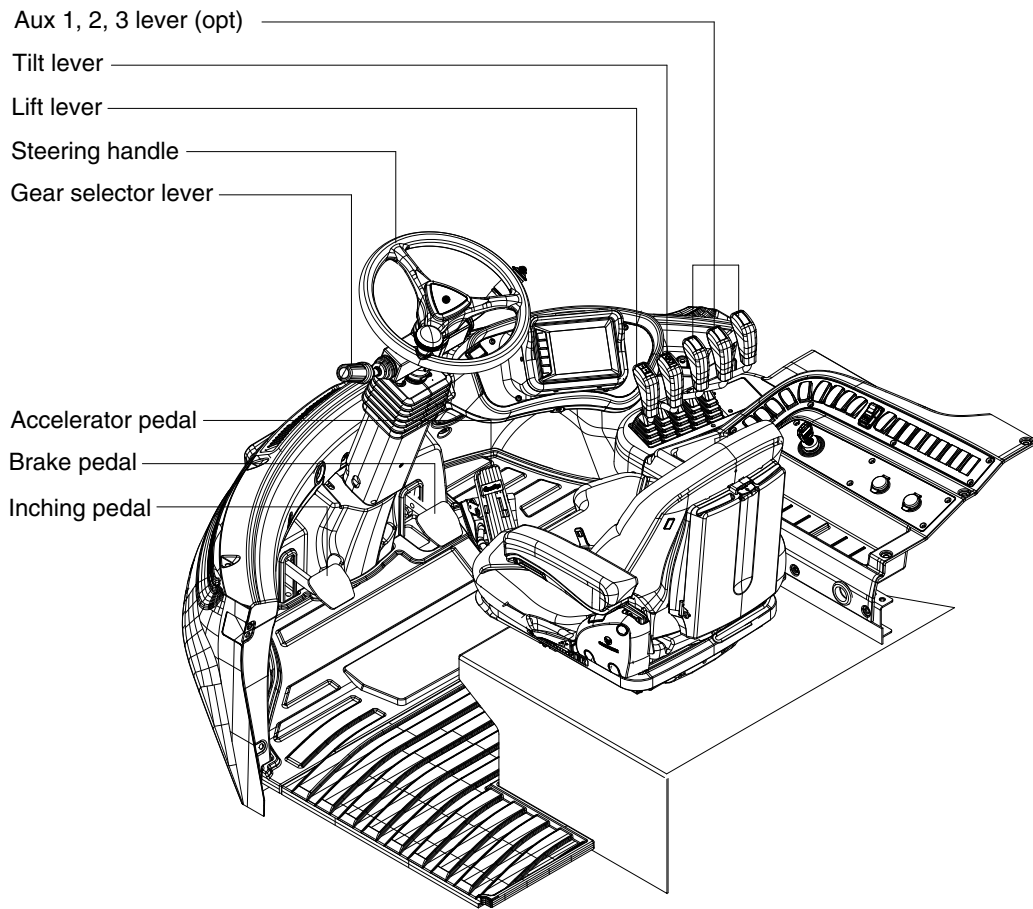
19) FNR SWITCH (option)



(1) This switch changes travel direction of truck only when the FNR enable switch is selected ON.

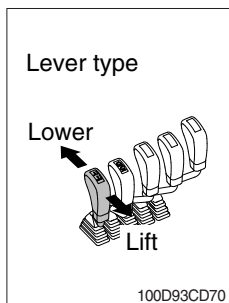
- F : Truck moves forward
- N : Neutral position
- R : Truck moves backward

6. CONTROL DEVICES



100D93KY04

1) LIFT LEVER



(1) LIFT

PULL the lever BACK to LIFT the forks.

(2) LOWER

PUSH the lever FORWARD to LOWER the load.

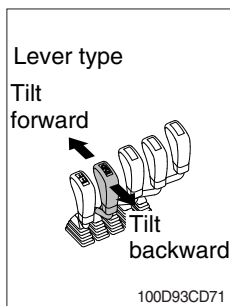
(3) HOLDING

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

※ Lifting speed is controlled by the lift lever and the accelerator pedal.

Lowering speed is controlled by the lift lever only.

2) TILT LEVER



(1) TILT FORWARD

PUSH the lever FORWARD to tilt mast FORWARD.

(2) TILT BACKWARD

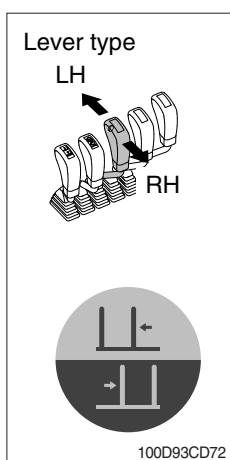
PULL the lever BACK to tilt mast BACKWARD.

(3) HOLDING

When the lever is released, tilting action stops.

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

3) LEVER FOR SIDE SHIFT



(1) LH MOVEMENT

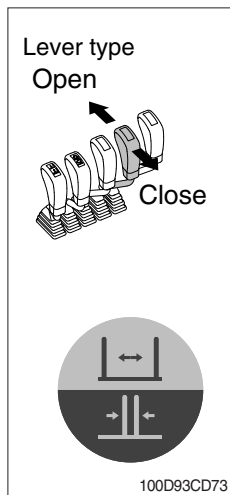
Push the lever forward to move the side shift to the left hand.

(2) RH MOVEMENT

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

4) LEVER FOR SIDE SHIFT WITH FORK POSITIONER

(1) FORK POSITIONER (SYNCHRONIZER TYPE)



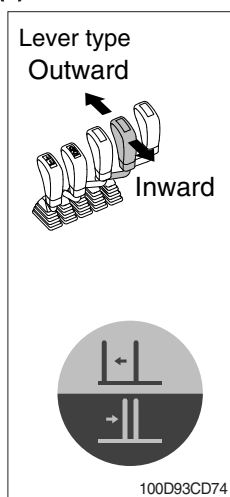
① OPEN THE FORKS

Push the lever forward to open both forks simultaneously.

② CLOSE THE FORKS

Pull the lever backward to close both forks simultaneously.

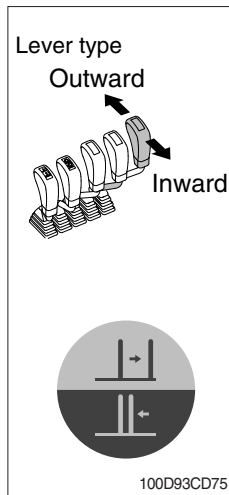
(2) FORK POSITIONER (INDEPENDENT TYPE)



① LH FORK MOVEMENT

- Push the lever forward to move the LH fork outward.

- Pull the lever backward to move the LH fork inward.

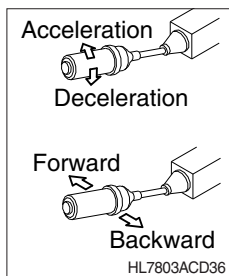


② RH FORK MOVEMENT

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

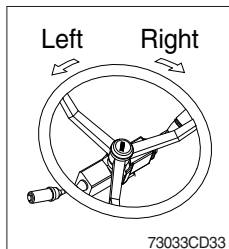
※ Operate the aux 2 lever while holding down the aux 3 mode switch.

5) GEAR SELECTOR LEVER



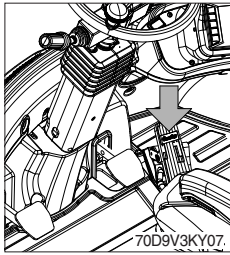
- (1) This lever is used for gear selection, forward 3 stages and reverse 3 stages.
- (2) If you push the gear selector lever, the truck moves forward, but pulling the gear selector lever, the truck moves backward.
- (3) If you turn the gear selector lever forward, the truck increases the speed, but if you turn the gear selector lever backward, the truck reduces the speed.

6) STEERING HANDLE



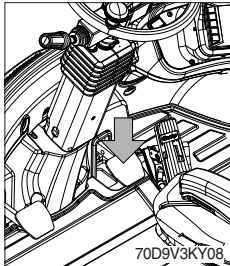
- (1) A steering cylinder in the center of the steering axle will operate the steering function.
- (2) Turning the steering wheel left, the truck moves to the left side and turning it right, the truck moves to the right side.

7) ACCELERATOR PEDAL



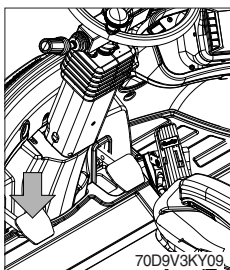
- (1) This pedal controls the engine speed. The engine speed will increase in proportion to the degree of force applied to this pedal.
- (2) Unless this pedal is pressed, the engine will run at low idling.

8) BRAKE PEDAL



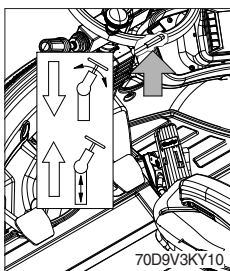
- (1) If the pedal is pushed, braking force is generated and bring the truck to a stop.
- ※ Do not operate the truck with stepping on the brake pedal unnecessarily, or bring premature wear of brake disc.

9) INCHING PEDAL



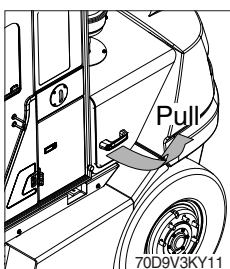
- (1) Inching pedal is used for fine control of forward and reverse movement when lifting up or putting down loads.
- ※ Do not put your foot on the inching pedal or brake pedal unless using it.

10) STEERING COLUMN ADJUST LEVER



- (1) By pulling down the lever, the handle is adjustable to tilt.
- (2) By pulling up the lever, the handle is adjustable to telescope.
- (3) Adjustable steering handle; Accommodates the various conditions of the operator.
 - Tilting angle : 40°
 - Telescopic stroke : 80 mm

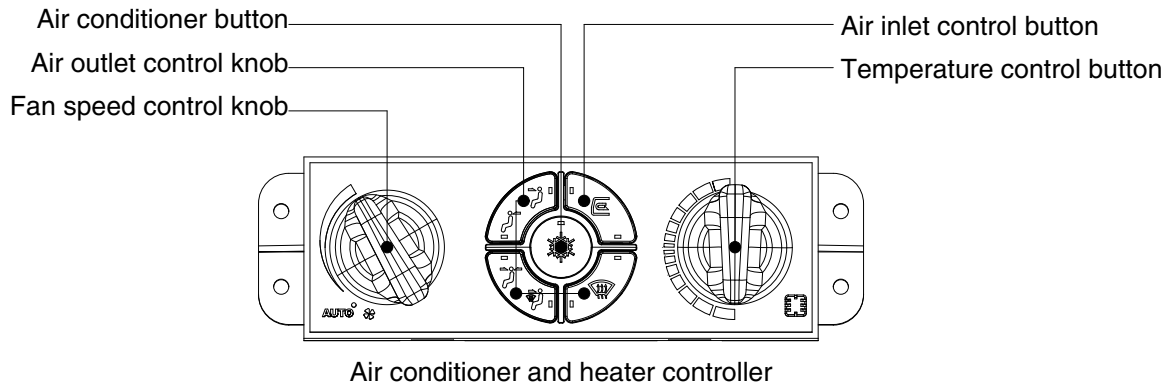
11) BODY WING COVER



- (1) Pull the handle attached on the body wing cover to open it.
- ※ Keep the body wing cover closed when open the cabin doors.

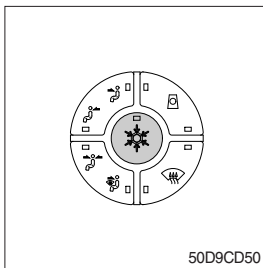
7. AIR CONDITIONER AND HEATER

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



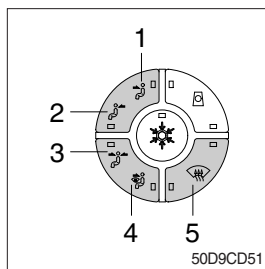
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1) AIR CONDITIONER BUTTON



- (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 AUTO pilot lamp ON when this button is pushed.

2) AIR OUTLET CONTROL BUTTON

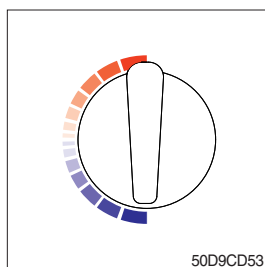


There are five kinds of air flow.

- 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.

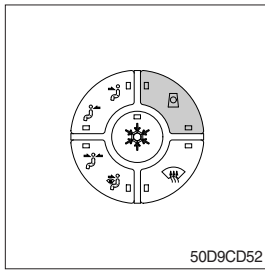
3) TEMPERATURE CONTROL KNOB



This knob regulates the temperature of air.

- ① Right rotation (red zone) : Heat up air temperature
- ② Left rotation (blue zone) : Cool down air temperature

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.

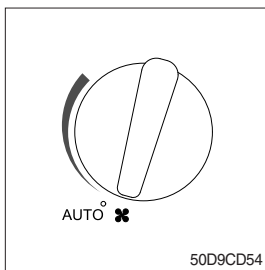
※ The pilot lamp is turned ON when the button is pushed.

※ 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.

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.

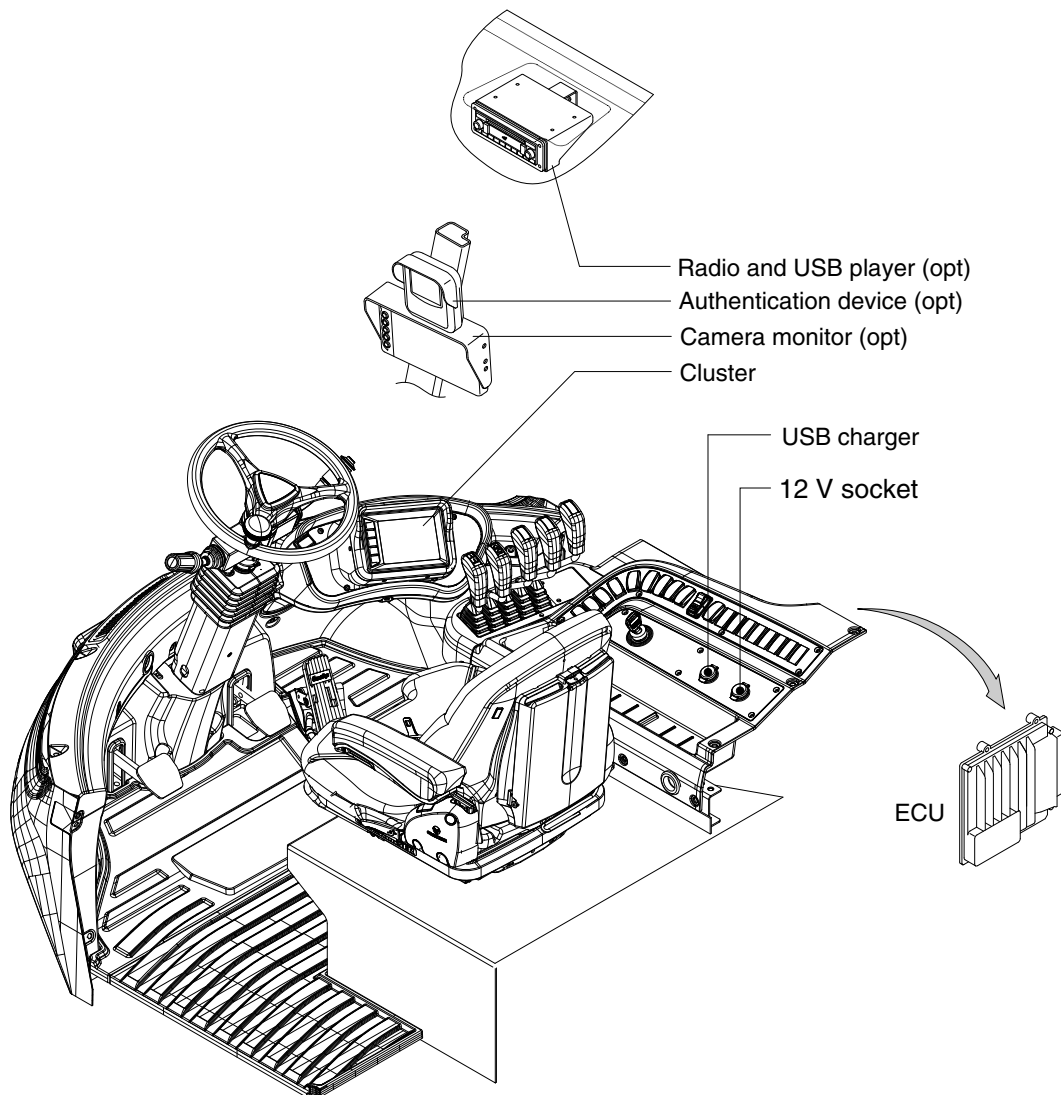
② This knob controls fan speed manually.

※ The AUTO pilot lamp OFF when this knob is operated.

③ This knob makes the system ON.

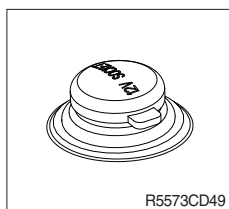
Error	Meaning
Ambient sensor open	1. Check assembly status.
Ambient sensor short	2. Ambient temperature sensor exchange after single item check.
In-cabin temperature sensor open	1. Check assembly status.
In-cabin temperature sensor short	2. In-cabin temperature sensor exchange after single item check.
Evap. sensor open	1. Check assembly status.
Evap. sensor short	2. Evap. sensor exchange after single item check.
Water valve sensor open	1. Check assembly status. 2. Mix actuator exchange after single
Gauge pressure circuit error	1. Check assembly status. 2. Please refer to the type of fault diagnosis using gauge. 3. Failure diagnosis and measures. Failure diagnosis of gauge type.

8. OTHERS



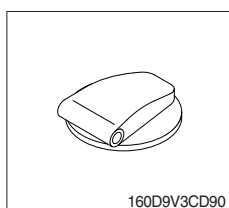
100D93KY13

1) 12V SOCKET



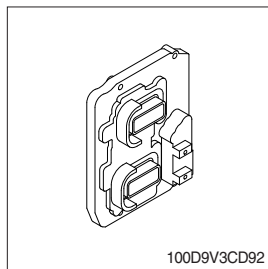
(1) Utilize the power of 12 V as your need and do not exceed power of 12 V, 120 W.

2) USB CHARGER



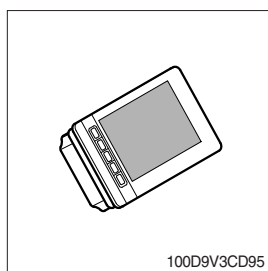
(1) This is possible to use a USB cable to connect a device to a power supply.

3) ENGINE CONTROL MODULE (ECM)



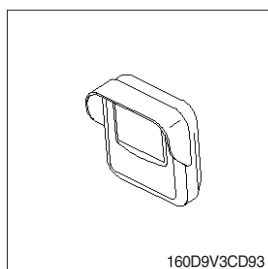
The engine control module (ECM) is the control center of the engine system.

4) CLUSTER



It consists of electronic parts and controls all lamps and buzzers on cluster in accordance with signals transmitted from the switches, the ECM, TCU, the engine and the hydraulic pressure sensors.

5) AUTHENTICATION DEVICE (option)



(1) This is used for RF ID tagging by touching the ID card or entering pin number as an option.

Also, it is possible to manage driver and safety.


















※ **Refer to page 3-91 for details.**

6) RADIO AND USB PLAYER (WITH BLUETOOTH, OPTION)



9403CD100

FRONT PANEL PRESENTATION

















- | | |
|---|---|
| <p>1  Power ON/OFF,
Volume UP/DOWN button</p> <p>2  Manual UP/DOWN Tuning,
File search, SEL button</p> <p>3  Mode button,
Audio mute button</p> <p>4  Call & Pair button</p> <p>5  Call end button</p> <p>6  Station preset 1
DIS Display button</p> <p>7  Station preset 2</p> <p>8  Station preset 3
RPT Repeat play button</p> <p>9  Station preset 4
RDM Random play button</p> | <p>10  Station preset 5
DIR- Directory down button</p> <p>11  Station preset 6
DIR+ Directory up button</p> <p>12  Scan play button (SCAN)
Best station memory (BSM) button</p> <p>13  Auto tune up, Seek up button</p> <p>14  Auto tune down, Track down button</p> <p>15  USB connector</p> <p>16  AUX IN Jack</p> <p>17  MIC hole</p> |
|---|---|

RADIO AND USB PLAYER (WITHOUT BLUETOOTH, OPTION)



9403CD101

FRONT PANEL PRESENTATION

- | | |
|--|---|
| <p>1  Power ON/OFF,
Volume UP/DOWN button</p> <p>2  Manual UP/DOWN Tuning,
File search, SEL button</p> <p>3  Mode button,
Audio mute button</p> <p>4  Radio seek up button</p> <p>5  Radio seek down button</p> <p>6  Station preset 1
DIS Display button</p> <p>7  Station preset 2</p> <p>8  Station preset 3
RPT Repeat play button</p> <p>9  Station preset 4
RDM Random play button</p> | <p>10  Station preset 5
DIR- Directory down button</p> <p>11  Station preset 6
DIR+ Directory up button</p> <p>12  Scan play button (SCAN)
Best station memory (BSM) button</p> <p>13  Track up button</p> <p>14  Track down button</p> <p>15  USB connector</p> <p>16  AUX IN Jack</p> |
|--|---|

■ 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 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



- 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



- 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.

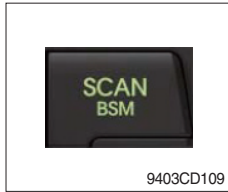


(4) Station preset button



- 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 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



- 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.

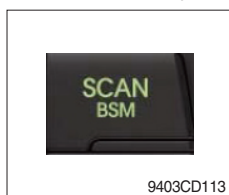
(4) Directory Up / Down button



- 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 randomly play the tracks in the 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

- 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.
- Display up to 32 characters in the LCD display.
- No support any of MULTI-CARD Reader.
- 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°C (14°F), 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

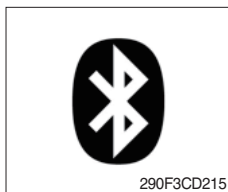
※ less for sending and receiving voice and data via bluetooth wireless technology. However the transmission distance may become shorter than the estimated distance depending on the environment where it is being used.

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

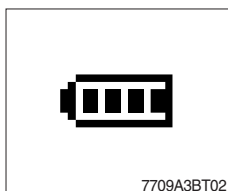
※ already equipped with the best bluetooth VR level.



a. Bluetooth icon

It will blink while establishing the bluetooth pairing.

It will light up after a bluetooth device connected.



b. Battery icon

It indicates the battery status of the connected bluetooth device.



c. Single strength icon

It indicates the signal strength of the connected bluetooth device.

(2) Pairing in hands free modes



- 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.



- 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.

※ 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.

※ 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.



- 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



- 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   simultaneously for about 5 seconds. (without Bluetooth)

② Press and hold   simultaneously for about 5 seconds. (with Bluetooth)

※ Take out the fuse for the audio system in the truck 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

7) CAMERA MONITOR (option)



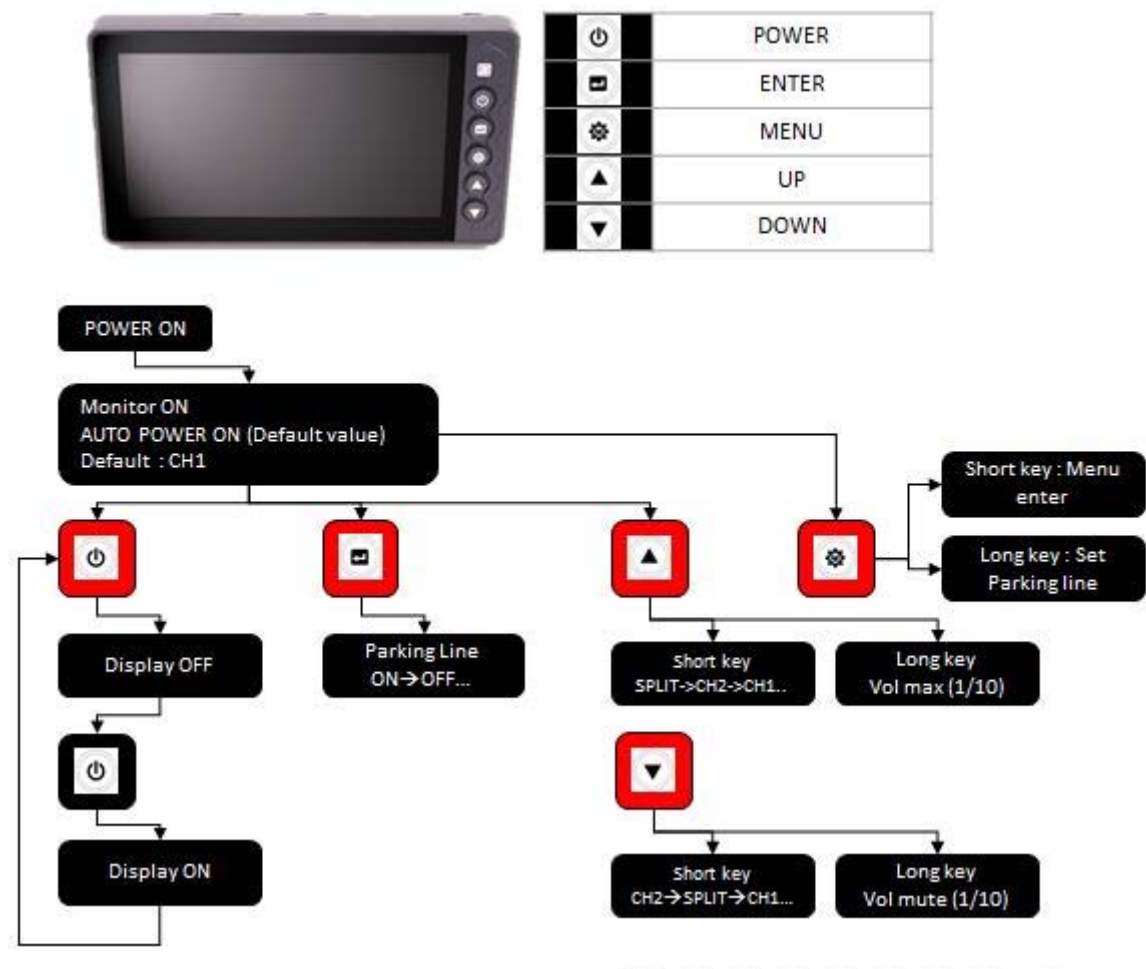
960A3CD65

(1) Summary of key actions

No.	Button	Description	Single Cam mode	Function menu - Single Cam
1		POWER	- Beep stop*	- Beep stop* - Menu escape (save & exit)
2		SELECT	Parking guide line On / Off	- 0 : Menu select - 1 : Adjust menu escape
3		MENU	- 0 : Menu enter - 1 : Parking guide line adjust (long key/2 sec)	Menu next page
4		UP	- S*: Previous view - L*: Adjust to the volumn set in the menu	- Menu Up - Menu Adjust Up
5		DOWN	Next view	- Menu Down - Menu Adjust down

- Beep stop : Operates with Power button during beep (MOD) operation and has the highest priority.
- Beep stop off : Monitor OFF → ON or UP key (L)
- When alarm beep occurs, key beep mute.
- S : Short key
- L : Long key

(2) Operation scenario (Single camera mode)




160D9V3CD100






(3) Function menu tree (Single cam mode)

SHORT KEY					
NO	MENU	Pop-up menu	Background video	SETTING VALUE	비고
1	SCREEN COLOR SETTING	■ SCREEN COLOR SETTING * BRIGHT : 20 * CONTRAST : 33 * COLOR : 30 * SHARPNESS : 30 * TINT : 30	Previous view	BRIGHT : 0~60 / 1STEP	DEFAULT : 20
				CONTRAST : 0~60 / 1STEP	DEFAULT : 33
				COLOR : 0~60 / 1STEP	DEFAULT : 30
				SHARPNESS : 0~60 / 1STEP	DEFAULT : 30
				TINT : 0~60 / 1STEP	DEFAULT : 30
2	CAMERA 1 SETTING	■ CAMERA1 SETTING * MIRROR : OFF * UPSIDE DOWN : OFF * TRIGGER ENABLE : ON * TRIGGER SUSTAIN : 02sec * MARKER DISPLAY : OFF * MARKER TYPE : TypeA * MARKER POSITION : Enter	CAMERA 1	MIRROR : ON/OFF	
				UPSIDE DOWN : ON/OFF	
				TRIGGER ENABLE : ON/OFF	
				TRIGGER SUSTAIN : 1~20sec / 1sec	
				MARKER DISPLAY : ALWAYS/TRIGGER/OFF	
				MARKER TYPE : TYPE A / TYPE B	
				MARKER POSITION : ENTER	MARKR WIDTH / HIGHT ADJUST
3	CAMERA 2 SETTING	■ CAMERA1 SETTING * MIRROR : OFF * UPSIDE DOWN : OFF * TRIGGER ENABLE : ON * TRIGGER SUSTAIN : 02sec * MARKER DISPLAY : OFF * MARKER TYPE : TypeA * MARKER POSITION : Enter	CAMERA 2	MIRROR : ON/OFF	
				UPSIDE DOWN : ON/OFF	
				TRIGGER ENABLE : ON/OFF	
				TRIGGER SUSTAIN : 1~20sec / 1sec	
				MARKER DISPLAY : ALWAYS/TRIGGER/OFF	
				MARKER TYPE : TYPE A / TYPE B	
				MARKER POSITION : ENTER	MARKR WIDTH / HIGHT ADJUST
4	SPLIT 1 SETTING	■ SPLIT1 SETTING * SPLIT TYPE : TypeA * CH1 : CAM1 * CH2 : CAM2	SPLIT VIEW	SPLIT TYPE : TYPE A / TYPE B	
				CH1 : CAMERA1 / CAMERA 2	
				CH2 : CAMERA1 / CAMERA 2	
5	SYSTEM CONFIG	■ SYSTEM CONFIG * AUTO POWER : AUTO * AUTO DIMMER : OFF * BEEP VOLUME : 05 * LANGUAGE : ENGLISH * FACTORY RESET : Ver0.55/1.33	SPLIT VIEW	AUTO POWER : AUTO / ON / OFF	
				AUTO DIMMER : ON / OFF	
				BEEP VOLUME : 0~10 / 1 STEP	DEFAULT : 5
				LANGUAGE : 한국어 / ENGLISH	DEFAULT : ENGLISH
				FACTORY RESET : Ver x.xx / x.xx	

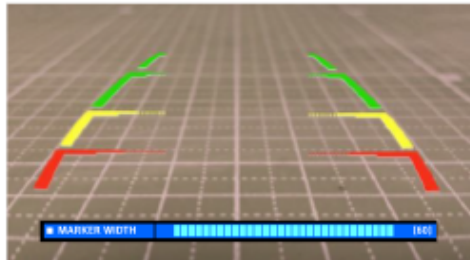
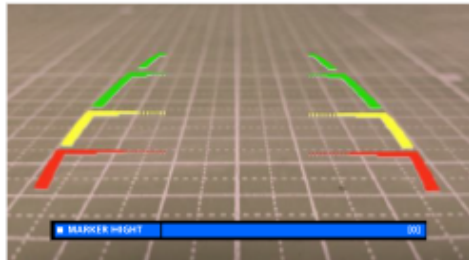
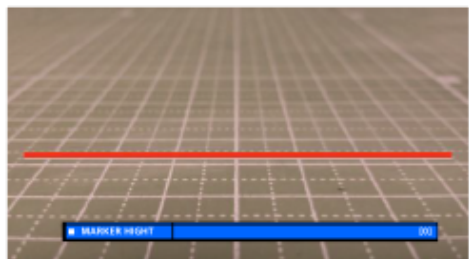
160D9V3CD101

(4) Parking guide line adjust

 → LONG KEY (2sec)	<table><tr><th colspan="2">CAMERA1 SETTING</th><th colspan="2">CAMERA2 SETTING</th></tr><tr><td>MIRROR</td><td>: OFF</td><td>MIRROR</td><td>: OFF</td></tr><tr><td>UPSIDE DOWN</td><td>: OFF</td><td>UPSIDE DOWN</td><td>: OFF</td></tr><tr><td>TRIGGER ENABLE</td><td>: ON</td><td>TRIGGER ENABLE</td><td>: ON</td></tr><tr><td>TRIGGER SUSTAIN</td><td>: 02sec</td><td>TRIGGER SUSTAIN</td><td>: 02sec</td></tr><tr><td>MARKER DISPLAY</td><td>: OFF</td><td>MARKER DISPLAY</td><td>: OFF</td></tr><tr><td>MARKER TYPE</td><td>: TypeA</td><td>MARKER TYPE</td><td>: TypeA</td></tr><tr><td>MARKER POSITION</td><td>: Enter</td><td>MARKER POSITION</td><td>: Enter</td></tr></table>	CAMERA1 SETTING		CAMERA2 SETTING		MIRROR	: OFF	MIRROR	: OFF	UPSIDE DOWN	: OFF	UPSIDE DOWN	: OFF	TRIGGER ENABLE	: ON	TRIGGER ENABLE	: ON	TRIGGER SUSTAIN	: 02sec	TRIGGER SUSTAIN	: 02sec	MARKER DISPLAY	: OFF	MARKER DISPLAY	: OFF	MARKER TYPE	: TypeA	MARKER TYPE	: TypeA	MARKER POSITION	: Enter	MARKER POSITION	: Enter
CAMERA1 SETTING		CAMERA2 SETTING																															
MIRROR	: OFF	MIRROR	: OFF																														
UPSIDE DOWN	: OFF	UPSIDE DOWN	: OFF																														
TRIGGER ENABLE	: ON	TRIGGER ENABLE	: ON																														
TRIGGER SUSTAIN	: 02sec	TRIGGER SUSTAIN	: 02sec																														
MARKER DISPLAY	: OFF	MARKER DISPLAY	: OFF																														
MARKER TYPE	: TypeA	MARKER TYPE	: TypeA																														
MARKER POSITION	: Enter	MARKER POSITION	: Enter																														
MENU BUTTON LONG KEY ENTER	CAMERA 1, 2 SETTING [Marker Position] SELECT and ENTER																																

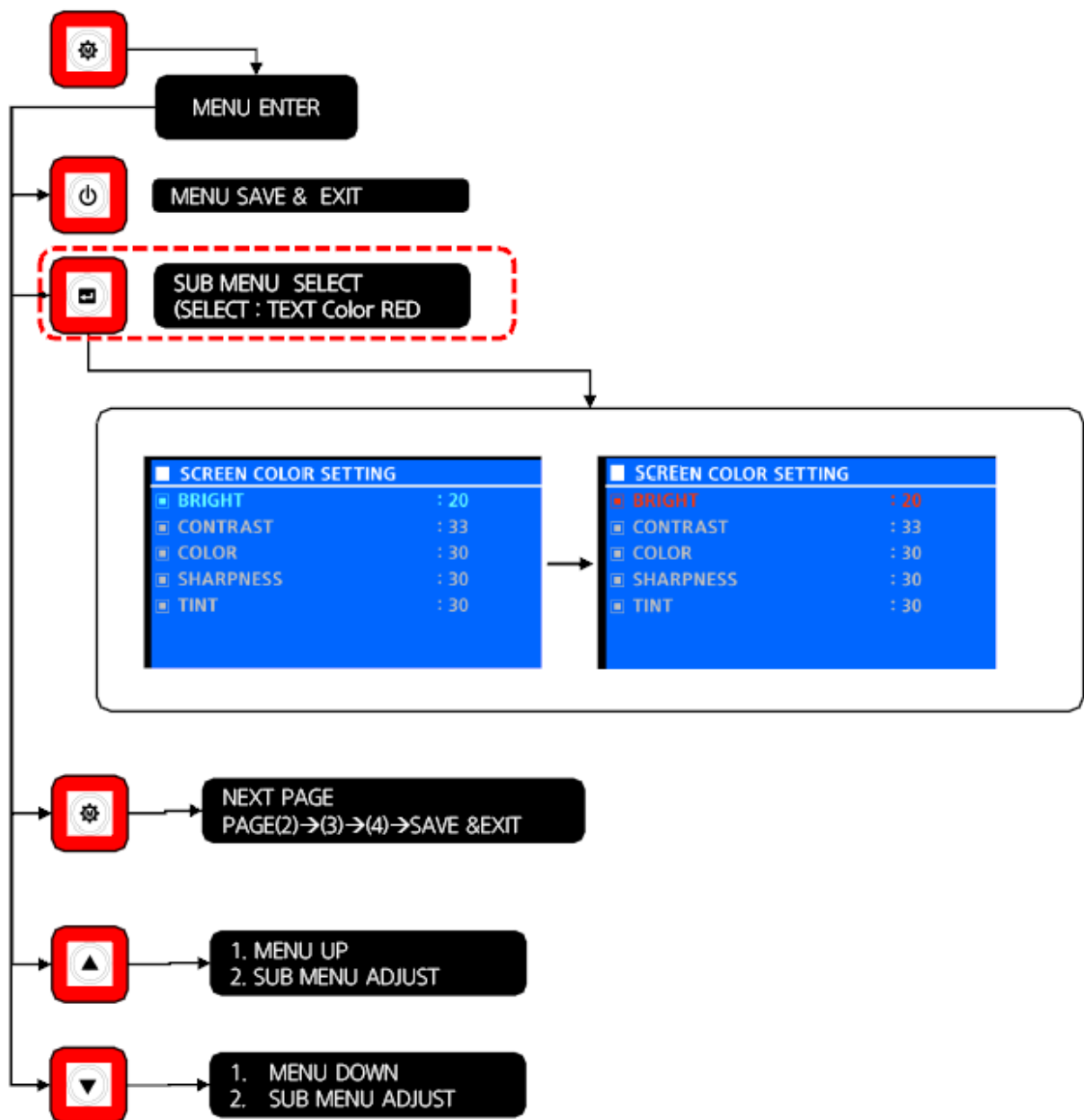
	MENU SAVE & EXIT
	Change video channel
	MARKER WIDTH → MARKER HIGHT → SAVE & EXIT
	SUB MENU ADJUST UP/DOWN
	

■ MARKER WIDTH		[60]
■ MARKER HIGHT		[0]

TYPE A		
TYPE B		
1. To set the parking line, [MARKER DISPLAY: ALWAYS or TRIGGER] must be set in Camera 1 or Camera 2 setting. 2. In other modes, the parking line can not be set. 3. [MARKER DISPLAY : OFF] 1) The parking line positioning menu should not be selected. 2) Do not enter LONG KEY with the menu button.		

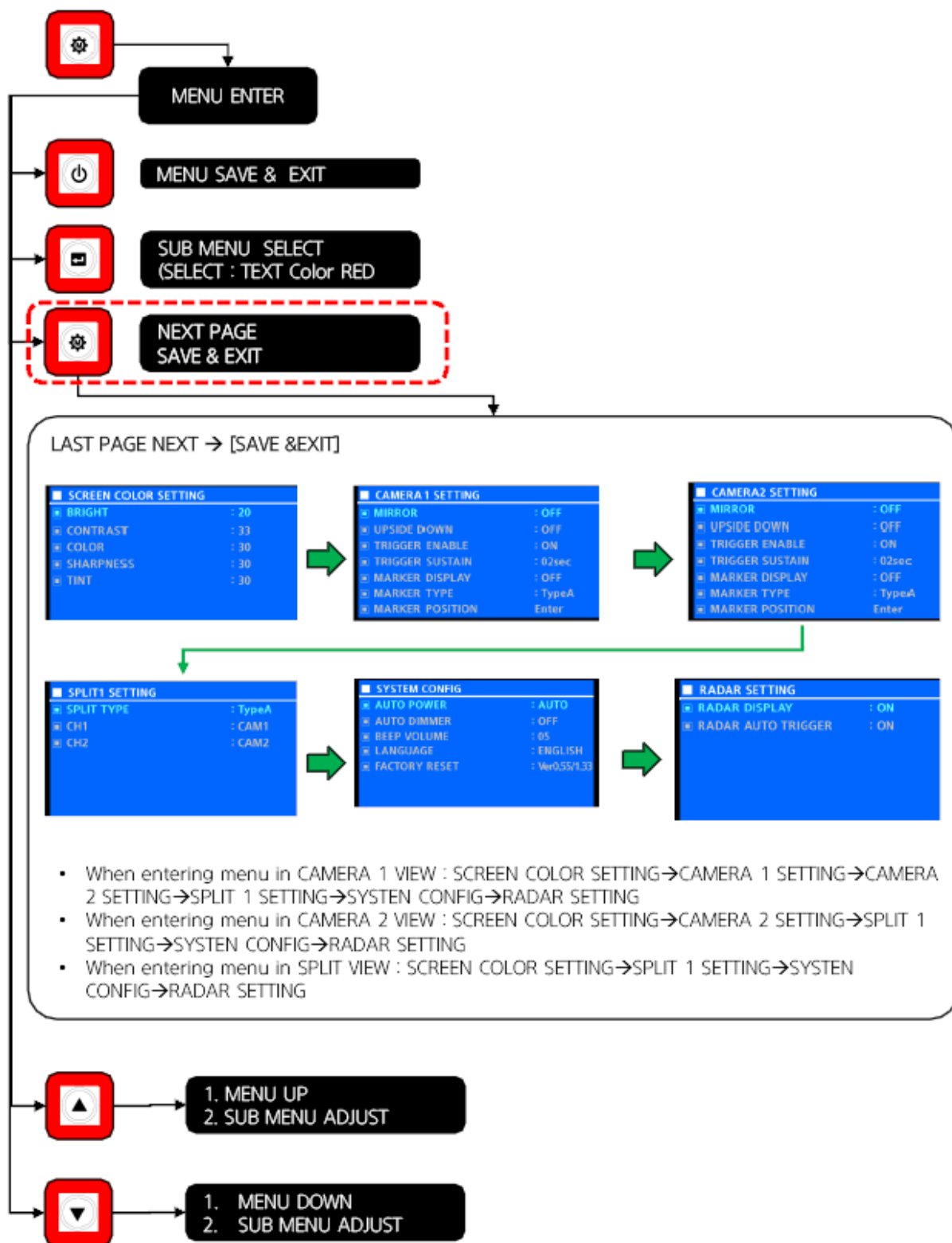
160D9V3CD102

(5) How to set function menu



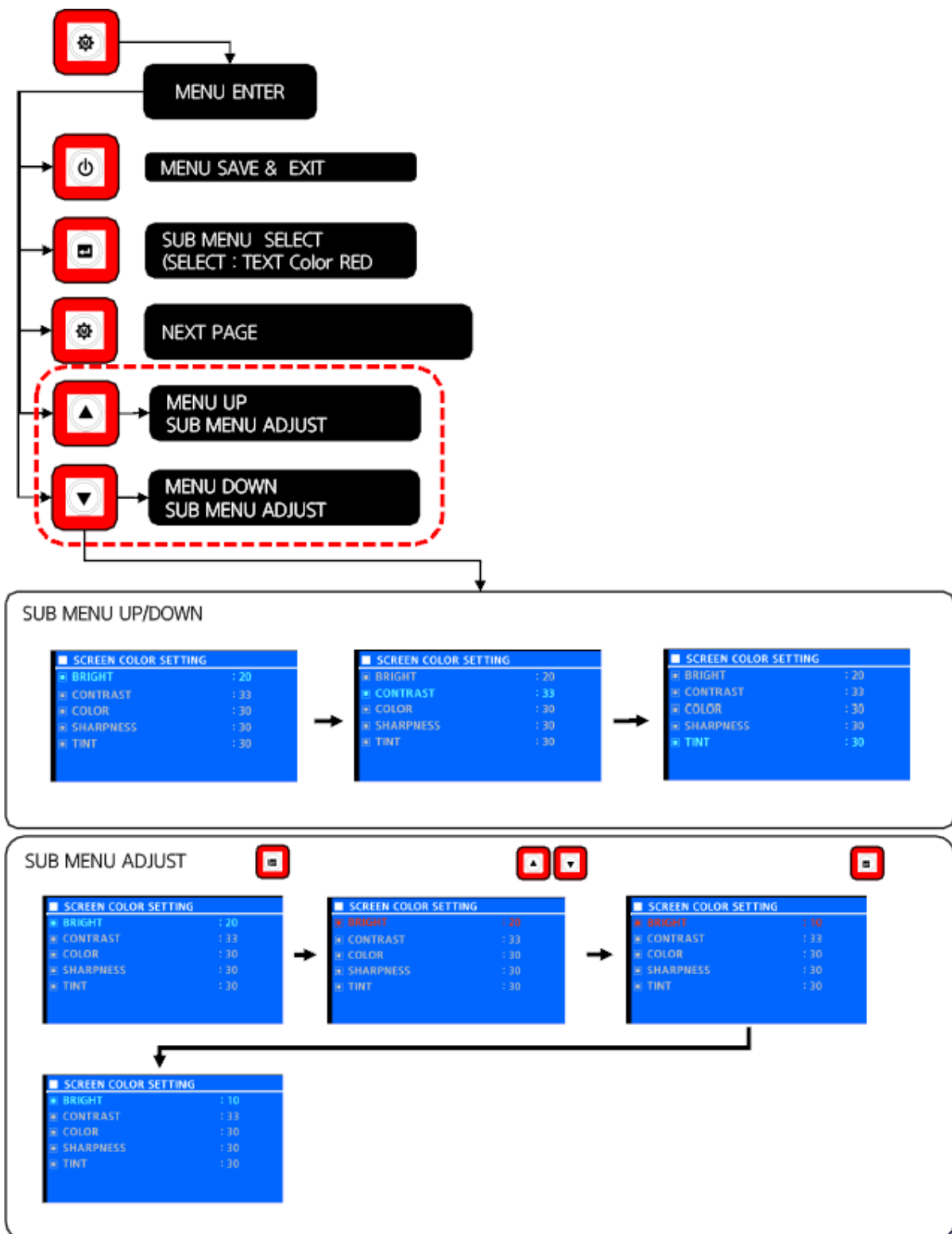
160D9V3CD103

(6) Composition of menu screen



160D9V3CD104

(7) Value adjustment



160D9V3CD105

8) HI-MATE (BASIC)

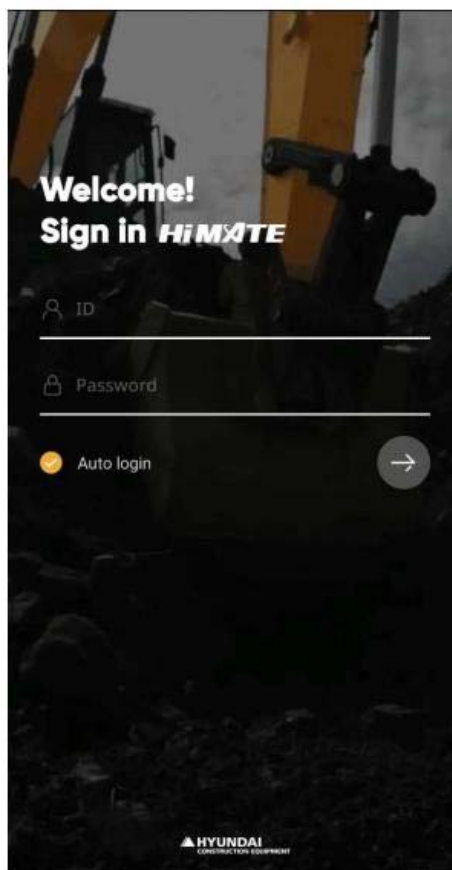
(1) How to connect

- ① Web : <https://himate.hyundai-ce.com>



92FT-00426

- ② App : iOS App Store / Google Play Store Search "HiMATE"



160D9V3HM02

(2) How to search

① You can search, see the result and get additional valuable information at a glance.

HIMATE

[TEST] Logout (GMT +9:00) Asia/Seoul

Notice Q&A FAQ Terms&Conditions

Search

Basic Alarm Maintenance Reset Search

Fleet ALL

Type ALL

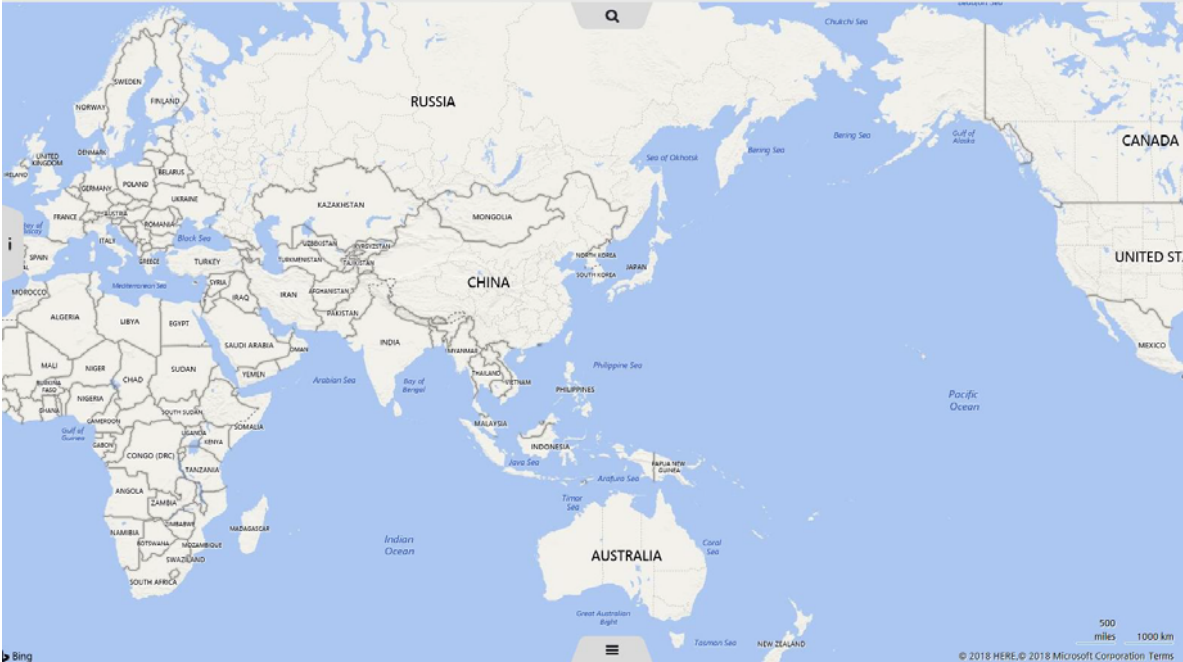
Customer

Model

Serial No

Service In Service

Comm Type ALL



500 miles 1000 km

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160D9V3HM03

② You can search, see the result and get additional valuable information at a glance.

HIMATE

[日本語] Logout (GMT +9:00) Asia/Seoul

Notice Q&A FAQ Terms&Conditions Privacy

Search

Basic Alarm Maintenance Reset Search

Fleet ALL

Type Fork Lift

Comm Type ALL

Region ALL


Country ALL

Machine ALL

Dealer ALL

Service In Service

Machine ID



Machine List (Page No : 1) (Count : 1,024)

First Prev

	Model	Serial No	Hourmeter	Dealer	Customer	Service period	Comm Type	Fuel used	Fault/Warning	Last update	Location
<input type="checkbox"/>	1300-9	0161	40	SPRINGER EQUIPMENT COMPA--		15-Mar-2021-15-Mar-2026	M	0	0	29-Mar-2021 15:35:02	Alabama, United States
<input type="checkbox"/>	1800-9	0037	9,370	GLOBAL LIFT EQUIPMENT USA --	Michelle Collier	25-Jan-2017-25-Jan-2022	M	0	0	29-Mar-2021 15:26:14	Florida, United States
<input type="checkbox"/>	1600-9	0279	624	LEAVITT MACHINERY		12-Jun-2019-12-Jun-2024	M	0	0	29-Mar-2021 15:19:08	Alberta, Canada
<input type="checkbox"/>	700-9	1234	4,890	M&L INDUSTRIES, L.L.C.	Mansura Great South--	14-Oct-2019-14-Oct-2024	M	0	0	29-Mar-2021 15:15:35	Louisiana, United States

160D9V3HM04

- ③ After you click the search button, the location (map) and list of the devices that appear as search results appear.

The equipment is expressed in green, sky blue, purple, depending on the type.

Machine List (Page No: 11) (Count: 1,001)

Model	Serial No	Hourmeter	Dealer	Customer	Service period	Comm time	Fuel used	Fault/Warning	Last update	Location
1100-9	0014	5,003	LIFT DEPOT LTD		03-Feb-2017-03-Feb-2022	M	43.5	1	24-Feb-2021 18:05:07	Michigan, Wayne County, City of Grosse Pointe Farms, U--
1300-9	0063	4,995	LOME STAR FORKLIFT 2017 US--		27-Mar-2019-27-Mar-2024	M	0	0	24-Feb-2021 18:02:09	Texas, Montgomery County, Waukegan, United States
800-9	0399	11,847	WISE FORKLIFT, INCORPORATED	Abbeville Great Out--	20-Jul-2018-20-Jul-2023	M	54.5	3	24-Feb-2021 18:01:31	Alabama, Henry County, Grapell, United States
1800-2E	1379	3,142	HFA Distributor Pty Ltd		28-Sep-2017-28-Sep-2022	M	19.4	1	24-Feb-2021 18:00:21	New South Wales, Weston, Australia

● Forklift
 ● Excavator
 ● Wheel loader

160D9V3HM05

- ④ The icon of the map refers to different types of equipment by color.

When you click a single machine

When you click on a group

Model / Serial No	Hourmeter	Last update
HW140 / 0108	419	12-Apr-2017 16:16:23
HW140 / 0090	419	12-Apr-2017 16:10:07
R140W-9A / 0129	1,233	12-Apr-2017 15:46:25
HX220L / 0140	1,152	12-Apr-2017 00:05:50
R180LC-9A / 0066	2,484	11-Apr-2017 14:48:59
HX220L / 0141	1,022	07-Apr-2017 22:08:51

5 2 or more machines
● Wheel loader
● Excavator
● Forklift

160D9V3HM06

(3) How to search machine list

When you click S/N in the list, the details of appliance will be displayed, and when you click the location, the map screen moves to the location of the equipment.

Machine List (94)

Model	Serial No	Hourmeter	Customer	Service period	Comm Type	Fuel used	Number of alarm	Last update	Location	Customer No
HX330NL	0193	1,391	Steenbergen Bert	05-Sep-2017~05-Sep-2022	M	265.3	0	08-Mar-2018 10:00:16	North Rhine-Westphalia, Melderich, Germany	
HX220L	0711	14	Paula Henken	22-Feb-2018~22-Feb-2023	M	32	0	08-Mar-2018 04:00:23	Lower Saxony, Rethem, Germany	
HX330NL	0206	268	Jacob van der Lin	17-Jan-2018~17-Jan-2023	M	292.1	0	08-Mar-2018 03:33:16	Province Gelderland, Gemeente Apeldoorn, Apeldoorn, Netherlands	
HX220L	0436	1,248	Jacob van der Lin	28-Jun-2017~28-Jun-2022	M	37.2	0	08-Mar-2018 03:13:00	North Rhine-Westphalia, Gelleo-Stratum, Germany	
R180LCD-9A	0103	1,707		04-Nov-2016~04-Nov-2018	M	22.8	1	08-Mar-2018 03:00:47	Lower Saxony, Raming, Germany	

160D9V3HM07

(4) How to create fleet

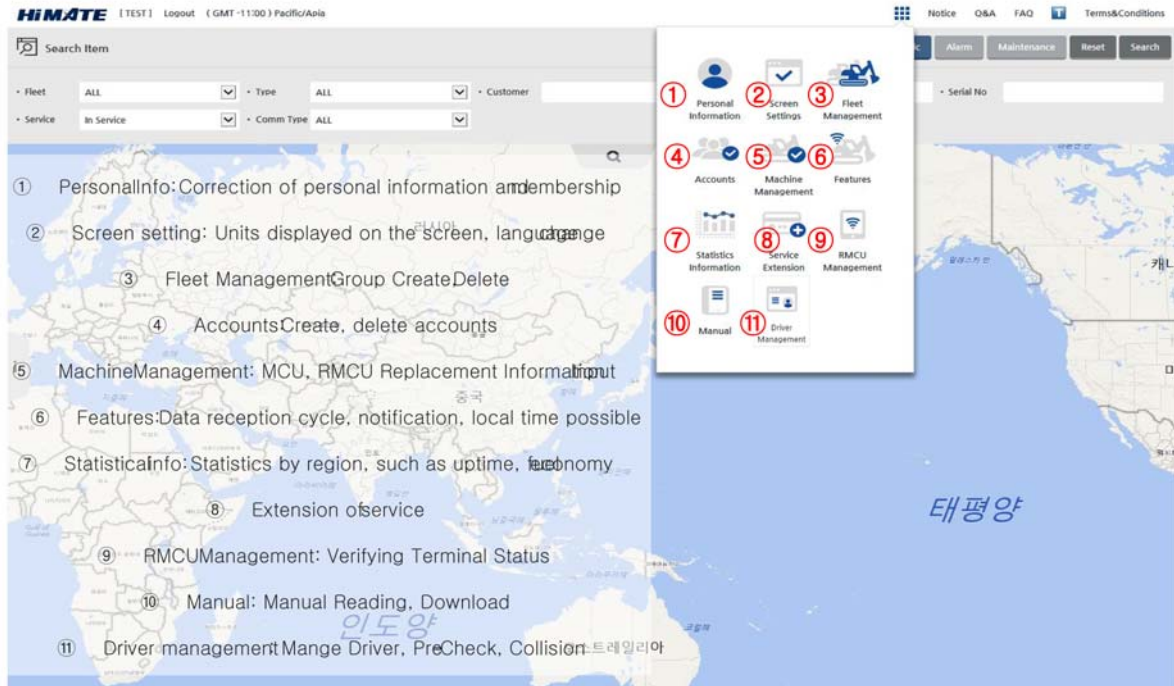
You can search, see the result and get additional valuable information at a glance.

Fleet

Model	Serial No	Hourmeter	Dealer	Customer	Service period	Comm Type	Fuel used	Fault/Warning	Last update	Location
2500-9	0132	5,774	CHE EQUIPMENT CORPORATION		30-Nov-2018~30-Nov-2023	M	111.1	1	29-Mar-2021 15:30:07	Washington, D.C., United States
1300-9	0161	40	SPRINGER EQUIPMENT COMPA		15-Mar-2021~15-Mar-2026	M	0	0	29-Mar-2021 15:35:02	Alabama, United States
1800-9	0037	9,370	GLOBAL LIFT EQUIPMENT USA	Michelle Collier	25-Jan-2017~25-Jan-2022	M	0	0	29-Mar-2021 15:28:14	Florida, United States
1600-9	0196	674	SECURITY MACHINERY		17-Jun-2018~17-Jun-2023	M	0	0	10-Mar-2021 16:12:08	Alabama, United States

160D9V3HM08

(5) Application list



160D9V3HM09

(6) Extension of service

Free subscription for New Equipment with RMS option

HCE offers free Hi MATE subscription for equipment purchased with RMS as an option or a standard. The period may differ by communication type and region. If you replace or move the RMCU to another equipment, free subscription is not offered.

Mobile	Satellite	Dual
5 years	2 years	2 years

Forklift is only available for Mobile

Hi MATE subscription starts when one of 4 requirements is met.

A. 100 Hourmeter

B. Customer registration (Hi MATE)

C. Delivery report (CERES)

D. 24 months after shipment

How to Extend Hi MATE Subscription

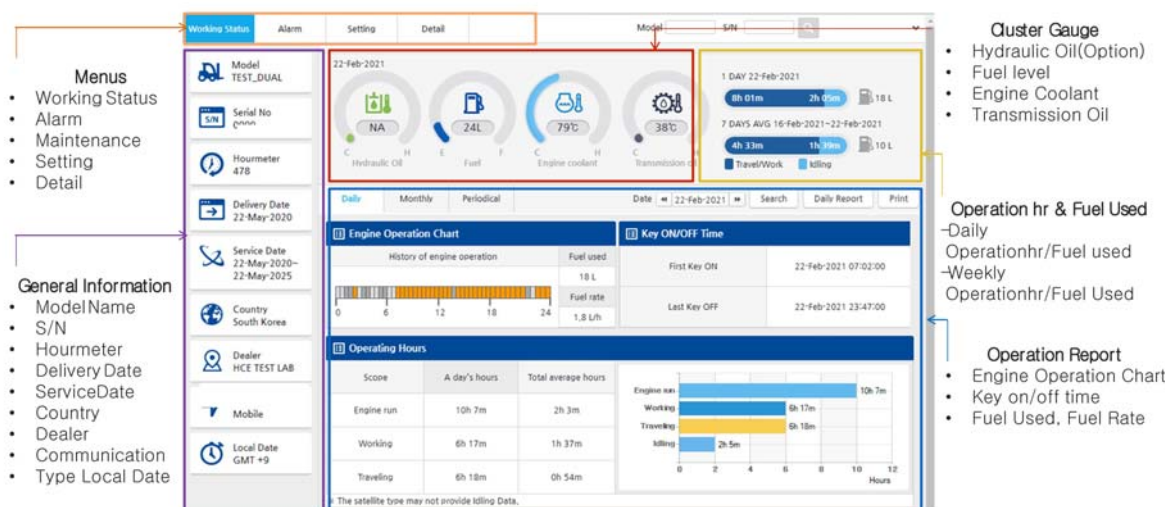
To continue Hi MATE service after termination or to start it for retrofitted RMS, use a service extension card.

Period	Mobile	Satellite	Dual
1 month	21Q8-32360	21Q8-32270	21Q8-32280
6 months	21Q8-32350	21Q8-32260	21Q8-32270
1 year	21Q8-32340	21Q8-32250	21Q8-32260
3 years	21Q8-32330	21Q8-32230	-

160D9V3HM10

(7) Machine details (engine type)

In the working status, you can find more information, including operation information, alarm, and etc.



List	Contents	Remark
Fuel	Current Fuel Tank	
Fuel Used	Cumulative fuel usage(1 day)	
Hydraulic Oil	Measuring Oil Temperature	It measure when selected PA01
Engine Coolant	Measuring Oil Temperature	
Transmission Oil	Measuring Oil Temperature	
Engine Run	When engine run	
Working	When measuring above 100kg	
Traveling	When speed above 1km/h	
Idling	When two situations are not(Working, Traveling)	

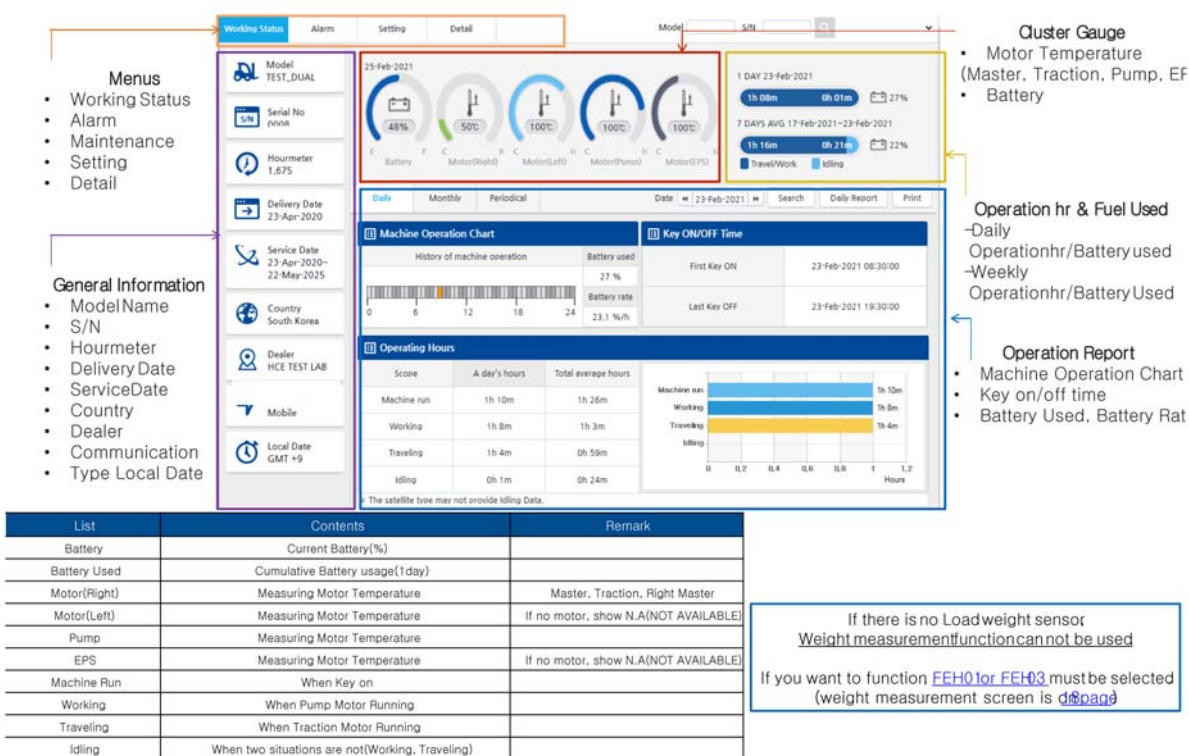
If there is no Loadweight sensor
Working time, Weight measurement function cannot be used

If you want to function FEH01 or FEH03 must be selected
(weight measurement screen is 08 page)

160D9V3HM11

(8) Machine details (electric type)

In the working status, you can find more information, including operation information, alarm, and etc.



List	Contents	Remark
Battery	Current Battery(%)	
Battery Used	Cumulative Battery usage(1 day)	
Motor(Right)	Measuring Motor Temperature	Master, Traction, Right Master
Motor(Left)	Measuring Motor Temperature	If no motor, show N.A(NOT AVAILABLE)
Pump	Measuring Motor Temperature	
EPS	Measuring Motor Temperature	If no motor, show N.A(NOT AVAILABLE)
Machine Run	When Key on	
Working	When Pump Motor Running	
Traveling	When Traction Motor Running	
Idling	When two situations are not(Working, Traveling)	

If there is no Loadweight sensor
Weight measurement function cannot be used

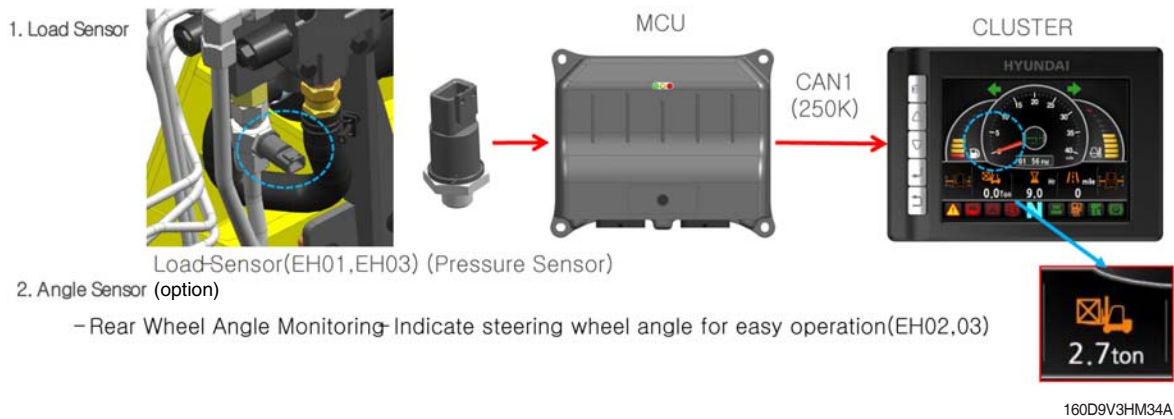
If you want to function FEH01 or FEH03 must be selected
(weight measurement screen is 08 page)

160D9V3HM12

(9) Load and angle sensor (EH)

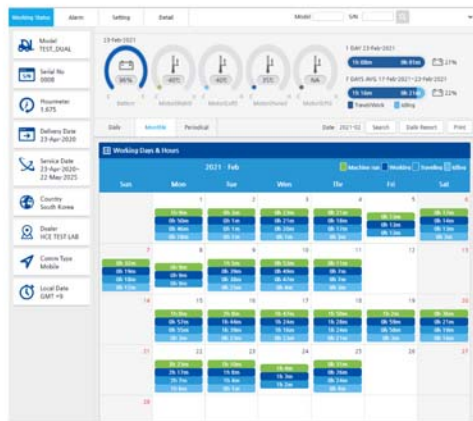
9) Load & Angle Sensor(EH)

Option Code	Mean	Type	Detail Mean	Remark
FEH	Load & Angle Sensor	FEH01	Load Sensor	9Ser. All
		FEH03	Load Sensor + Angle Sensor	16~30ton

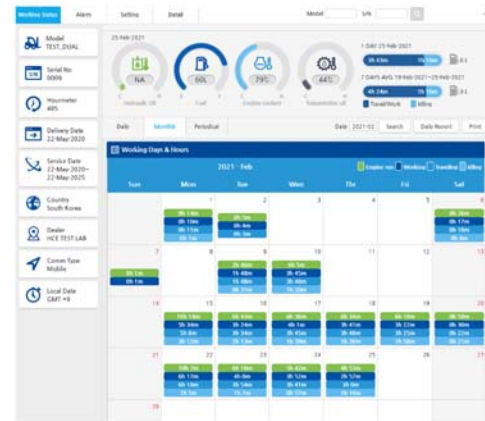


(10) Machine details (monthly period)

Can check the operating history, temperature distribution, and fuel usage.



Engine



Electric

160D9V3HM13

(11) Alarm

Machine Details (monthly period) - Alarm

Working Status: Alarm

Model: TEST_DUAL

Serial No: 0009

Hourmeter: 485

Delivery Date: 22 May 2020

Service Date: 22 May 2020 - 22 May 2025

Country: South Korea

Dealer: HCE TEST LAB

Comm Type: Mobile

Local Date: GMT +9

Alarm Notice

Date	Time	Hourmeter	Alarm Type	Alarm	SPN	FMI	Severity	Description	Trouble Shooting Guide	Case Study
25-Feb-2021	15:31		A	Weak Signal	557		Level 5	(Warning) Transmission Oil Temperature High		
25-Feb-2021	13:03	484	W	Stop Soon	557		Level 5	(Warning) Transmission Oil Temperature High		
24-Feb-2021	15:00		A	Weak Signal	557		Level 5	(Warning) Transmission Oil Temperature High		
24-Feb-2021	13:12	477	W	Stop Soon	557		Level 5	(Warning) Transmission Oil Temperature High		
23-Feb-2021	09:29		A	Weak Signal	557		Level 5	(Warning) Fuel level low		
23-Feb-2021	06:29	468	W	Stop Soon	303		Level 5	(Warning) Transmission Oil Temperature High		
22-Feb-2021	10:19	460	W	Stop Soon	557		Level 5	(Warning) Transmission Oil Temperature High		
20-Feb-2021	10:48		A	Weak Signal	557		Level 5	(Warning) Transmission Oil Temperature High		
19-Feb-2021	08:50	451	W	Stop Now	319		Level 5	(Warning) Engine Stop		
19-Feb-2021	08:49	451	W	Stop Now	320		Level 5	(Warning) Engine Check		

Engine

Machine Details (monthly period) - Alarm

Working Status: Alarm

Model: TEST_DUAL

Serial No: 0009

Hourmeter: 1,675

Delivery Date: 22 Apr 2020

Service Date: 22 Apr 2020 - 22 May 2025

Country: South Korea

Dealer: HCE TEST LAB

Comm Type: Mobile

Local Date: GMT +9

Alarm Notice

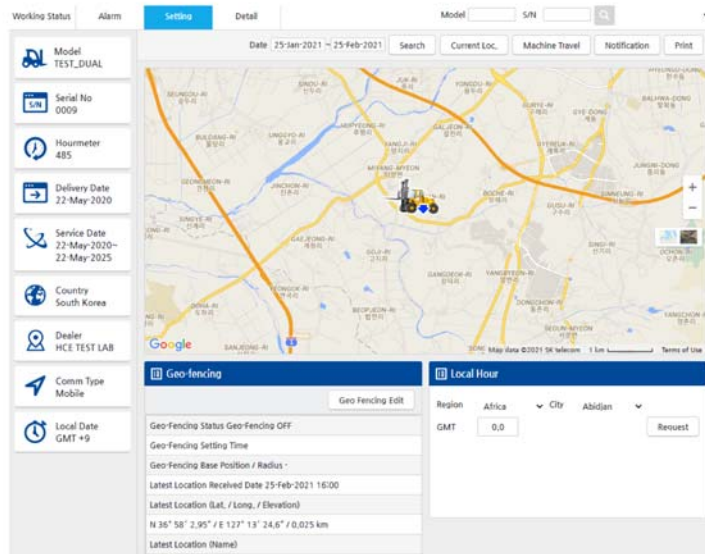
Date	Time	Hourmeter	Alarm Type	Alarm	SPN	FMI	Severity	Description	Trouble Shooting Guide	Case Study
24-Feb-2021	16:18	1674	W	Stop Soon	M243		Level 5	SEQUENCE FAULT		
22-Feb-2021	16:08	1671	W	Stop Soon	M244		Level 5	SLAVE WARNING		
22-Feb-2021	16:08	1671	W	Stop Soon	M251		Level 5	WAITING FOR NODE		
22-Feb-2021	15:48	1671	W	Stop Soon	P251		Level 5	WAITING FOR NODE		
22-Feb-2021	09:23	1669	W	Stop Soon	M243		Level 5	SEQUENCE FAULT		
20-Feb-2021	14:02	1669	W	Stop Soon	M243		Level 5	SEQUENCE FAULT		
19-Feb-2021	17:37	1668	W	Stop Soon	M243		Level 5	SEQUENCE FAULT		
18-Feb-2021	15:12	1667	W	Stop Soon	P251		Level 5	WAITING FOR NODE		
18-Feb-2021	15:12	1667	W	Stop Soon	M246		Level 5	MASTER KEY		
18-Feb-2021	15:06	1667	W	Stop Soon	M243		Level 5	SEQUENCE FAULT		

Electric

Machine is sent to H+Mate immediately when an alarm occurs. You can check in real time.

160D9V3HM14

(12) Geo-fencing



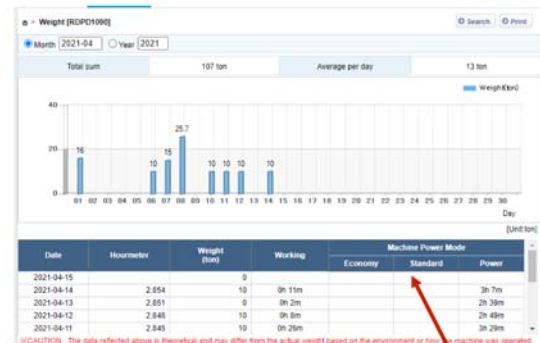
After setting the location range to use to prevent theft from the current position, the alarm occurs when the position is exceeded.(Can be received Mail & SMS)

160D9V3HM15

(13) Alarm



Engine



Electric



Weight can be measured up to 99,999ton a day, and workloads are recorded during the day.

Electric: ECONOMY(= E), Standard (N), POWER(= H) mode

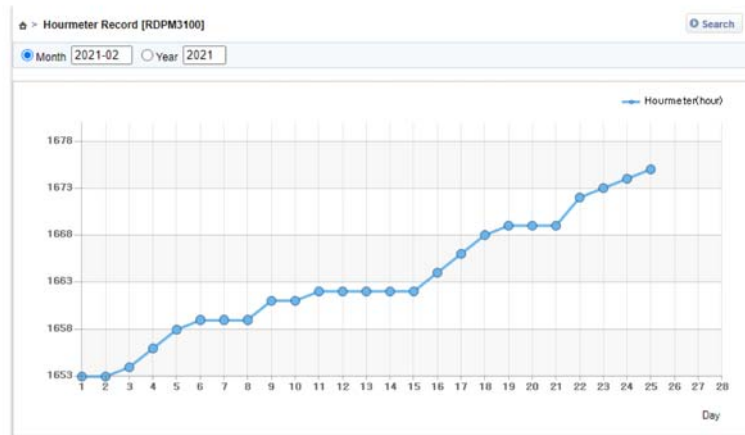
Engine: Standard(=Eco), Power(=Standard) mode.

Weight logic: When the weight is more than 100kg, Stack every second.

When it is less than Weight(ton)= Weight Sum / Count

160D9V3HM16

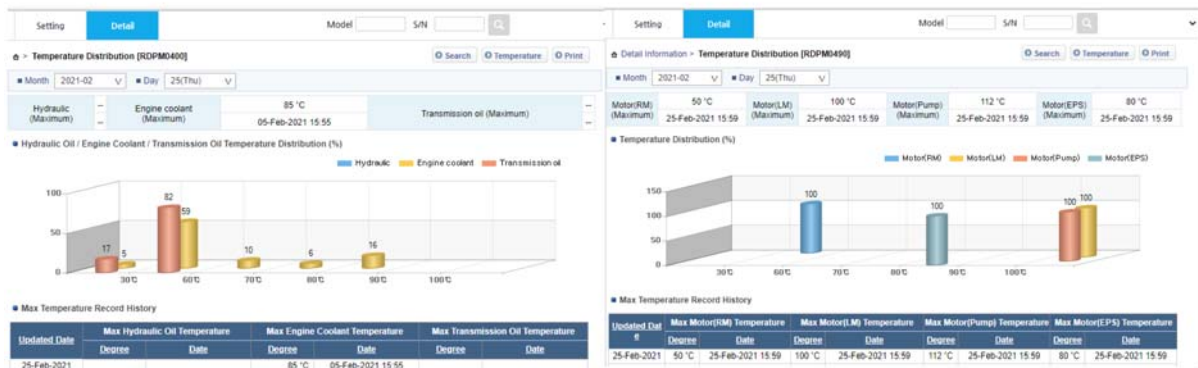
(14) Hourmeter



You can check the daytime HOURMETER to verify that it was excessively used in a specific date.

160D9V3HM17

(15) Temperature (available in dealer accounts)



Engine

Electric

The engine type measures the hydraulic, Engine Coolant, Transmission Oil temperature.
The electric type measures the temperature for each motor.
You can measure the temperature distribution from 30 °C to 100 °C to determine whether the equipment is excessively used or there is a problem.
In addition, it is possible to manage the equipment to make sure that the maximum temperature is recorded.

160D9V3HM18

(16) MCU information (available in dealer accounts)

MCU Information [RDPM0500]

MCU info Request

MCU Information

Manufacture Date	MCU Program Version	MCU Serial No	Machine Model	Received date
16-Mar-2020	3.6	1903M00451	BT-9(4)	02-Feb-2021 11:55

MCU Change History

No	Replace Date	MCU Serial No	Hourmeter difference		Input	
			Hour	Sec	Name	Date

MCU Information [RDPM0500]

MCU info Request

MCU Information

Manufacture Date	MCU Program Version	MCU Serial No	Machine Model	Received date
06-Oct-2020	2.6	20J06-013	45D-9E	02-Feb-2021 10:25

MCU Change History

No	Replace Date	MCU Serial No	Hourmeter difference		Input	
			Hour	Sec	Name	Date

You can check the date of manufacture, MCU Program version, serial number, and machine model name

160D9V3HM19

(17) Running history (available in dealer accounts)

a - Engine Running Hours [RDPD039]							
Month: 2021-02		Period: 25-Jan-2021		25-Feb-2021			
Date	History of engine operation	Hourometer	Engine run	Working	Traveling	Inchka Hour	Fuel Level
29-Feb-2021							
27-Feb-2021							
26-Feb-2021							
25-Feb-2021		405	4h 53m	2h 57m	3h 0m		77 %
24-Feb-2021		400	5h 42m	3h 52m	3h 41m		51 %
23-Feb-2021		474	6h 10m	4h 0m	3h 54m		38 %
22-Feb-2021		468	12h 7m	6h 17m	6h 18m		8 %
21-Feb-2021							
20-Feb-2021		458	0h 58m	0h 30m	0h 22m		33 %
19-Feb-2021		457	0h 18m	3h 22m	3h 25m		44 %
18-Feb-2021		451	0h 34m	3h 41m	3h 48m		54 %
17-Feb-2021		444	0h 36m	4h 1m	3h 45m		35 %
16-Feb-2021		437	0h 43m	3h 26m	3h 34m		95 %

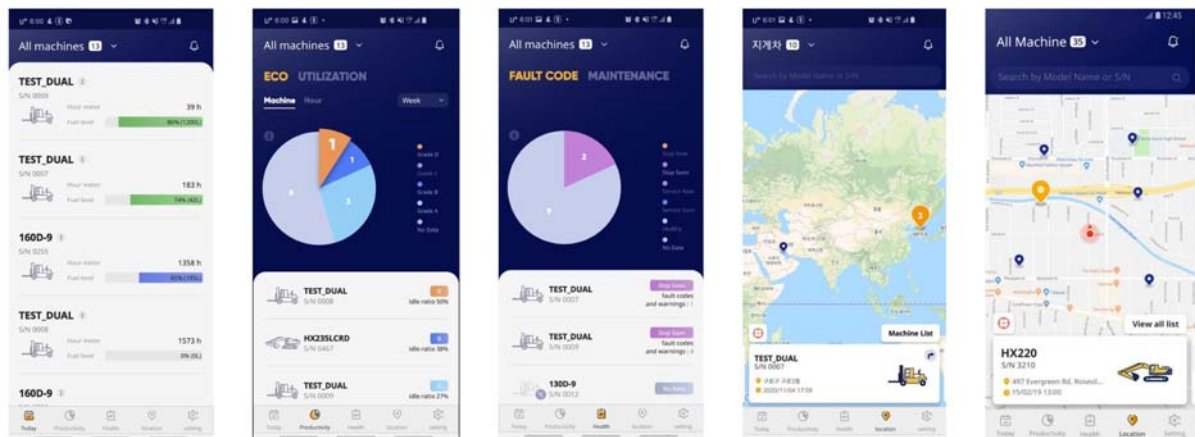
Engine

Electric

You can see how you used the equipment by date and you can export it with PRINT (Excel, etc.).

160D9V3HM20

(18) Mobile app



You can check equipment status, utilization rate, fault, position etc.

Easy to check

160D9V3HM21

(3) Manage sites

Remote Management System - Chrome

himate.hyundai-ce.com/Page/Pop/EOPO/EOPO0001.aspx

Manage Sites Manage Driver Manage Pre-check Manage Collision Manage report

SITE

Refresh

Save New

Site WONHO TEST

Site	Equipment
MOONSU TEST	3
PAOLO TEST	2
WONHO TEST	4

WONHO TEST Add Machine

Model	Serial No	Driver
TESTM3_TAEHA	0001	7
TEST_DUAL	0007	0
TEST_DUAL	0010	8
TEST_DUAL_F	0002	9

Save Cancel

Add Machines of site group

• Model S/N Search

Model	Serial No
<input type="checkbox"/> TESTM3_TAEHA	0001
<input type="checkbox"/> TEST_DUAL	0006
<input type="checkbox"/> TEST_DUAL	0007
<input type="checkbox"/> TEST_DUAL	0008
<input type="checkbox"/> TEST_DUAL	0009
<input type="checkbox"/> TEST_DUAL	0010
<input type="checkbox"/> TEST_DUAL_F	0001
<input type="checkbox"/> TEST_DUAL_F	0002

• Site WONHO TEST

Model	Serial No
<input type="checkbox"/> TESTM3_TAEHA	0001
<input type="checkbox"/> TEST_DUAL	0007
<input type="checkbox"/> TEST_DUAL	0010
<input type="checkbox"/> TEST_DUAL_F	0002

WONHO TEST Add

User Name	User ID
LEE KANG SUN	A4220**
PARK MOON SU	A4497**
KIM WAN SOO	A4615**
SHIN YOUNG PYUNG	A5070**
Kyungwoo Kyungwoo	Kyungw**
HYUNDAI CONSTRUCTION EQUIP AMERICAS, INC JASON	Morga**
TAEHA MECHATRONICS	tae**

Equipment with the authentication device is queried, and you can register the equipment to the desired site. You can also register SUB users with Site and manage them together.

160D9V3HM24

(4) Manage drivers (use pin number)

Manage Driver > Manage Driver [EPO0200]

Search **New** Delete Print Send

Site WONHO Model Serial No Driver

	Site	Driver	ID Type	License Start Date	License Expiration Date	Start Time	End Time	Workable Equipment	Not transmitted
<input type="checkbox"/>	WONHO TEST	W3000	PIN	2021-03-04	2021-03-31			2	
<input type="checkbox"/>	WONHO TEST	W3001	PIN	2021-03-04	2021-03-19			3	
<input type="checkbox"/>	WONHO TEST	W3002	PIN	2021-03-04	2021-03-22			3	
<input type="checkbox"/>	WONHO TEST	W3003	PIN	2021-03-04	2021-03-25			3	
<input type="checkbox"/>	WONHO TEST	WCARD	RFID	2021-03-17	2023-12-21			3	
<input type="checkbox"/>	WONHO TEST	WONHO1000	PIN	2021-03-04	2021-03-18	16:21	16:24	3	
<input type="checkbox"/>	WONHO TEST	WONHO2000	PIN	2021-03-04	2021-03-17	01:56	12:57	2	
<input type="checkbox"/>	WONHO TEST	현대1007	PIN	2021-03-04	2022-01-21			3	
<input type="checkbox"/>	WONHO TEST	현대4000	PIN	2021-03-03	2021-10-21	03:41	12:01	3	

9 Listings

The driver name can be entered up to 16 characters

Driver New/Update Mgt [EPO02010]

Save Close

* Driver WONHO HYUNDAI

* ID Type PIN * ID Number 7777

* License Activation 17-Mar-2021 * License Expiration Date 20-Apr-2021

☒ Start Time 오후 02:34 ☐ End Time 오후 11:34

☒ Activation

* Indicates a required field

Pin Type: Can only enter 4 digits
RFID Type: Can only enter 8 char (English + digits)
(please check next page)

4. You can see that a new driver is added

You can not register the same name ~~for~~ site. Likewise, the same PW is not registered. This must be unique.
The shift time setting is in your choice (start ~ end time)

160D9V3HM25

(5) Manage drivers (use RFID number)

1. A separate popup is displayed when you click the name in the Driver column

2. After changing the desired information, press save to reflect the changed information

3. If you want to register with an RFID card other than a pin number, check the card information in the authentication device.

4. Enter this number as it is in the id number

You can not register the same name for the. Likewise, the same PW is not registered. This must be unique.
The shift time setting is the choice (start ~ end time)

160D9V3HM26

(6) How to register a driver to use the equipment

1. Find the desired equipment to register the driver

Up to 50 drivers per machine can be registered.

2. Select the desired device and press

3. You can see that it is reflected in the available equipment section.

Machines registered on other sites is not inquiry or register.
If you want, you must release the equipment registered on another site.

160D9V3HM27

(7) How to check driver information in the authentication device

FMS > Driver [RDB00100]

Search New Delete Print Send

Driver ALL Model Serial No

Driver	ID Type	License Start Date	License Expiration Date	Start Time	End Time	Workable Equipment	Not Transmitted
<input type="checkbox"/> 3001호호	PIN	17-Dec-2020	30-Sep-2021			2	
<input type="checkbox"/> 3000TTP	PIN	17-Dec-2020	31-Jul-2021			3	
<input type="checkbox"/> 2006LAGENHET	PIN	01-Sep-2020	31-Jan-2021			3	
<input type="checkbox"/> 2005DEPARTAME	PIN	01-Sep-2020	28-Feb-2021			3	

24 Listings



1. When registration is complete, it can be checked at the authentication device.
2. For example, you can see that the driver's name on the web is in user information.

Registered information is stored in the operating system (key on)

160D9V3HM28

(8) Manage pre-check

Manage Sites Manage Driver Manage Pre-check Manage Collision Manage report

Driver Management > Manage Pre-check [EOP00300]

Site MOONSU TEST Model Serial No

No	Site	Model	Serial No	Pre-check count	Not transmitted
1	MOONSU TEST	TESTM3_TAEHA	0004	2	
2	MOONSU TEST	TESTM3_TAEHA	0005	2	
3	MOONSU TEST	TESTM3_TAEHA	0006	2	

3 Listings

Up to 25 pre-check per machine can be registered.

Pre-check List

No	Question	Answer	Critical	Last update	Machine Count
<input type="checkbox"/> 1	TIRE IS OK??	Yes	Yes	17-Mar-2021	2
<input type="checkbox"/> 2	ARE YOU OK??	Yes	Yes	18-Mar-2021	3
<input type="checkbox"/> 3	D. DID YOU WORK OUT LAST NIGHT?	Yes	No	27-Mar-2021	1
<input type="checkbox"/> 4	HHHJJJKKKKK	Yes	Yes	31-Mar-2021	0

Add Pre-check of Machines

No	Question	Answer	Critical
<input type="checkbox"/> 1	TIRE IS OK??	Yes	Yes
<input type="checkbox"/> 2	ARE YOU OK??	Yes	Yes
<input type="checkbox"/> 3	D. DID YOU WORK OUT LAST NIGHT?	Yes	No
<input type="checkbox"/> 4	HHHJJJKKKKK	Yes	Yes

Pre-check New/Update Mgt [EOP00310]

* Question

* Answer

* Critical

* Indicates a required field

Up to 94 characters can be entered.

Please register the desired phrase first.
When set to CRITICAL, it is logged in to meet the set answer.
If not CRITICAL, it will be logged in as a set answer.

160D9V3HM29

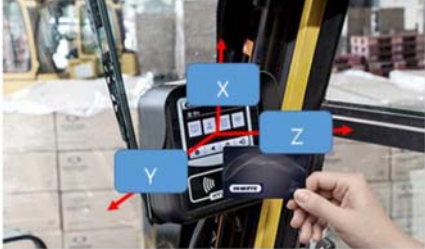
(9) Manage collision and over speed

Manage Sites | Manage Driver | Manage Pre-check | **Manage Collision** | Manage report

Manage Collision > Manage Collision [EOPO0400]

Site: B-X TEST | Model: | Serial No: |

No	Site	Model	Serial No	Ref. Collision X	Ref. Collision Y	Ref. Collision Z	Ref. Over Speed	Not transmitted
1	B-X TEST	25B-X	0003	2G	2G	2G	N/A	
2	B-X TEST	25B-X	0004	2G	2G	2G	N/A	
3	B-X TEST	25B-X	0005	2G	2G	2G	N/A	
4	B-X TEST	30B-X	0003	2G	2G	2G	N/A	
5	B-X TEST	30B-X	0004	2G	2G	2G	N/A	



Remote Management System - Chrome

himate.hyundai-ce.com/Page/POP/EOPO/EOPO0410.aspx?MACHL...

Collision New/Update Mgt [EOPO0410]

Model / Serial No: 25B-X #0003

Ref. Collision X: 2.0 (0: Disabled, Range: 0.1G-25.0G)

Ref. Collision Y: 2.0 (0: Disabled, Range: 0.1G-25.0G)

Ref. Collision Z: 2.0 (0: Disabled, Range: 0.1G-25.0G)

Ref. Over Speed: 0 (0: Inactivation, Range: 1-30km/h)

You can set the G value that the crash or 'Over speed' event occurred.
If the G value is exceeded or the speed is checked, the event will occur immediately
(if it occurs several times in 1 minute, only 1 event will occur respectively)

160D9V3HM30

(10) Driver report

Manage Sites | Manage Driver | Manage Pre-check | Manage Collision | **Manage report**

Driver report | Pre Check report | Collision report

Driver report > Driver report [EOPO0510]

Period: 23-Mar-2021 ~ 31-Mar-2021 | Site: MOONSU | Model: | Serial No: | Driver: |

LOGIN	LOG OFF	Site	Model	Serial No	Driver	Hourmeter	Engine	Working
26-Mar-2021 09:12	26-Mar-2021 09:17	MOONSU TEST	TESTM3_TAEHA	0004	NICE GUY	LOGIN: 1.805 LOG OFF: 1.805 total: 0 hrs	LOGIN: 0h 46m LOG OFF: 0h 51m total: 0h 5m	LOGIN: 0h 19m LOG OFF: 0h 19m total: 0h 0m
26-Mar-2021 09:12	26-Mar-2021 09:12	MOONSU TEST	TESTM3_TAEHA	0004	NICE GUY	LOGIN: 1.805 LOG OFF: 1.805 total: 0 hrs	LOGIN: 0h 46m LOG OFF: 0h 46m total: 0h 0m	LOGIN: 0h 19m LOG OFF: 0h 19m total: 0h 0m
24-Mar-2021 19:13	24-Mar-2021 19:52	MOONSU TEST	TESTM3_TAEHA	0006	HYUNDAI 001	LOGIN: 3.471 LOG OFF: 3.472 total: 1 hrs	LOGIN: 19h 43m LOG OFF: 20h 22m total: 0h 39m	LOGIN: 2h 43m LOG OFF: 2h 43m total: 0h 0m
24-Mar-2021 16:10	24-Mar-2021 17:42	MOONSU TEST	TESTM3_TAEHA	0006	HYUNDAI 001	LOGIN: 3.468 LOG OFF: 3.471 total: 3 hrs	LOGIN: 18h 11m LOG OFF: 19h 43m total: 1h 32m	LOGIN: 2h 25m LOG OFF: 2h 43m total: 0h 18m
24-Mar-2021 01:23	24-Mar-2021 01:50	MOONSU TEST	TESTM3_TAEHA	0006	HYUNDAI 001	LOGIN: 3.455 LOG OFF: 3.458 total: 1 hrs	LOGIN: 11h 45m LOG OFF: 12h 14m total: 0h 29m	LOGIN: 1h 52m LOG OFF: 1h 55m total: 0h 3m
23-Mar-2021 21:18	24-Mar-2021 00:04	MOONSU TEST	TESTM3_TAEHA	0006	HYUNDAI 001	LOGIN: 3.449 LOG OFF: 3.455 total: 5 hrs	LOGIN: 0h 1m LOG OFF: 11h 45m total: 2h 45m	LOGIN: 1h 13m LOG OFF: 1h 52m total: 0h 39m
23-Mar-2021 16:01	23-Mar-2021 18:56	MOONSU TEST	TESTM3_TAEHA	0006	HYUNDAI 001	LOGIN: 3.444 LOG OFF: 3.449 total: 5 hrs	LOGIN: 0h 4m LOG OFF: 2h 5m total: 2h 51m	LOGIN: 0h 37m LOG OFF: 1h 12m total: 0h 35m

driver report
User ID: A509157 (2021-03-31, 14:59)

LOGIN	LOG OFF	Site	Model	Serial No	Driver	Hourmeter	Engine	Working	Traveling	Idling	Fuel or battery
31-Mar-2021 03:52	31-Mar-2021 03:54	MOONSU TEST	TESTM3_TAEHA	0004	NICE GUY	LOGIN: 1,815 LOG OFF: 1,815 total: 0 hrs	LOGIN: 0h 7m LOG OFF: 0h 9m total: 0h 2m	LOGIN: 0h 6m LOG OFF: 0h 8m total: 0h 1m	LOGIN: 0h 5m LOG OFF: 0h 7m total: 0h 1m	LOGIN: 0h 1m LOG OFF: 0h 1m total: 0h 0m	LOGIN: 97% LOG OFF: 97% total: 0h 0m
31-Mar-2021 03:15	31-Mar-2021 03:18	MOONSU TEST	TESTM3_TAEHA	0004	NICE GUY	LOGIN: 1,815 LOG OFF: 1,815 total: 0 hrs	LOGIN: 0h 5m LOG OFF: 0h 7m total: 0h 2m	LOGIN: 0h 3m LOG OFF: 0h 5m total: 0h 1m	LOGIN: 0h 3m LOG OFF: 0h 5m total: 0h 1m	LOGIN: 0h 1m LOG OFF: 0h 1m total: 0h 0m	LOGIN: 97% LOG OFF: 97% total: 0h 0m
31-Mar-2021 03:01	31-Mar-2021 03:04	MOONSU TEST	TESTM3_TAEHA	0004	NICE GUY	LOGIN: 1,815 LOG OFF: 1,815 total: 0 hrs	LOGIN: 0h 2m LOG OFF: 0h 5m total: 0h 3m	LOGIN: 0h 1m LOG OFF: 0h 3m total: 0h 2m	LOGIN: 0h 1m LOG OFF: 0h 3m total: 0h 1m	LOGIN: 0h 0m LOG OFF: 0h 1m total: 0h 0m	LOGIN: 97% LOG OFF: 97% total: 0h 0m
31-Mar-2021 02:52	31-Mar-2021 02:53	MOONSU TEST	TESTM3_TAEHA	0004	NICE GUY	LOGIN: 1,815 LOG OFF: 1,815 total: 0 hrs	LOGIN: 0h 1m LOG OFF: 0h 1m total: 0h 0m	LOGIN: 0h 0m LOG OFF: 0h 0m total: 0h 0m	LOGIN: 0h 0m LOG OFF: 0h 0m total: 0h 0m	LOGIN: 0h 0m LOG OFF: 0h 0m total: 0h 0m	LOGIN: 97% LOG OFF: 97% total: 0h 0m

You can check the login and logoff information by the driver
This can be easily managed by output by Excel.

160D9V3HM31

(11) Pre-check report

Manage Sites	Manage Driver	Manage Pre-check	Manage Collision	Manage report
Driver report	Pre Check report	Collision report		

Manage report > Pre Check report [EOP00520]

Period: 24-Mar-2021 ~ 01-Apr-2021 Site: MOONS... Model: Serial No: Driver:

Site	Date & Time	Model	Serial No	Driver	Q1	A1	Q2	A2	Q3	A3	Q4	A4
MOONSU TEST	31-Mar-2021 11:00	TESTM3_TAEHA	0005	HYUNDAI 002	ARE YOU OK??	Yes	TIRE IS OK??	Yes				
MOONSU TEST	31-Mar-2021 10:54	TESTM3_TAEHA	0005	HYUNDAI 002	ARE YOU OK??	Yes	TIRE IS OK??	Yes				
MOONSU TEST	31-Mar-2021 05:07	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 04:34	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 04:25	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 04:21	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 04:17	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 03:58	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 03:52	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				
MOONSU TEST	31-Mar-2021 03:15	TESTM3_TAEHA	0004	NICE GUY	D. DID YOU WORK OUT LAST NIGHT??	Yes	ARE YOU OK??	Yes				

136 Listings

1 2 3 4 5 6 7 8 9 10 > >>

No	Question	Answer	Critical	Last update	Machine Count
1	TIRE IS OK??	Yes	Yes	17-Mar-2021	2
2	ARE YOU OK??	Yes	Yes	18-Mar-2021	3
3	D. DID YOU WORK OUT LAST NIGHT??	Yes	No	27-Mar-2021	1

You can check the response to the registered questions
Questions show randomly changed.
It is possible to manage with this or one Excel.

160D9V3HM32

(12) Collision and over speed report

Manage Sites	Manage Driver	Manage Pre-check	Manage Collision	Manage report
Driver report	Pre Check report	Collision report		

Collision report > Collision report [EOP00530]

Period: 17-Dec-2021 ~ 25-Dec-2021 Site: MOONS... Model: Serial No: Driver:

Site	Date & Time	Model	Serial No	Driver	Collision Detect	X-Axis	Y-Axis	Z-Axis	Over speed detect	Over speed
MOONSU TEST	23-Dec-2021 14:33	TESTM3_TAEHA	0005	INTERFACE	No	0G	0G	0G	Yes	23Km
MOONSU TEST	23-Dec-2021 14:32	TESTM3_TAEHA	0005	INTERFACE	No	0G	0G	0G	Yes	22Km

Site	Date & Time	Model	Serial No	Driver	Collision Detect	X-Axis	Y-Axis	Z-Axis	Over speed detect	Over speed
WONHO TEST	23-Nov-2021 14:36	TESTM3_TAEHA	0002	HI MATE Master	Yes	0.4G	1.4G	2.6G	No	0Km
WONHO TEST	12-Oct-2021 15:07	TEST_DUAL_F	0001	WONHO HYUNDAI	Yes	0.7G	0.6G	1.7G	No	0Km

Site	Date & Time	Model	Serial No	Driver	Collision Detect	X-Axis	Y-Axis	Z-Axis	Over speed detect	Over speed
B-X TEST	23-Dec-2021 11:43	25B-X	0005	현대산업차량 B-X	Yes	0.4G	0.4G	2.6G	No	0Km
B-X TEST	22-Dec-2021 12:18	25B-X	0005	현대산업차량 B-X	Yes	1.1G	0.5G	3G	No	0Km

Event occurs when a value higher than the registered G value or over speed is measured.
It is possible to manage with this or one Excel.

Manage Sites	Manage Driver	Manage Pre-check	Manage Collision	Manage report
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Manage Collision > Manage Collision [EOP00400]

Site: B-X TEST Model: Serial No:

No	Site	Model	Serial No	Ref. Collision X	Ref. Collision Y	Ref. Collision Z	Ref. Over Speed	Not transmitted
1	B-X TEST	25B-X	0003	2G	2G	2G	N/A	
2	B-X TEST	25B-X	0004	2G	2G	2G	N/A	
3	B-X TEST	25B-X	0005	2G	2G	2G	N/A	
4	B-X TEST	30B-X	0003	2G	2G	2G	N/A	
5	B-X TEST	30B-X	0004	2G	2G	2G	N/A	



160D9V3HM33