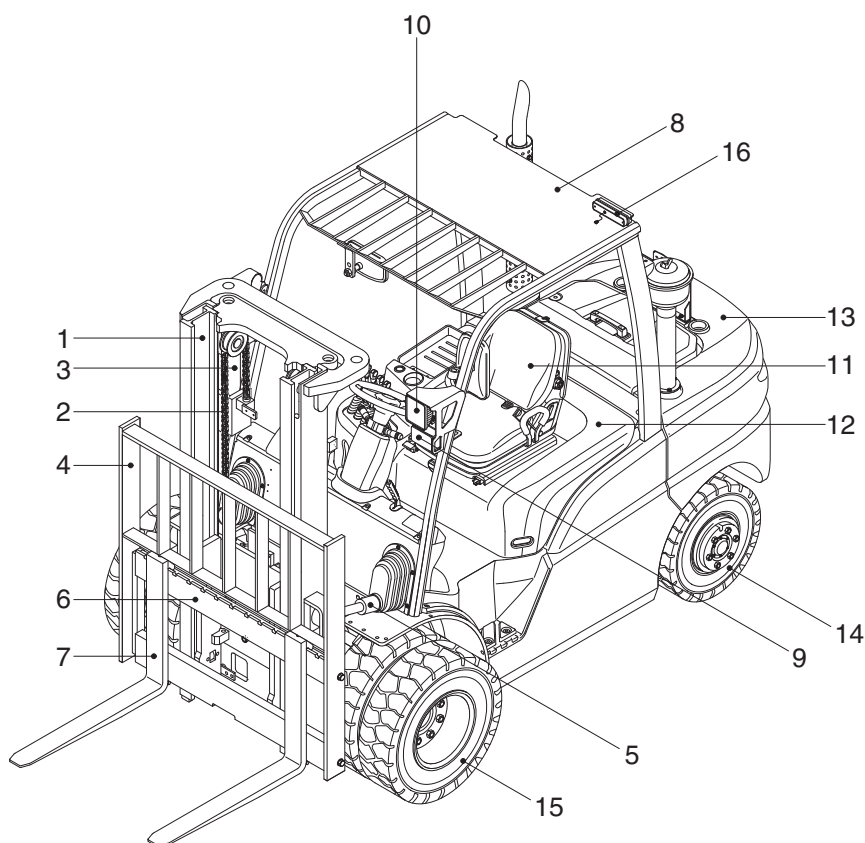


## 3. KNOW YOUR TRUCK

### 1. GENERAL LOCATIONS

35D/40D/45D-9S, 50D-9SA

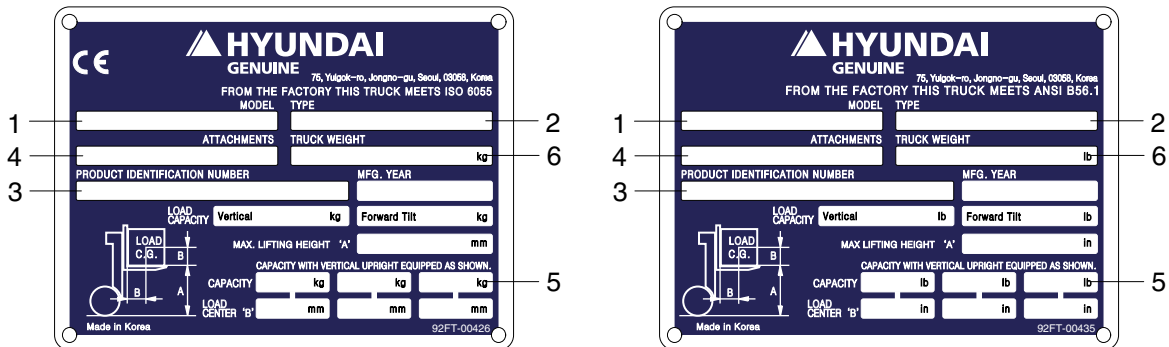


35D9SOM54

- |                 |                    |                          |
|-----------------|--------------------|--------------------------|
| 1 Mast          | 7 Forks            | 13 Counterweight         |
| 2 Lift chain    | 8 Overhead guard   | 14 Rear wheel            |
| 3 Lift cylinder | 9 Turn signal lamp | 15 Front wheel           |
| 4 Backrest      | 10 Head lamp       | 16 Rear combination lamp |
| 5 Tilt cylinder | 11 Operator's seat |                          |
| 6 Lift bracket  | 12 Bonnet          |                          |

## 2. DATA/SAFETY PLATES AND DECALS

### 1) TRUCK DATA AND CAPACITY PLATE



(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.

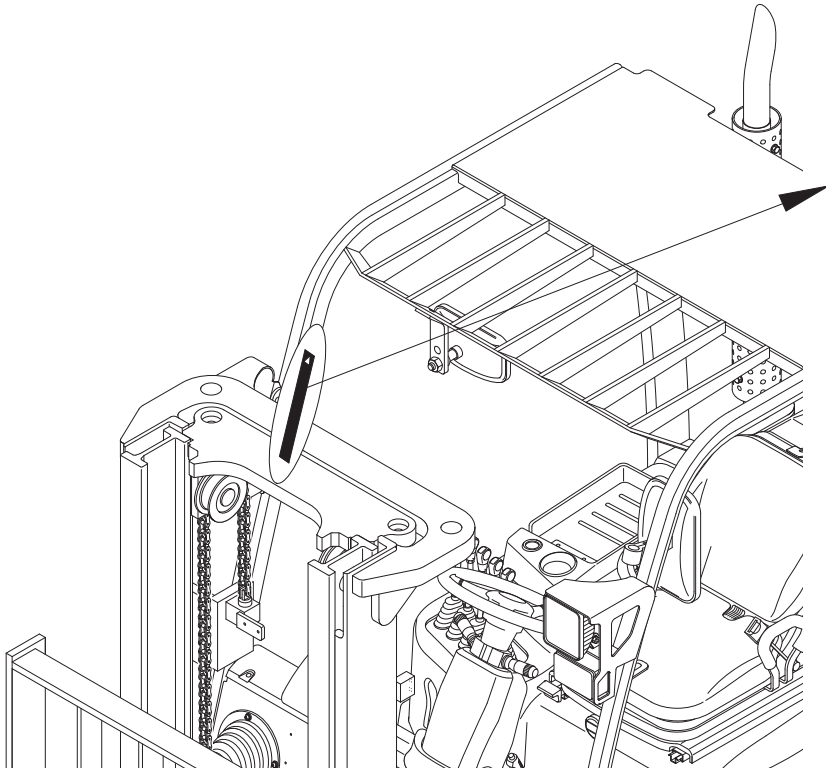
**Do not exceed the maximum capacity specified.**

(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.**

## 2) OPERATOR SAFETY WARNING DECAL



35D9SOM59K

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

### ⚠ **Operator/Tip-over warning decal**

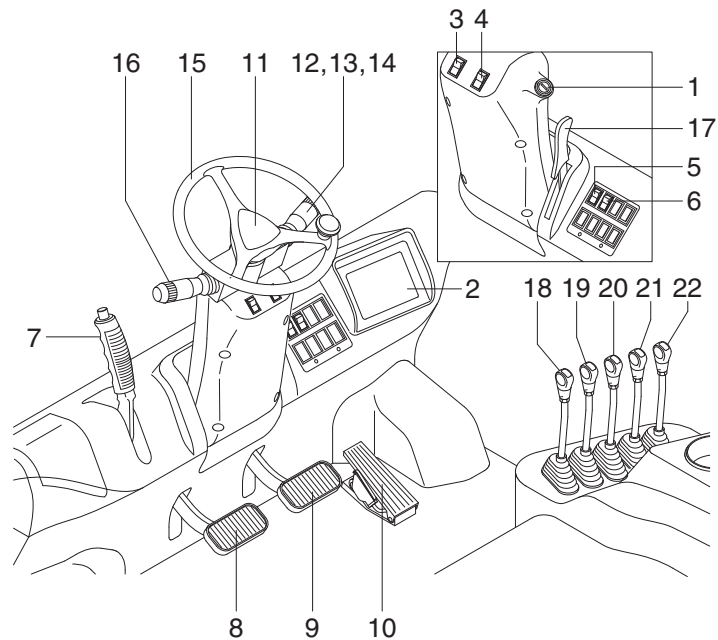
This decal is located on the front right hand leg of the driver's overhead. Its purpose is to remind the operator that staying in the seat provides the best chance of avoiding injury in the event of a truck-tipping or driving off a dock mishap.

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



35D9SOM09A

### 3. INSTRUMENTS AND CONTROLS



35D9SOM64TK

- |                            |                          |                                 |
|----------------------------|--------------------------|---------------------------------|
| 1 Start switch             | 9 Brake pedal            | 17 Steering column adjust lever |
| 2 Cluster                  | 10 Accelerator pedal     | 18 Lift lever                   |
| 3 Hazard lamp switch (opt) | 11 Horn button           | 19 Tilt lever                   |
| 4 Parking switch           | 12 Head lamp switch      | 20 Attach lever 1 (opt)         |
| 5 Auto shift switch        | 13 Illumination lamp     | 21 Attach lever 2 (opt)         |
| 6 Work lamp switch (opt)   | 14 Turn signal switch    | 22 Attach lever 3 (opt)         |
| 7 Parking brake lever      | 15 Steering wheel        |                                 |
| 8 Inching pedal            | 16 Forward-reverse lever |                                 |

△ Familiarize yourself with the controls and follow safe operating procedures.



## 4. CLUSTER

### 1) STRUCTURE

Like following figure, cluster is consisted of LCD and switch. LCD will indicate the operation and abnormal status of vehicle to the driver in order to use and maintenance.

Also, LCD allows to set and indicate the various modes, monitoring, and gadgets.



35D9SCL001

## 2) GAUGE

### (1) Operation screen

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



35D9SCL002K

- 1 Speed meter
- 2 Fuel indicator

- 3 Coolant temperature indicator
- 4 Clock

### (2) Speed meter

- ① Display the trip speed of vehicle.
- ② Speed unit is km/h or mile.

※ **Speed unit can be set in the speed unit menu of display set up.**




35D9SCL003K

### (3) Fuel indicator




35D9SCL004K

- ① Display the remains of fuel tank.
- ② If the indicator point to the red zone, or warning lamp  will be lit up in red, please refuel.

### (4) Coolant temperature indicator



35D9SCL005K

- ① Display the coolant temperature.
  - While zone : 40 ~ 120°C
  - Red zone : Over 120°C
  - Warning lamp on : Over 115°C
- ② If the gauge points to the red zone, or warning lamp  is on, please stop the engine and inspect the coolant system.

### (5) Clock



35D9SCL006K

- ① Display current time.
- ② You can enter current time at display Set Up > Time Set Up menu.

### 3) WARNING LAMP AND INDICATOR LAMP



35D9SCL007K

- ※ 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.

#### (1) Fuel level warning lamp



- ① Warning lamp will be displayed if fuel level is low.
- ② Please refuel immediately if the lamp is on.

#### (2) Coolant temperature warning lamp



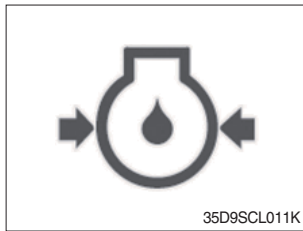
- ① Coolant temperature warning will be lit up when temperature is over 115°C.
- ② If the warning lamp is on continuously, please inspect the coolant system.

#### (3) Expendables replacement indicator lamp



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

#### (4) Engine oil pressure warning lamp



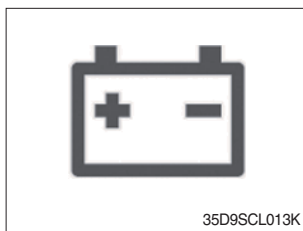
- ① This warning lamp will be lit up when engine oil pressure is low.
- ② Stops the engine immediately if the warning lamp is lit up.
- ③ Please check the engine oil.

#### (5) Engine inspection warning lamp



- ① This warning lamp will be lit up if the engine ECM sends a failure code to cluster or receives the signal.
- ② Check the failure code of cluster.

#### (6) Battery charge warning lamp



- ① This warning lamp is lit when battery charging voltage is low.
- ② Please inspect the battery charging circuit if the warning lamp is lit.

#### (7) Air cleaner warning lamp



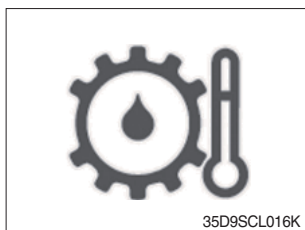
- ① This warning lamp is lit when air cleaner filter is clogged up.
- ② Please clean up or replace the filter.

#### (8) Engine warm-up Indicator lamp



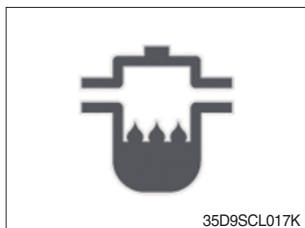
- ① If the ignition is on, the warm-up will be started. Please start the engine after Indicator lamp is turned off.

#### (9) TM oil temperature warning lamp



- ① Transmission oil temperature warning is consisted of two indications.
  - 110°C or higher : Amber is light up
  - 120°C or higher : Red is flashing
- ② When this lamp light up during operation, stop the engine and check the machine.

#### (10) Water in fuel indicator lamp



- ① Light up when water in fuel.
- ② Stop the engine and please drain the water of water separator.

#### (11) OPSS Indicator lamp



- ① Light up if driver leave seat during operation.
- ② Machine driving and control will be blocked if lamp is lit up.

#### (12) Parking indicator lamp



- ① Light up when parking brake is ON.

#### (13) Tilt lock Indicator lamp



- ① The Indicator lamp will be lit up if the tilt lock switch (optional) is entered.
- ② Tilt action will be limited if this Indicator lamp is lit up and the mast is located at 90 degrees.

#### (14) Communication error warning lamp



- ① This warning lamp will be lit up if the communication with MCU is fail.
- ② Please check the communication line if the warning lamp is lit up.

#### (15) Maximum speed warning indicator lamp



- ① This Indicator lamp is lit up on the middle of screen if vehicle speed is exceeded maximum speed that was set.
- ② Alarm buzzer will ring every two seconds.
- ③ Alarm will go off if the speed goes down below set up speed.

#### (16) Brake oil level warning lamp



- ① Warning lamp will be displayed if brake oil is low of reservoir tank.
- ② Please refill immediately if the lamp is on.

#### (17) Clutch protection warning lamp (or T/M oil warning)



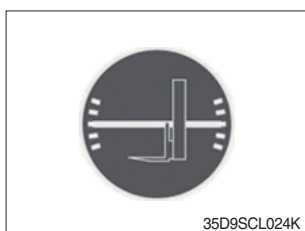
- ① Warning lamp will be displayed if clutch protection system operating or transmission oil is low.
- ② Please refill immediately if the lamp is on.

#### 4) INFORMATION DISPLAY



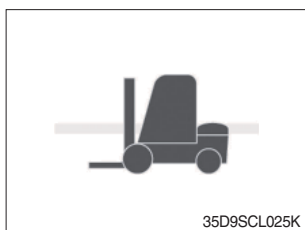
35D9SCL023K

**(1) Mast front/rear tilt (optional)**



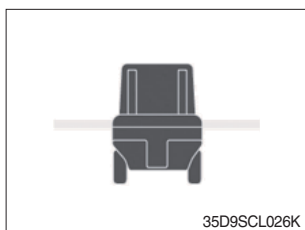
- ① Display the real time tilt of mast.

**(2) Vehicle front/rear tilt**



- ① Display the front/rear tilt of vehicle in real time.
  - Stop : Tilt angle is higher than  $2.3^{\circ}$  then the red warning symbol.
  - Driving : Tilt angle is higher than  $10.2^{\circ}$  then the red warning symbol.

### (3) Vehicle left/right tilt



- ① Display the left/right tilt of vehicle in real time.
  - Stop : Tilt angle is higher than  $3.4^{\circ}$  then the red warning symbol.
  - Driving : Tilt angle is higher than  $24.2^{\circ}$  then the red warning symbol.



#### (4) Load weight (optional)



- ① Display the load weight.
- ② Screen will display blurry if the weight sensor has not been mounted.

#### (5) Total trip distance



- ① Display total trip distance of vehicle.
- ② Unit of distance is kilometer.

#### (6) Operation time



- ① Display the used time of vehicle.
- ② Icon will be changed as follow if starts ignition.



35D9SCL030K

#### (7) Explanation of warning lamp and indicator lamp



Explanation of selected warning lamp or indicator lamp

Selected icon

35D9SCL031K

- ① Explanation will be displayed if press the arrow (refer to page 3-17) while warning lamp or indicator lamp is on.
- ② Explanation for warning lamp or indicator lamp that are shown on the screen will be displayed if press the arrow continuously.

## 5) DRIVING INDICATOR LAMP



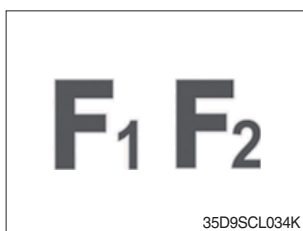
35D9SCL032K

### (1) Neutral



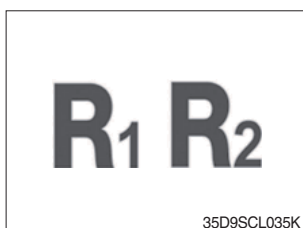
- ① This Indicator lamp will be lit up when direction lever is located in neutral.

### (2) Forward



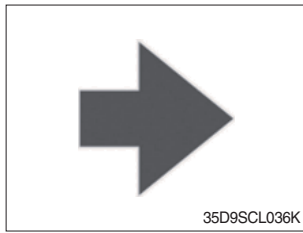
- ① This indicator lamp is displayed if the forward gear is selected.
- ② First gear will be displayed as **F<sub>1</sub>** , and second gear will be displayed as **F<sub>2</sub>** .

### (3) Reverse



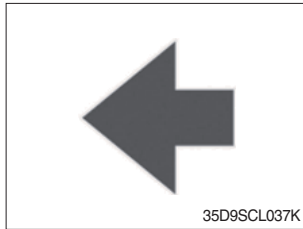
- ① This indicator lamp is displayed if the reverse gear is selected.
- ② First gear will be displayed as **R<sub>1</sub>** , and second gear will be displayed as **R<sub>2</sub>** .

**(4) Right turning pilot lamp**



① This pilot lamp will flash if turns on the right turn signal.

**(5) Left turning pilot lamp**



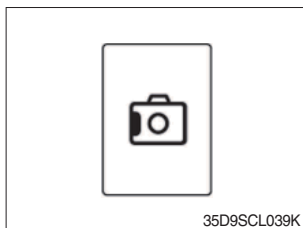
① This pilot lamp will flash if turns on the left turn signal.

## 6) SWITCH



35D9SCL038K

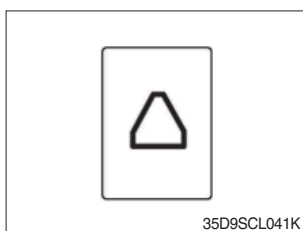
### (1) Camera



- ① This switch displays rear camera images. (if the camera is mounted)

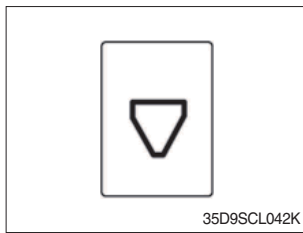


### (2) UP/Left



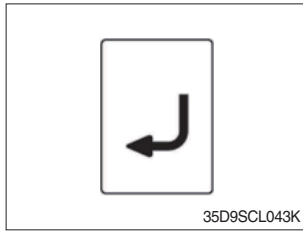
- ① This switch is used to move upward or leftward in menu or increase the value.

### (3) Down/Right



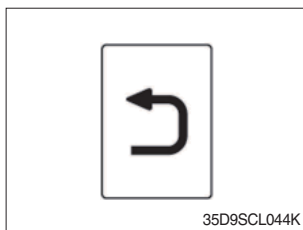
- ① This switch is used to move downward or rightward in menu or decrease the value.

### (4) Select



- ① This switch is used to enter into the menu or to select.

### (5) Cancel (ESC)



- ① This switch is used to cancel or move to upper menu.



35D9SCL045

## 7) MAIN MENU

Operation Screen



Main Menu Screen






Sub-Menu Screen



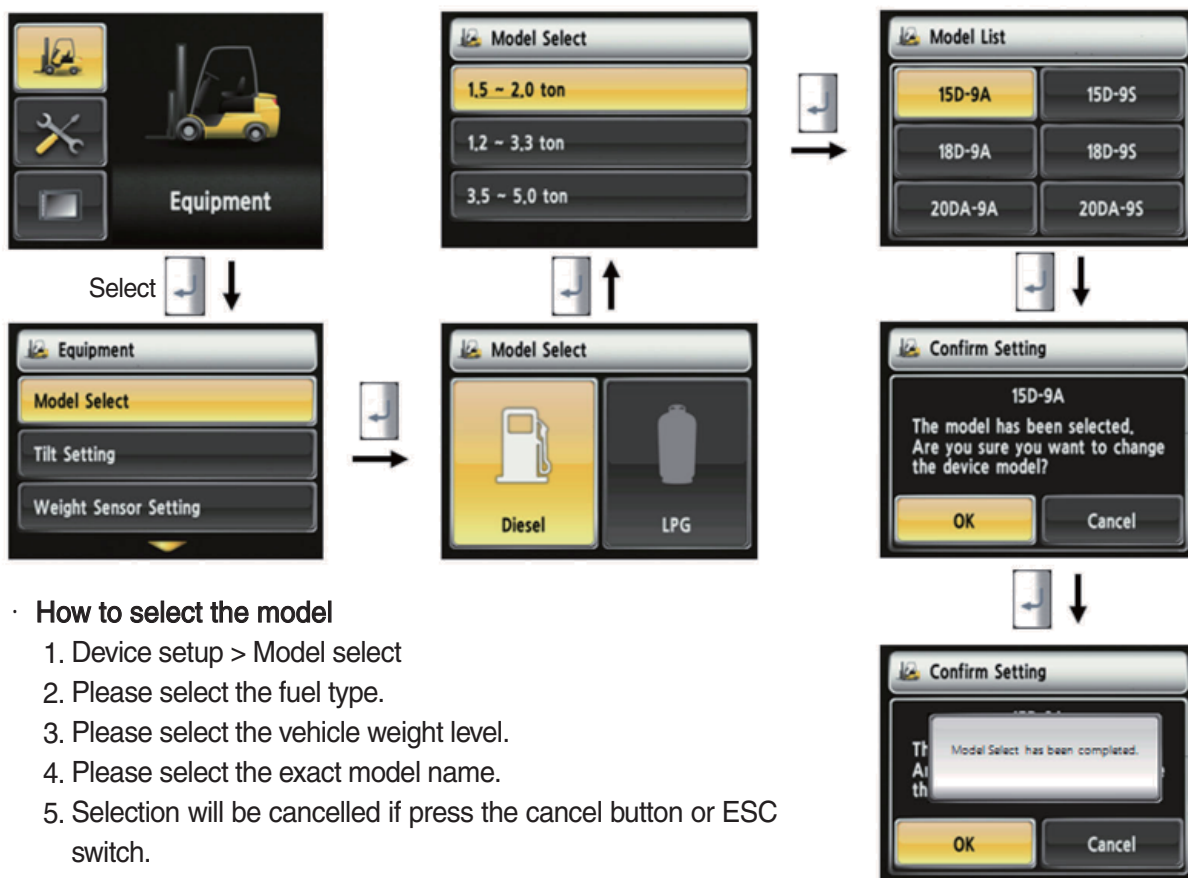
35D9SCL046

A menu consists of main menu and sub-menu.

### (1) Structure

No	Main menu	Sub menu	Explanation
1		Model select Vehicle tilt Initialize Weight sensor setup Ignition control setup Camera setup Auto-shift speed setup DCSR speed setup Maximum speed warning MCU Monitor information	Diesel, LPG Vehicle tilt Initialize Enter the cylinder cross section area , Adjust load weight, Weight display setup Ignition control, Change password Interoperate with reverse gear 1st gear-> Switching speed to 2nd gear, 2nd gear -> Switching speed to 1st gear DCSR On, Block driving speed, Restore driving speed Maximum speed warning MCU/Monitor Information
2		Failure History Expendables management I/O Information A/S Contact	Current engine failure, Engine failure history Change oil and filter replacement cycle Analog Input, Digital input/output Change A/S contact
3		LCD Brightness Time Setup Unit Setup Language Setting	Automatic, Manual Clock Speed, Weight, Temperature, Pressure, Date type Korean, English

## (2) Model select



### How to select the model

1. Device setup > Model select
  2. Please select the fuel type.
  3. Please select the vehicle weight level.
  4. Please select the exact model name.
  5. Selection will be cancelled if press the cancel button or ESC switch.
- ※ To use full function of vehicle, exact model must be selected.

35D9SCL047

### (3) Initialize vehicle tilt



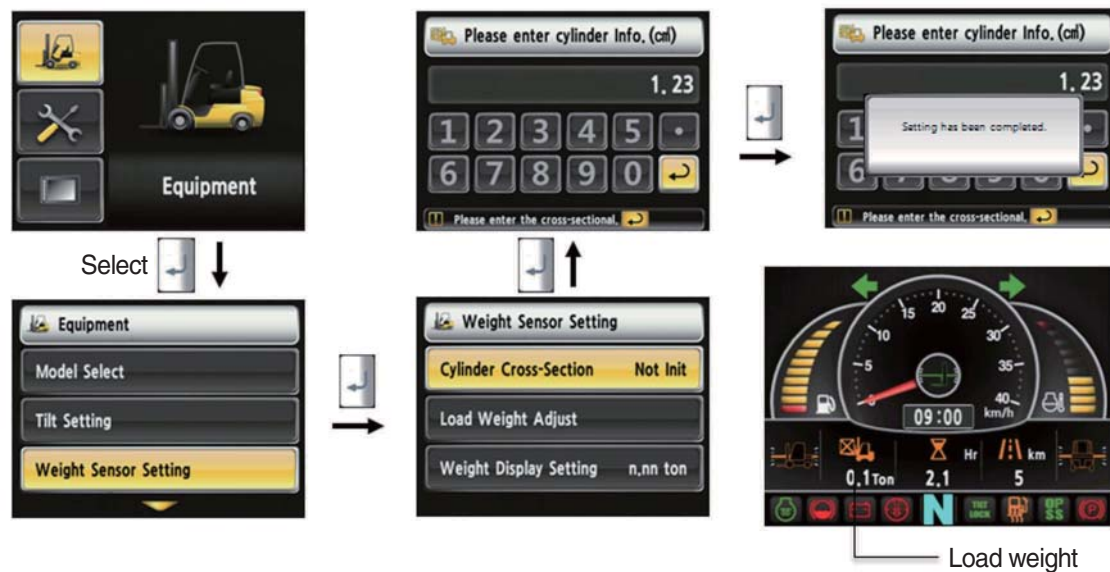
35D9SCL048

#### Initialize vehicle tilt

1. The tilt sensor has already been initialized when deliver the vehicle from factory.
2. Initialize vehicle tilt if the tilt sensor figure or vehicle tilt is not horizontal in the flatland.  
Vehicle set up > Initialize vehicle tilt
3. You must set tilt in the flatland since this is a horizontal set up.
4. If tilt sensor for mast is mounted (optional), locates the mast vertically.
5. Mast maximum angle depends on the vehicle.



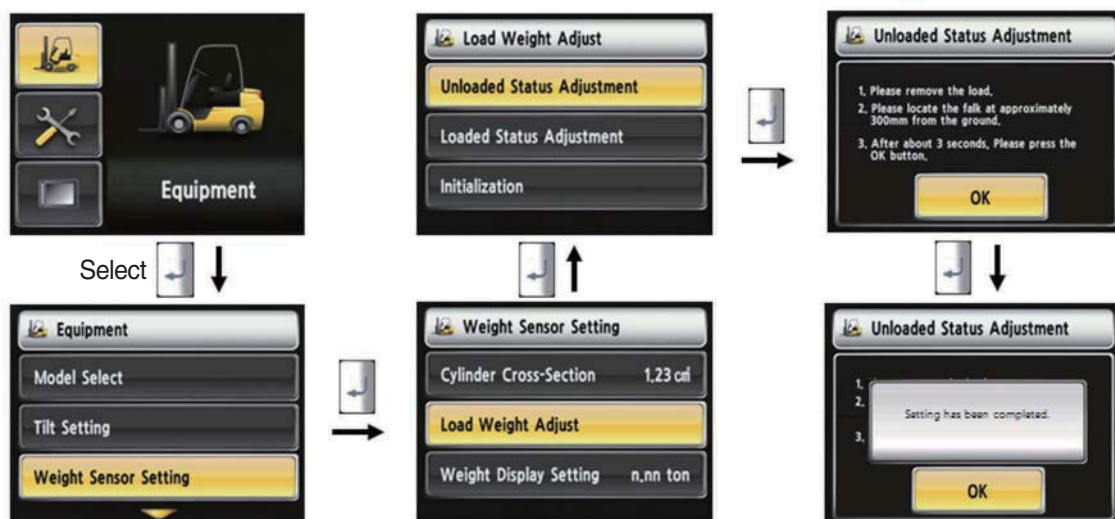
#### (4) Weight sensor set up



35D9SCL049

#### How to set weight sensor

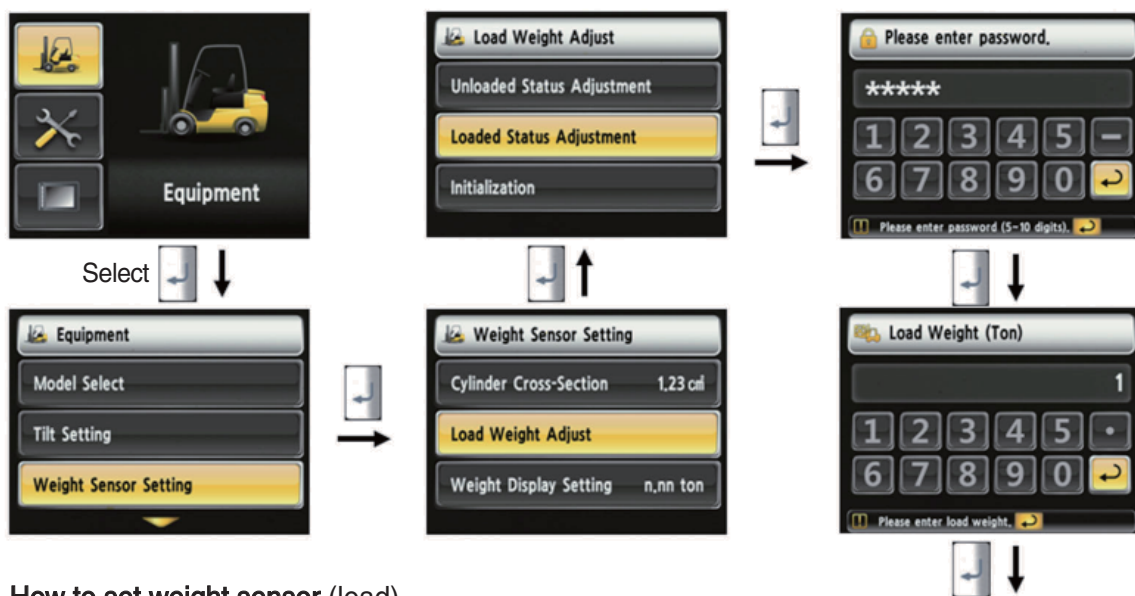
1. The weight sensor has already been set when deliver the vehicle from factory.
2. Device setup > Weight sensor setup
3. There are three ways to setup. (unload, load, initialization)
4. A cylinder cross sectional area value will be displayed in initial screen, please enter the cross sectional area using shift and select button if there are changes.
5. Please finish setup using enter button when input is done.



35D9SCL050

#### How to set weight sensor (unload)

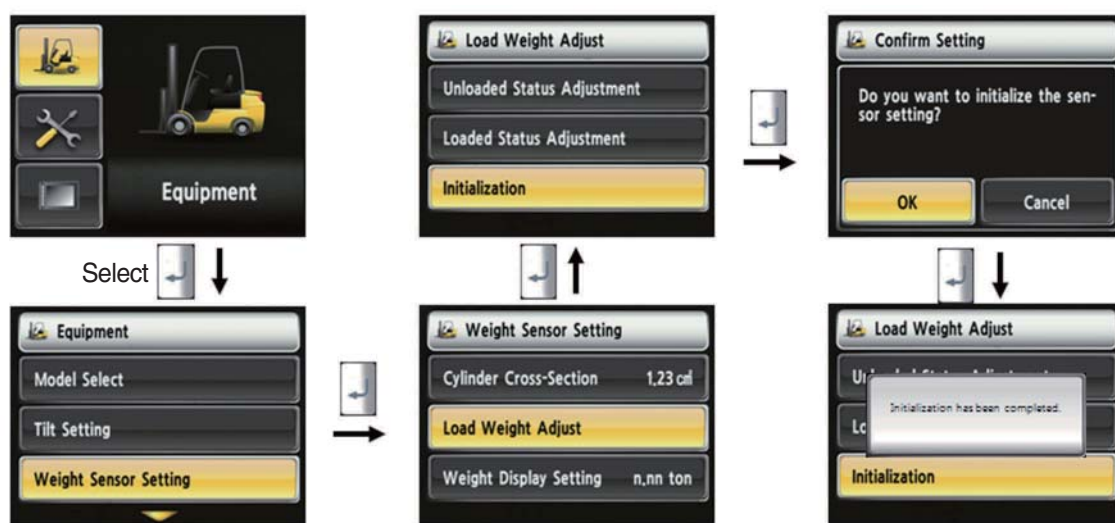
1. Device setup > Weight sensor setup
2. The way to adjust the no-load weight is as follow
3. First, please select the no-load adjust.
4. Wait 3 seconds after lifting no-load fork approximately 30 cm from the ground level, then press OK button.



#### How to set weight sensor (load)

1. Device Setup > Weight Sensor Setup
2. The way to adjust the load weight is as follow
3. First, please select the load adjust.
4. Please enter user password.
5. Please enter load weight.
6. Please locate the loaded fork approximately 30 cm from the ground level.
7. If set is completed, the screen will be switched automatically.
8. Please proceed the operation within 30 seconds.
9. Operating will be cancelled automatically if the time is elapsed longer than 30 seconds

35D9SCL051

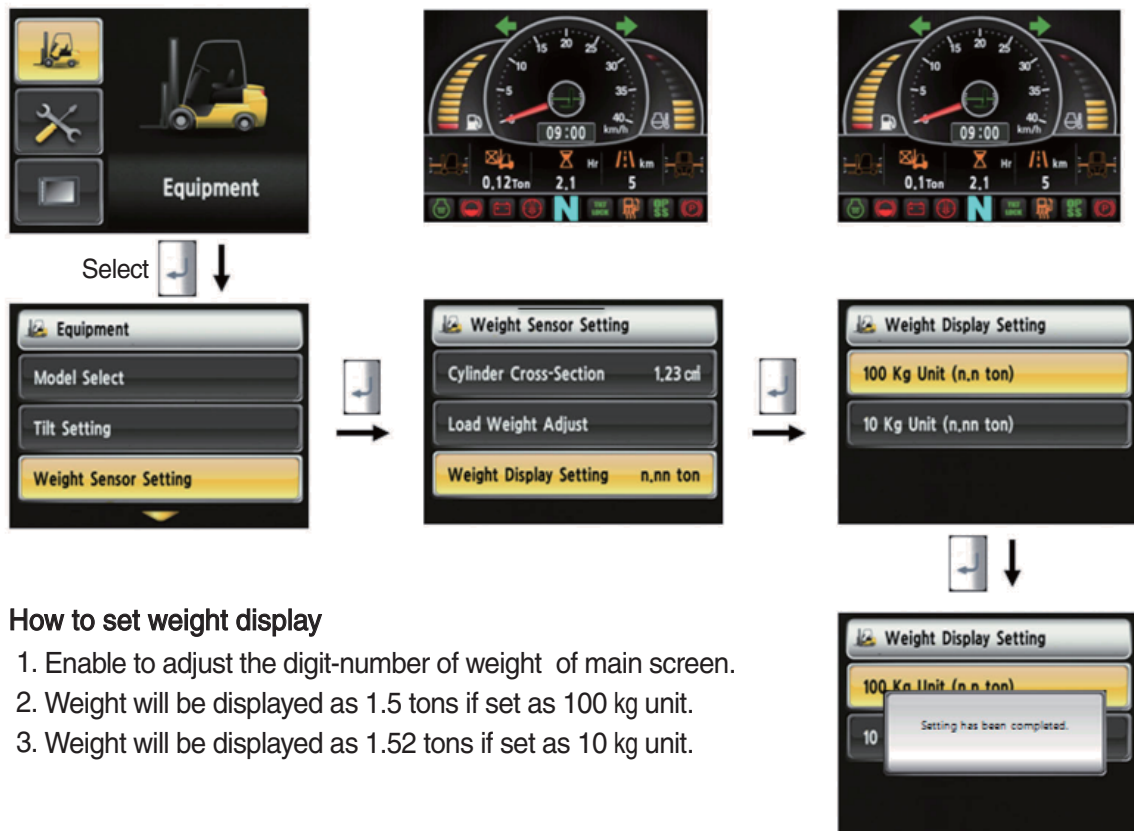


35D9SCL052

#### How to set weight sensor (initialization)

1. Initialize Menu calculates the weight using only cylinder cross sectional area and no-load setting.

## (5) Weight setup

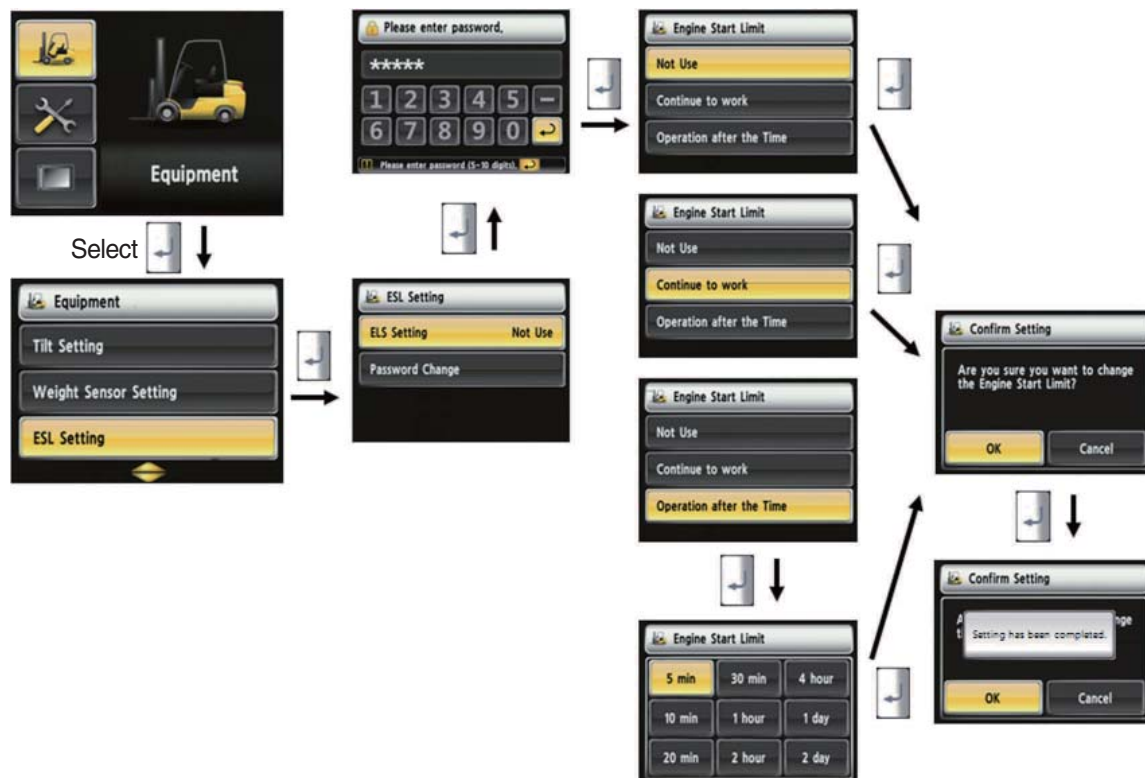


### How to set weight display

1. Enable to adjust the digit-number of weight of main screen.
2. Weight will be displayed as 1.5 tons if set as 100 kg unit.
3. Weight will be displayed as 1.52 tons if set as 10 kg unit.

35D9SCL053

## (6) Ignition control

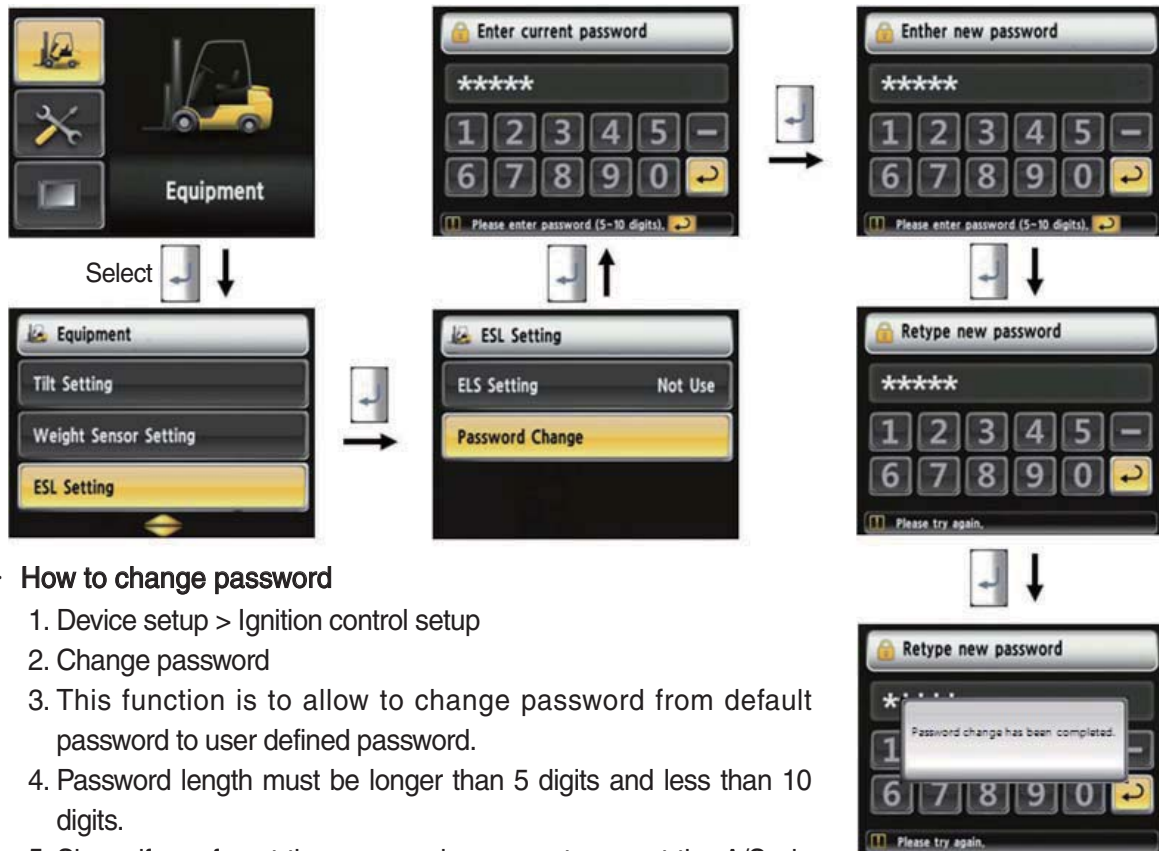


35D9SCL054

### How to set ignition control

1. Device Setup > Ignition control
2. Password request screen will be displayed if you select the menu. Default password is "00000".
3. Password length must be longer than 5 digit and less than 10 digit.
4. Next step is allowed only if password is authenticated.

## (7) Change password

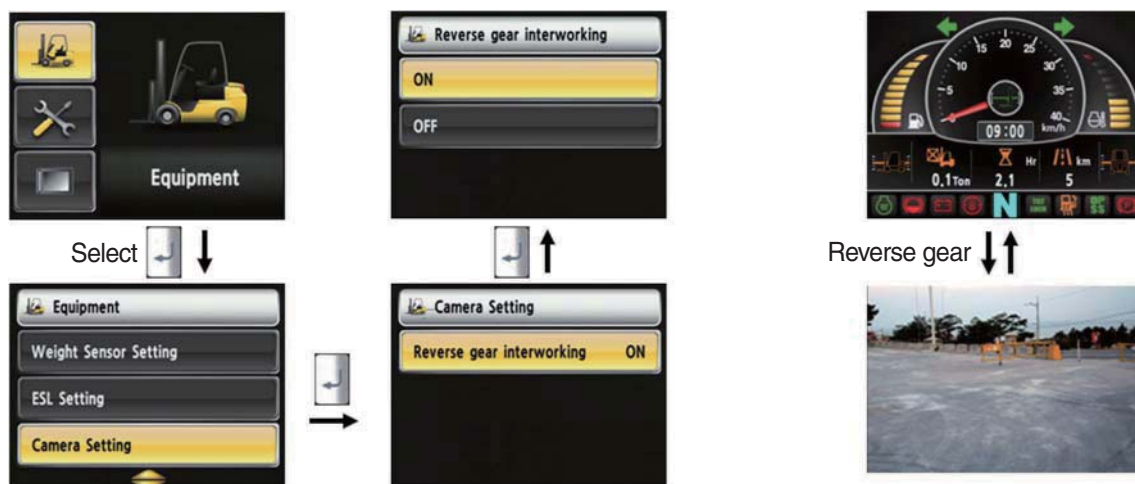


### How to change password

1. Device setup > Ignition control setup
2. Change password
3. This function is to allow to change password from default password to user defined password.
4. Password length must be longer than 5 digits and less than 10 digits.
5. Since, if you forget the password, you must request the A/S, do not forget the password.

35D9SCL055

## (8) Camera setup



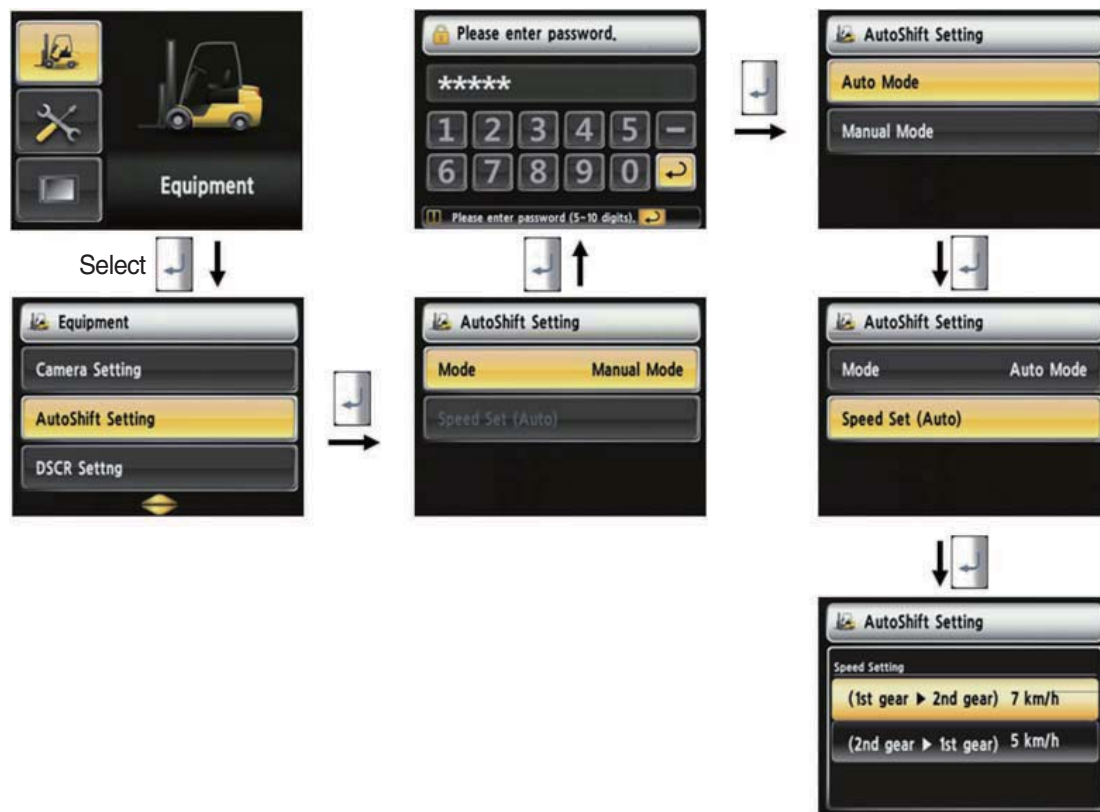
35D9SCL056

### How to set camera

1. Device setup > Camera setup
2. 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.



## (9) Auto-shift setup

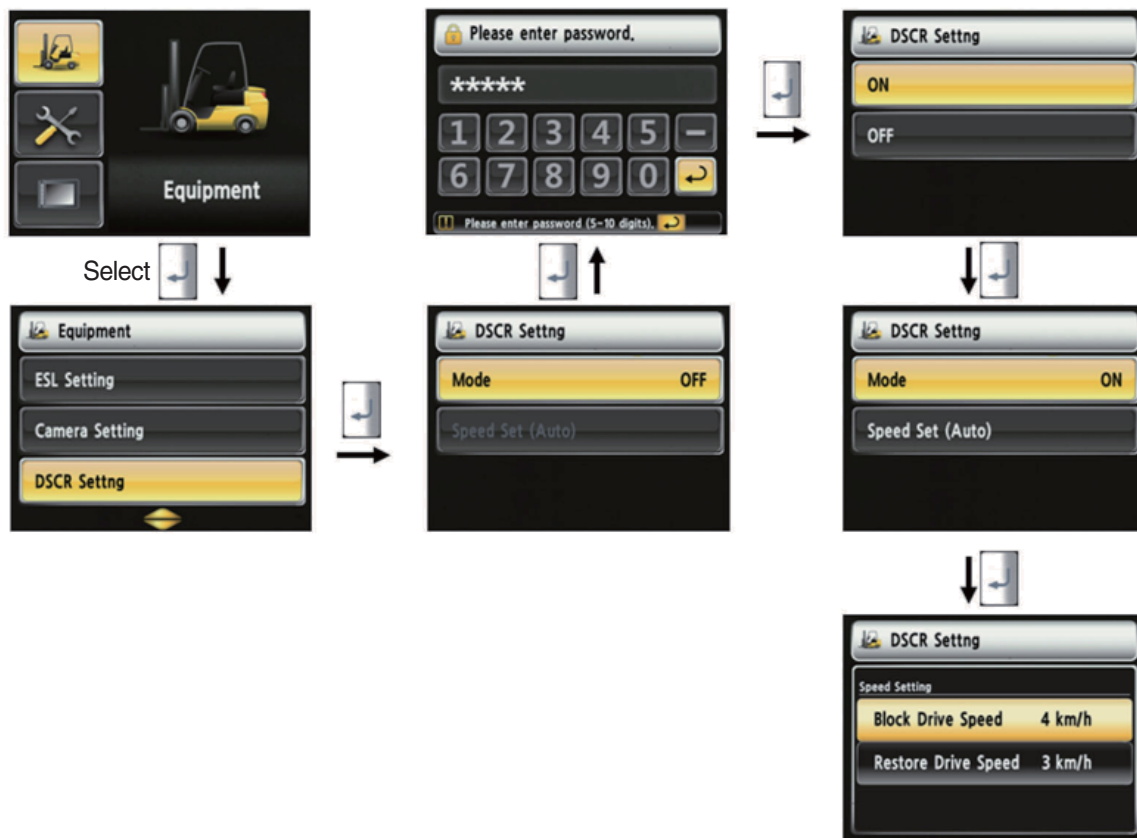


35D9SCL057

### How to set auto-shift

1. Device Setup > Auto-Shift setup
2. User password is required in order to set this function.
3. In automatic mode, the gear is switched automatically by vehicle speed.
4. Enable to set the gear switching speed.

## (10) DCSR Setup

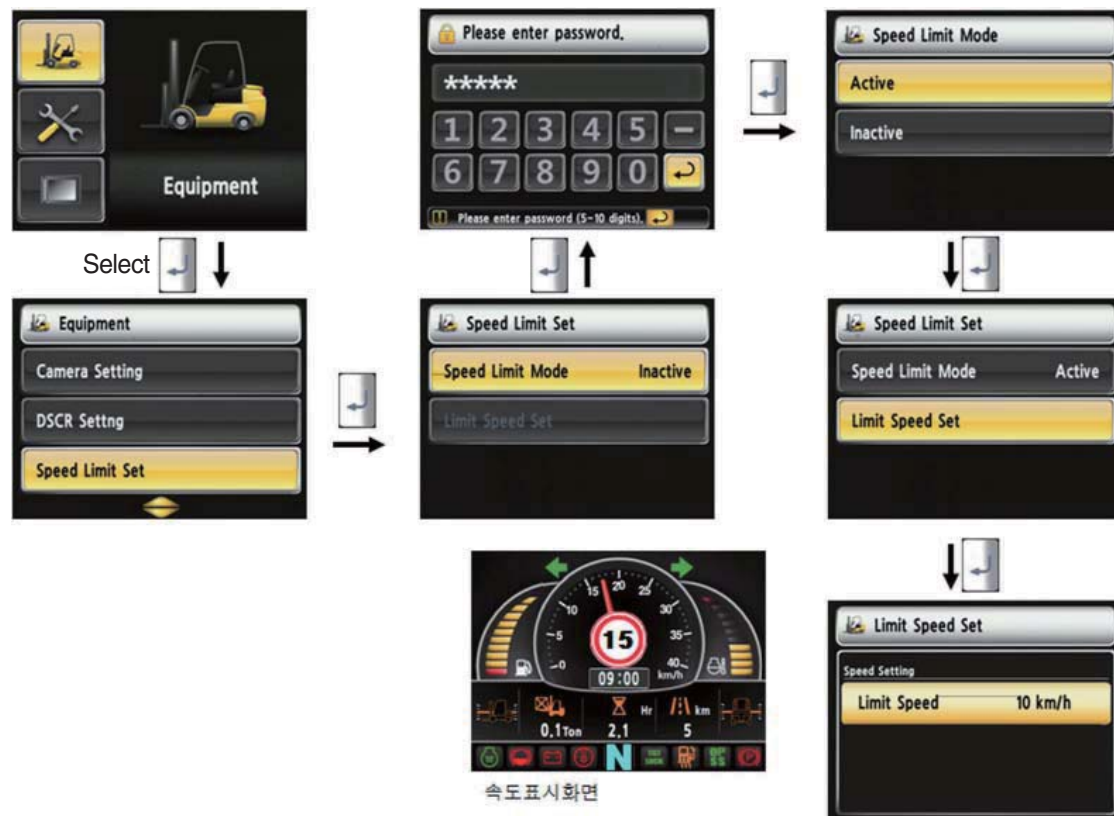


35D9SCL058

### How to set DCSR

1. Device setup > DCSR setup
  2. User password is required in order to set this function.
  3. If the setting is ON, driving will be blocked if the driving speed is over the specified speed.
  4. Driving will be continued if the driving speed is not over the specified speed.
- ※ DCSR : Direction change shock relief

## (11) Driving speed warning setup



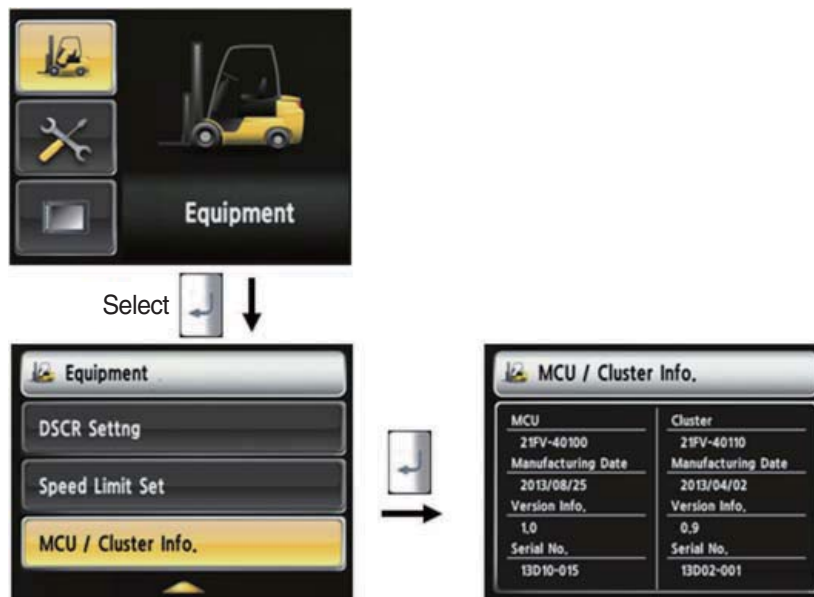
35D9SCL059

### · How to set driving speed warning

1. Device Setup > Driving speed warning
2. User password is required in order to set this function.
3. If alarm is set as enable, setting speed will be displayed on the screen, and the buzzer rings every 2 seconds.



## (12) MCU/Monitor information

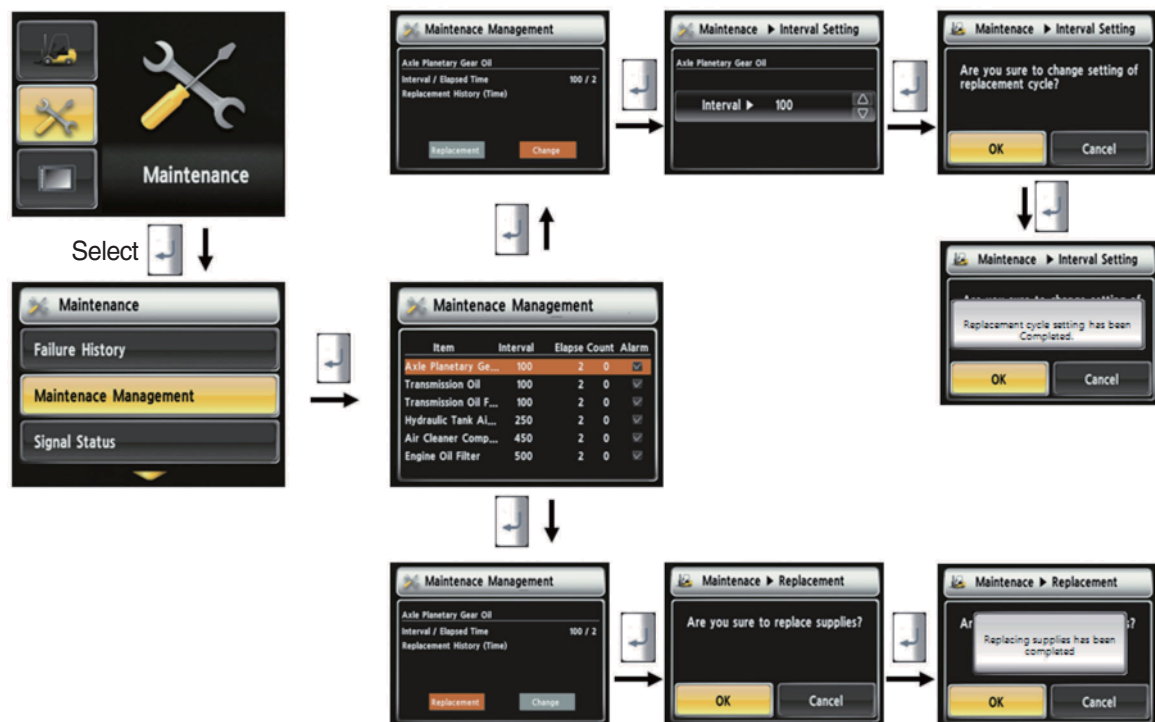


35D9SCL060

### MCU / Monitor information

1. Device Setup > MCU/Monitor information
2. MCU, manufactured date and version of monitor, and serial number will be displayed.

### (13) Expendables replacement management

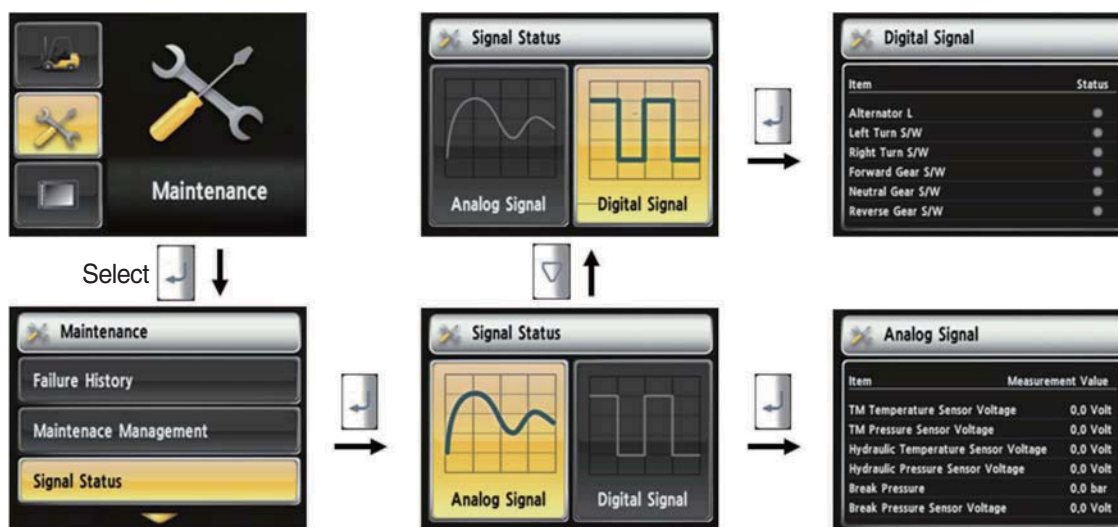


35D9SCL061

#### How to replace expendables

1. Device setup > Expendables management
2. If the expendables replacement cycle has been passed, alarm will be displayed as ON
3. Press the "Expendables replacement" if replaced the expendables.
4. Information about recent replacement (max. 9) will be displayed.
5. If you want to change the cycle, please press the "Change cycle" button.

#### (14) I/O Information



35D9SCL062

#### How to set I/O information



1. Maintenance > I/O information
2. I/O information can be classified as two signals. Analog signal can see the numeric data. Digital signal can indicate only ON/OFF.
3. User can change the cycle.

#### (15) A/S Contact Setup

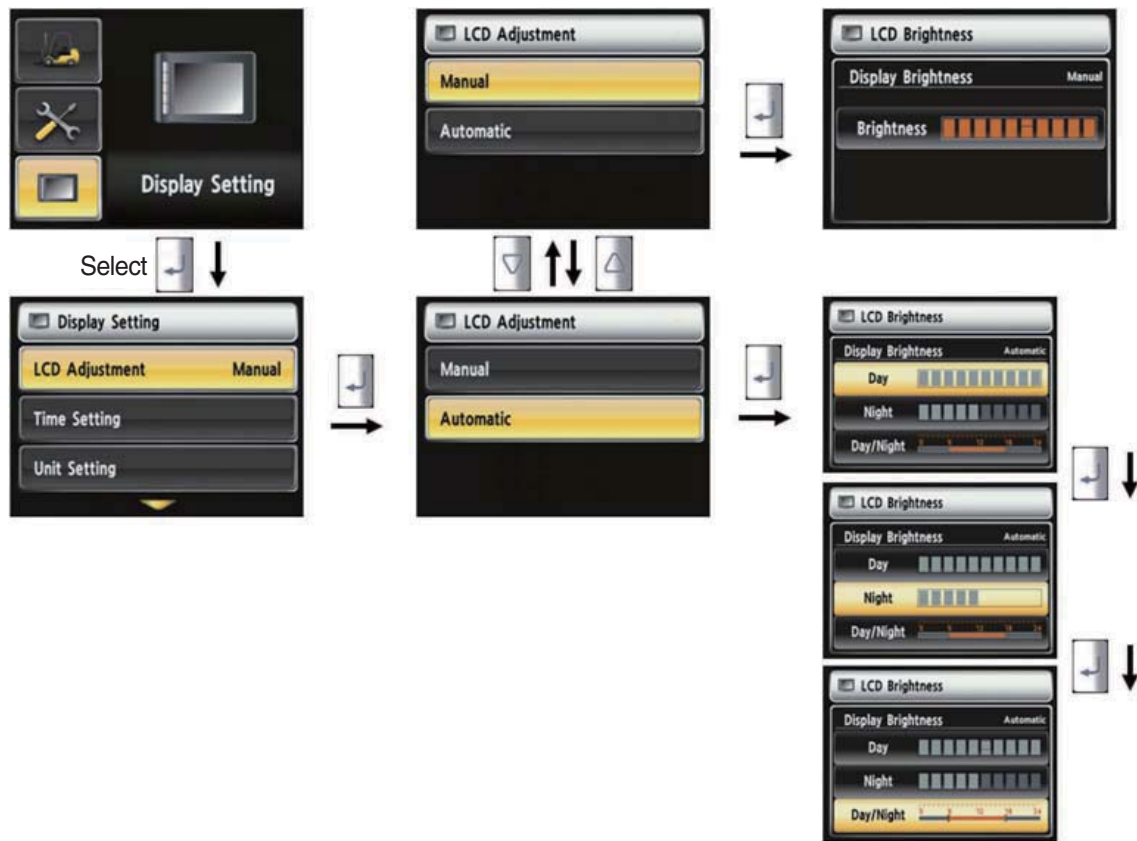


35D9SCL063

#### How to set A/S contact

1. Maintenance > A/S Contact
2. User can change the A/S contact when deliver the vehicle from factory.
3. If user moves numeric number using arrow, and press the  select button, number will be displayed on the screen.
4. If user press the  enter key, the value will be set.
5. Contact will be displayed as the modified value.

## (16) LCD brightness

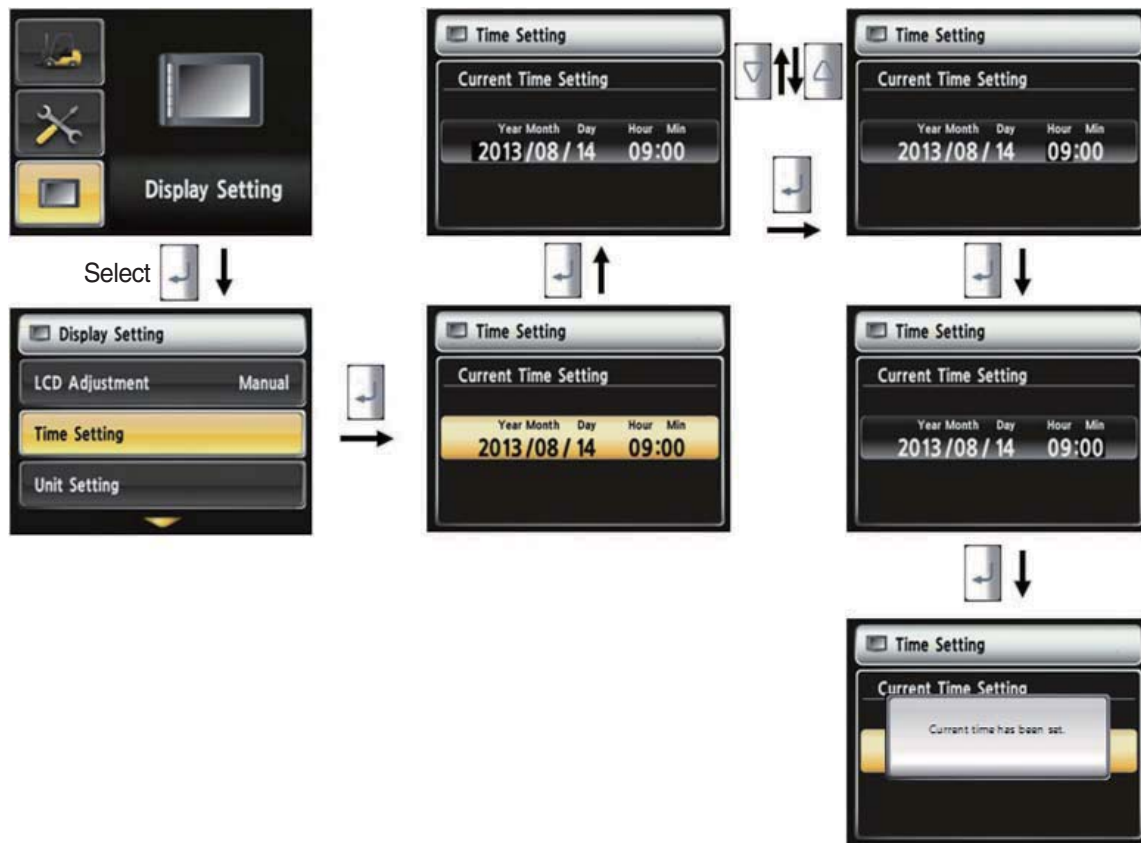


35D9SCL064

### How to set LCD brightness

1. Display > LCD brightness
2. LCD brightness has two options. Automatic mode and manual mode.
3. Manual mode always keeps the selected brightness.

### (17) Time setup

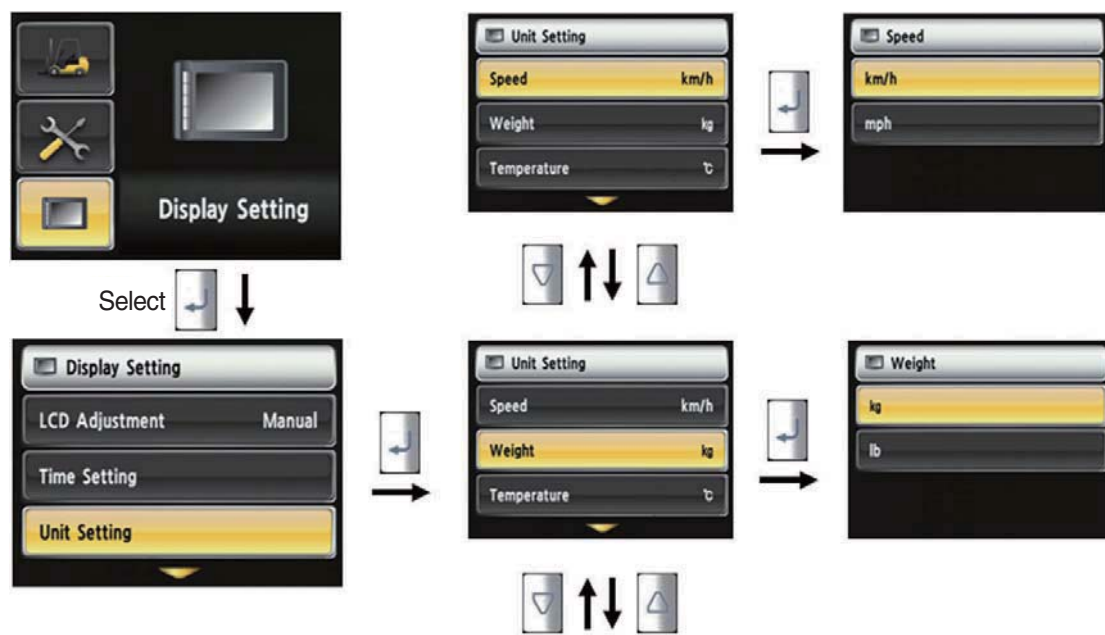


35D9SCL065

## How to set current time

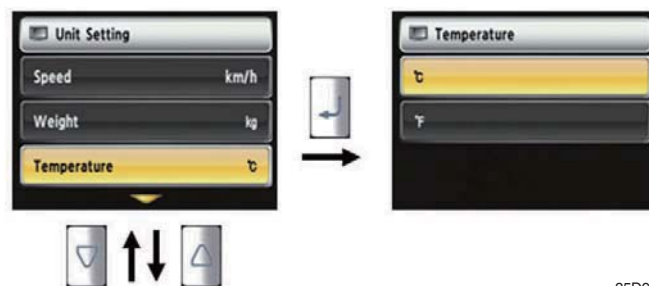
1. Display setup > Time setup
2. Enable to set the time that is displayed in main screen.
3. Set time in following order. (year > month > day > hour > minute)

## (18) Unit setup

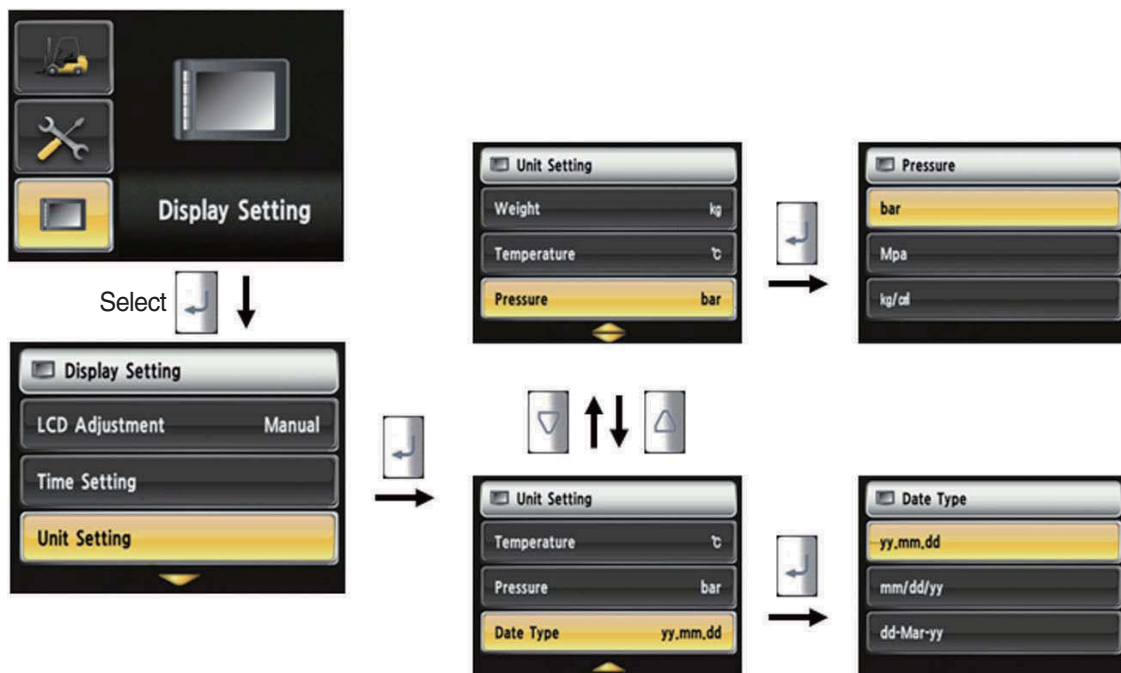


### Unit setup

1. Display setup > Unit setup
2. Enable to set all unit values that displayed on screen.
3. It is displayed by calculating as setting unit.

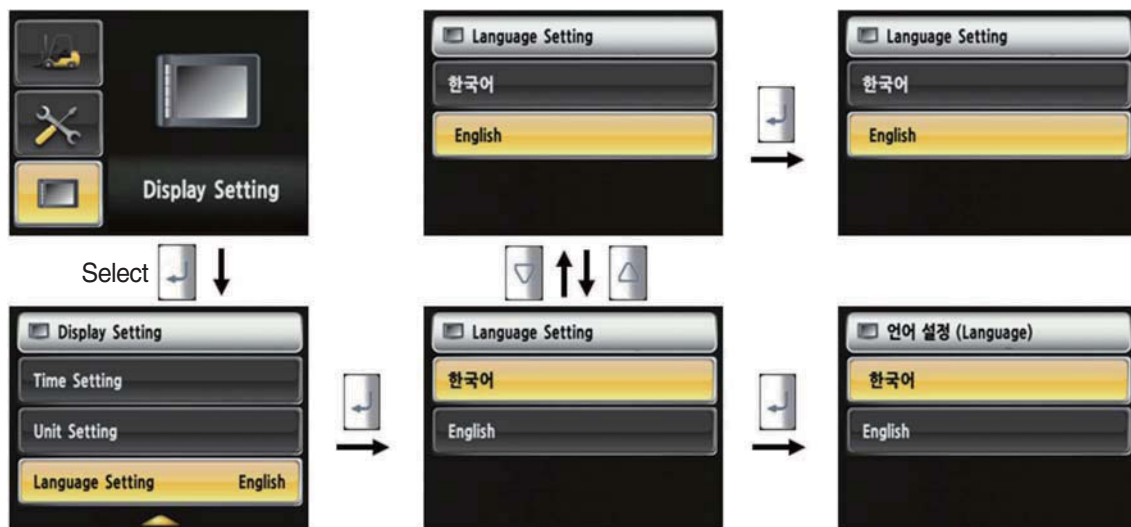


35D9SCL066



35D9SCL067

## (19) Language setup



35D9SCL068

### · How to set language

1. Display Setup> Language setup
2. Language setup changes the language that is displayed on the screen to language that user defined.
3. Currently, supported language is Korean and English.



## 8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

S/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 the engine oil refill.
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 filter.
4	Water in fuel warning		Water in fuel warning lamp	Please drain the water of water separator.
5	Engine check warning		Engine check warning lamp	Check the failure code of cluster.
6	TM oil temperature warning	Yellow 	TM oil temperature warning lamp	TM oil is over temperature condition.
7	Parking brake indicator lamp		Parking brake indicator lamp	Parking brake is operating.
8	Brake oil level warning		Brake oil level warning lamp	Brake oil level is low. Please the brake oil refill.
9	Battery charging warning		Battery charging warning lamp	Charging the battery is bad. Please check alternator and wiring.
10	Tilt lock indicator		Tilt lock indicator lamp	Auto-leveling is the operational status.
11	OPSS indicator		OPSS indicator lamp	OPPS is working. Blocking driving or operation of the device.
12	Fuel warning		Fuel warning lamp	Fuel level is low. Please the diesel oil refill.
13	Coolant temperature warning		Engine coolant temperature warning lamp	Engine coolant is over temperature condition.
14	T/M oil warning or clutch protection		T/M oil warning lamp	Clutch protection system operating or TM oil level is low. Please the T/M oil refill.
15	Cummunication error warning		Cummunication error warning lamp	Communication with MCU is fail condition. Check communication line.
16	LH Turn indicator		LH Turning pilot lamp	-
17	RH Turn indicator		RH Turning pilot lamp	-



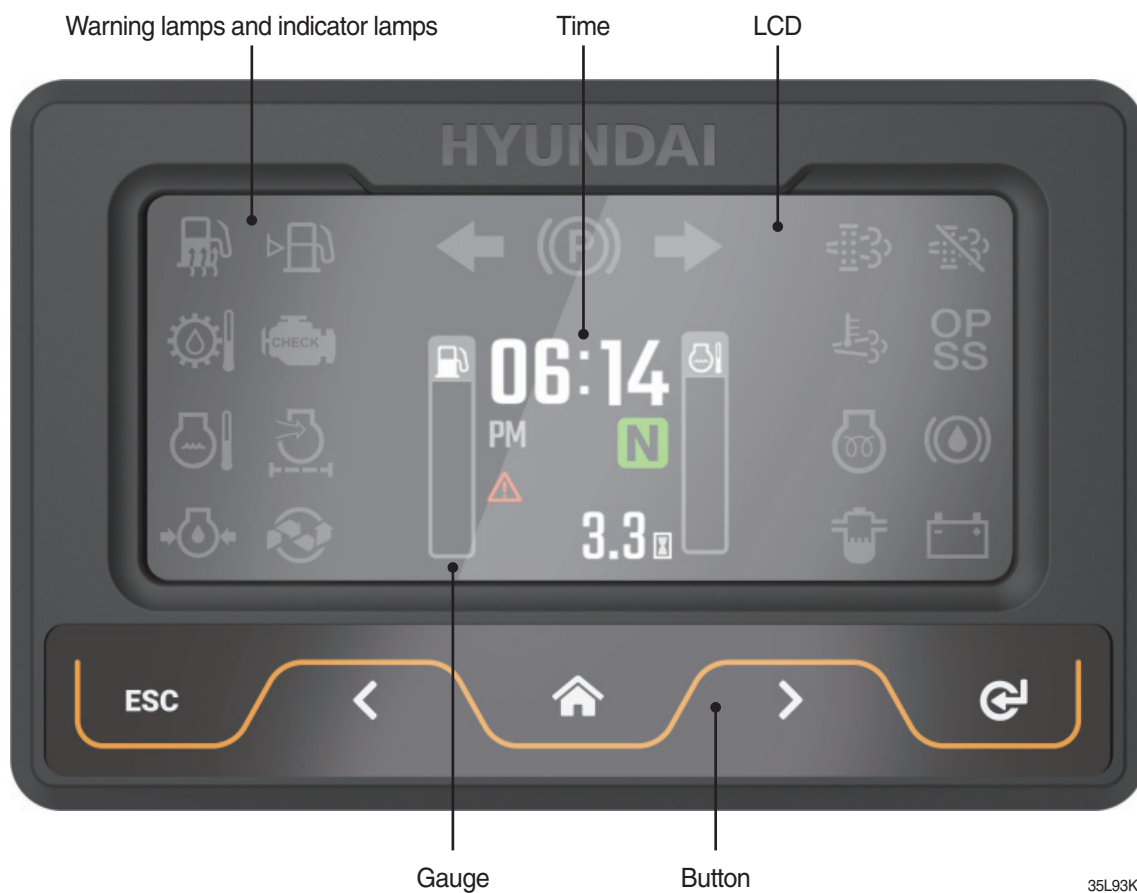
S/No.	Warning lamp types	Symbol	Warning and indicator	Causes and correction
18	Forward first gear	<b>F<sub>1</sub></b>	Forward first gear indicator lamp	-
19	Forward second gear	<b>F<sub>2</sub></b>	Forward second gear indicator lamp	-
20	Reverse first gear	<b>R<sub>1</sub></b>	Reverse first gear indicator lamp	-
21	Reverse second gear	<b>R<sub>2</sub></b>	Reverse second gear indicator lamp	-

## 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.



35L93KY03

## 2) GAUGE

### (1) Operation screen

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

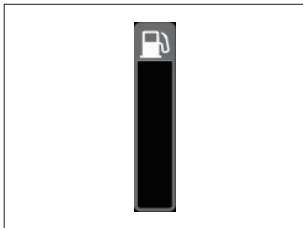


### (2) Speed meter


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

※ Speed unit can be set in the speed unit menu of display set up at page 3-37-19.

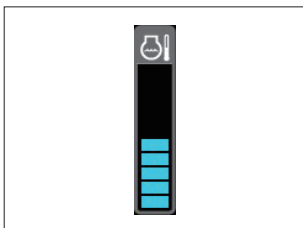
### (3) Fuel gauge




35L93KY05

- 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



35L93KY06

- 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
















35L93KY07

- It displays the usage time of the truck.

### 3) WARNING LAMPS

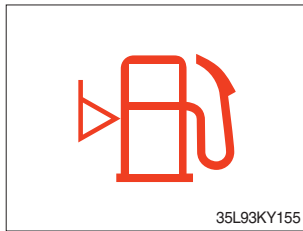


35L93KY08

No.	Warning lamp		No.	Warning lamp	
1		Fuel Level warning lamp	8		Transmission oil temperature warning lamp
2		coolant temperature warning lamp	9		Air cleaner filter warning lamp
3		Engine oil pressure warning lamp	10		DPF regeneration warning lamp (null)
4		Water in fuel warning lamp	11		DPF inhibit warning lamp (null)
5		Engine check warning lamp	12		DPF high temperature warning lamp (null)
6		Battery charge warning lamp	13		Brake oil level warning lamp
7		Communication error warning lamp			

※ Warning and indicator lamp will display only items that were set as ON, and all warning and indicator will be displayed in the left or right side of screen. And directional indicator lamp will display at the center.

#### (1) Fuel level warning lamp



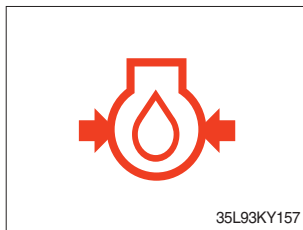
- Warning lamp will be displayed if fuel level is low.
- Please refuel immediately if the lamp is on.

#### (2) Coolant temperature warning lamp



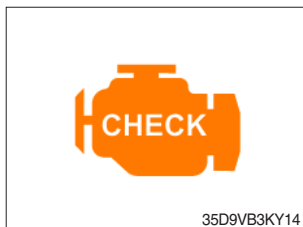
- Coolant temperature warning will lit up when temperature is over 115 °C (239 °F).
- If the warning lamp is on continuously, please inspect the coolant system.

#### (3) Engine oil pressure warning lamp



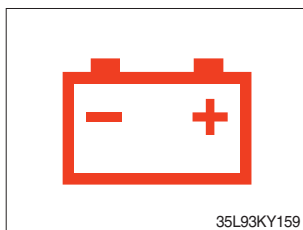
- This warning lamp will be lit up when engine oil pressure is low.
- Stop the engine immediately if the warning lamp is lit up.
- Please check the engine oil.

#### (4) Engine check warning lamp



- If the lamp lights ON, check the engine and a failure code of cluster. If you have a proper action, the lamp will turn off within 4 times of restart.
- Check the failure code of cluster.

#### (5) Battery charge warning lamp



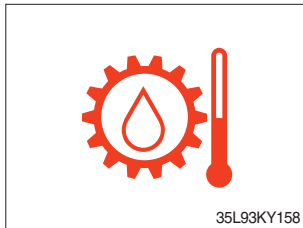
- This warning lamp is lit up when battery charging voltage is low.
- Please inspect the battery charging circuit if the warning lamp lights up.

#### (6) Communication error warning lamp



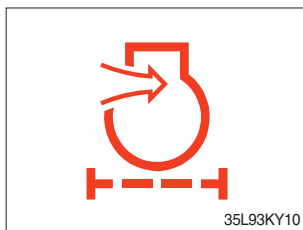
- This warning lamp will be lit up if the communication between MCU and ECU is fail.
- Please check the communication line if the warning lamp is lit up.

#### (7) Transmission oil temperature warning lamp



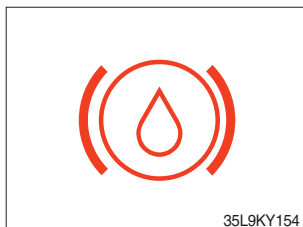
- Transmission oil temperature warning lamp will be lit up and flashing when temperature is 120 °C (248 °F) or higher.
- When this lamp lights up during operation, stop the engine and check the truck.

#### (8) Air cleaner filter warning lamp



- When the filter of the air cleaner that purifies the air supplied to the engine is clogged and a vacuum is generated inside, the switch is activated and turned on.
- If the lamp is on, check the filter and clean or replace it.

#### (9) Brake oil level warning lamp











- This warning lamp will be displayed if brake oil is low of reservoir tank.
- Please refill immediately if the lamp lights up.

#### 4) INDICATOR LAMPS



35L93KY11

No.	Indicator lamp		No.	Indicator lamp	
1		Consumable replacement indicator lamp	5		OPSS indicator lamp
2		Engine warming up indicator lamp	6		Driving indicator lamp
3		Fuel warmer indicator lamp	7		
4		Parking brake indicator lamp	8		

※ Warning and indicator lamp will display only items that were set as ON, and all warning and indicator will be displayed in the left or right side of screen. And directional indicator lamp will display at the center.

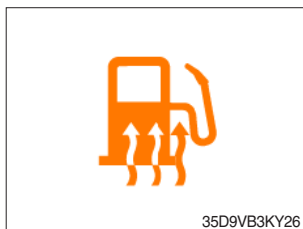


#### (1) Engine warming up indicator lamp



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

#### (2) Fuel warmer indicator lamp



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

#### (3) Consumable replacement indicator lamp



- Lights 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.

#### (4) Parking brake indicator lamp



- Lights up when parking brake is ON.

#### (5) OPSS indicator lamp



- Lights 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 0-8 for details.

## (6) Driving indicator lamp

### ① Neutral



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

### ② Forward



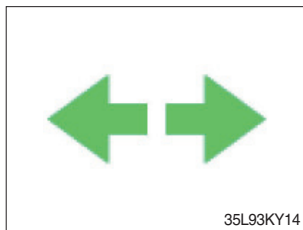
- This indicator lamp is displayed if the forward gear is selected.
- First gear will be displayed as **F<sub>1</sub>** , and second gear will be displayed as **F<sub>2</sub>** .

### ③ Reverse



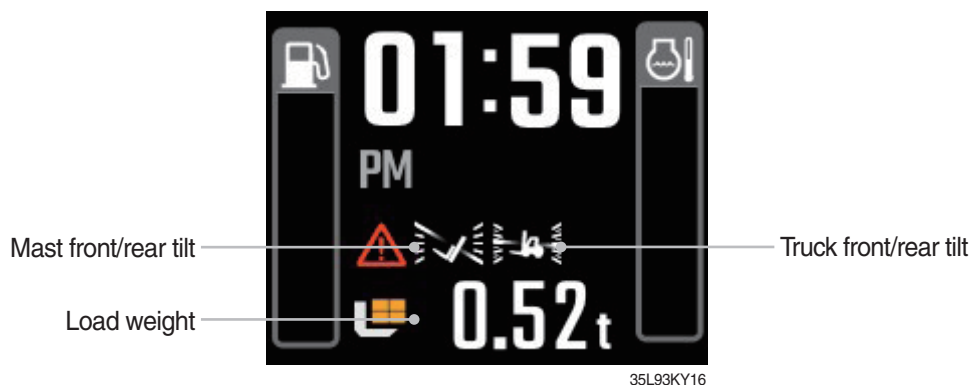
- This indicator lamp is displayed if the reverse gear is selected.

### ④ Right or left turning indicator lamp

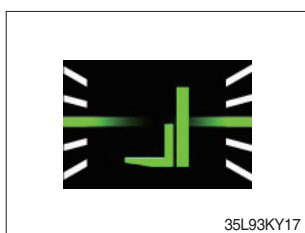


- This indicator lamp will flash if turns on the right or left turn signal.

## 5) INFORMATION DISPLAY (option)



### (1) Mast front/rear tilt



- Display the real time tilt of mast.

### (2) Truck front/rear tilt



- Display the front/rear tilt of truck in real time.
- The red warning symbol turned on condition.
  - Stop : Tilt angle is higher than  $2.3^{\circ}$
  - Driving : Tilt angle is higher than  $10.2^{\circ}$

### (3) Load weight



- Displays the weight of the cargo.
- If the weight sensor is not attached, it is dimmed

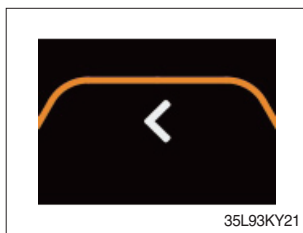
## 6) BUTTONS

### (1) Enter (select)



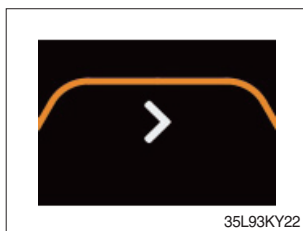
- This switch is used to enter into the menu or to select.

### (2) UP/Left



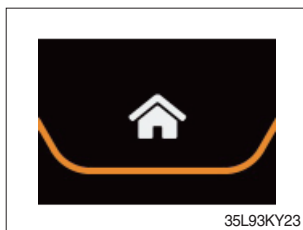
- This switch is used to move upward or leftward in menu or increase the value.

### (3) Down/Right



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

### (4) Menu or Home



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

### (5) Cancel (ESC)



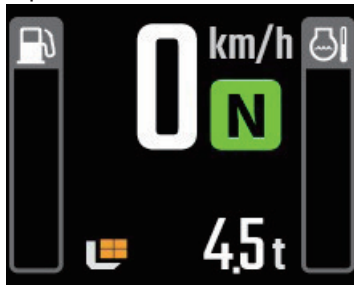
- This switch is used to cancel or move to upper menu.

## 7) MAIN MENU

### (1) Structure

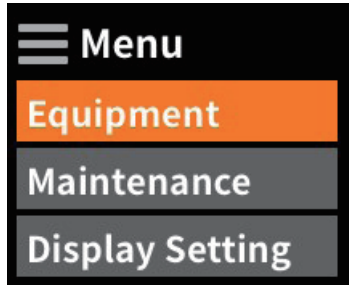
A menu consists of main menu and sub-menu.

Operation Screen



35L93KY25

Main Menu Screen

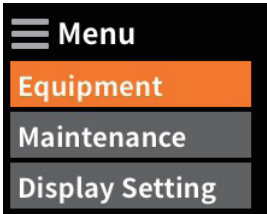
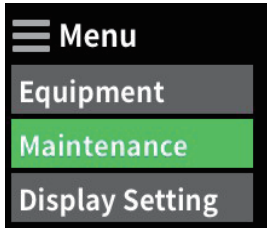
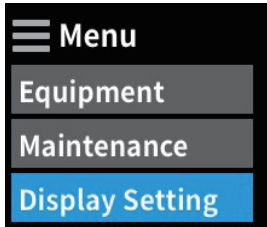


35L93KY26

Sub-Menu Screen



35L93KY27

No.	Main menu	Sub menu	Explanation
1		<ul style="list-style-type: none"> <li>Model select</li> <li>Tilt setting (option)</li> <li>Weight sensor setting (option)</li> <li>ESL setting</li> <li>DCSR setting</li> <li>HAC setting</li> <li>Vehicle max speed limit</li> <li>Clutch protection alarm</li> <li>Zero start setting</li> <li>Auto shift setting</li> <li>Information</li> </ul>	<ul style="list-style-type: none"> <li>Diesel, LPG</li> <li>Vehicle tilt Initialize</li> <li>Enter the cylinder cross section area, Adjust load weight, Weight display setup</li> <li>ESL setting, Engine start limit, Delay time</li> <li>DCSR on, Cut-off driving speed, Restore driving speed</li> <li>Maximum speed limitation</li> <li>Speed setting, Overlap time setting</li> <li>Cluster-CI information</li> </ul>
2		<ul style="list-style-type: none"> <li>Failure History</li> <li>Maintenance management</li> <li>I/O information</li> <li>User password change</li> </ul>	<ul style="list-style-type: none"> <li>Engine failure history</li> <li>Change oil and filter replacement cycle</li> <li>Analog Input, Digital input/output</li> </ul>
3		<ul style="list-style-type: none"> <li>Time Setting</li> <li>LCD brightness adjustment</li> <li>LED brightness adjustment</li> <li>Unit Setting</li> <li>Language</li> <li>ESL password change</li> </ul>	<ul style="list-style-type: none"> <li>Date, Time setting</li> <li>Speed, Weight, Temperature, Pressure, Date</li> </ul>

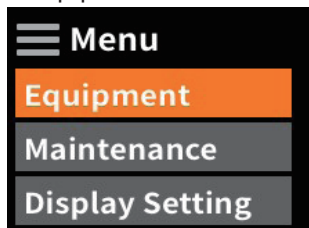
## (2) Equipment menu

### ① Model select (a required setting)

- How to check the Model Select (check under the start switch ON status)
- Selection will be canceled if pressed the cancel button.

※ **This is a required setting. Some functions may not be worked properly if you do not select the model.**

#### 1. Equipment



35L93KY26

Enter to equipment menu.

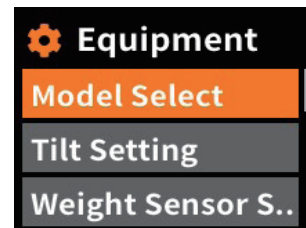
#### 2. Password



35L93KY28

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

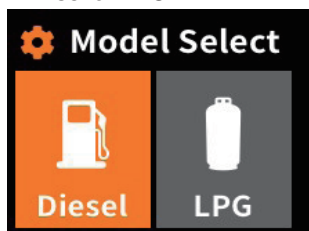
#### 3. Model select



35L93KY29

Choose model select

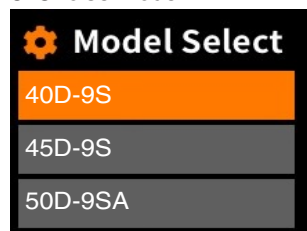
#### 4. Diesel or LPG



35D9S3KY30

Please select the fuel type.

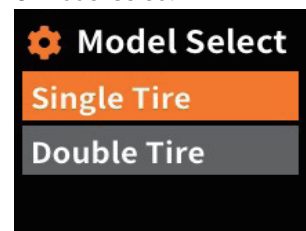
#### 5. Choose model



35D9S3KY31

Select the your model.

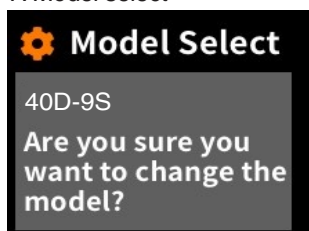
#### 6. Model select



35L93KY32

Select the your tire.

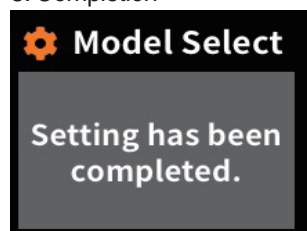
#### 7. Model select



35D9S3KY33

Change on select button.

#### 8. Completion



35L93KY34

- ※ 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.

② **Tilt setting** (option, as required setting)

How to check "Tilt reset" (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.

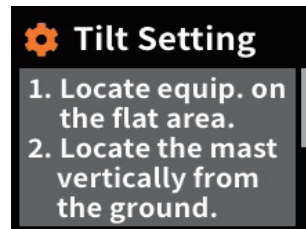
1. Tilt setting



35L93KY35

Choose tilt reset.

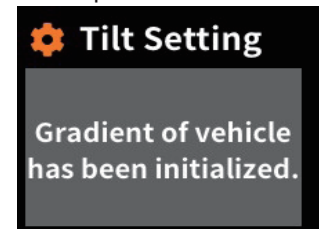
2. Instruction



35L93KY36

Follow the instruction showing in the screen.

3. Completion



35L93KY37

Setting has been completed.

a. Check functions

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

(b) Auto-leveling

- (a) Tilt mast inward or outward.
- (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) Front/rear tilt warning (red)

- Stop :  $\pm 2.3^\circ$  (1.5 tons ~ 5.0 tons)
- Driving :  $\pm 10.2^\circ$  (1.5 tons ~ 5.0 tons)

(d) Left/right tilt warning (red)

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

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



### ③ Weight sensor set up (option)

- How to check "the weight sensor set up" (Check under the start switch ON status)
- There are three settings for weight sensor. (unload, load, reset)

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

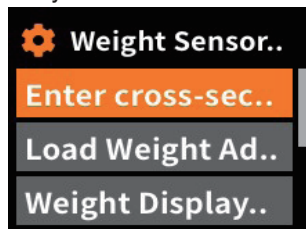
#### a. Setting cylinder cross section

##### 1. Weight sensor setting



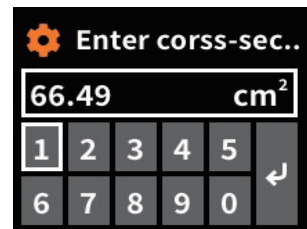
Choose weight sensor setting.

##### 2. Cylinder cross-section



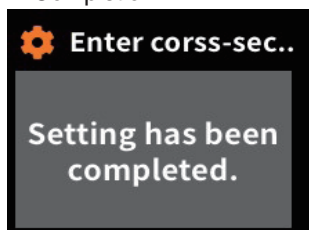
Choose Cylinder Cross-Section. If Cylinder Cross-Section is already set up, setting value is shown in initial screen.

##### 3. Value



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

##### 4. Completion



Setting has been completed.

##### ※ Cross-section value

Model	V-mast	TF-mast	TS-mast	VF-mast
35/40/45D-9S	66.97	86.59	88.36	86.59
50D-9SA	76.97	86.59	88.36	86.59

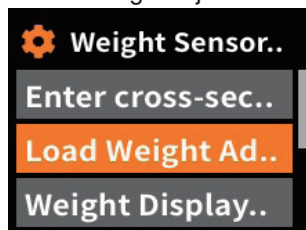
#### b. Unloaded status adjustment

##### 1. Weight sensor setting



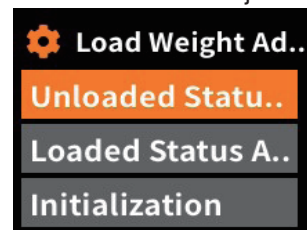
Choose weight sensor setting and enter.

##### 2. Load weight adjust



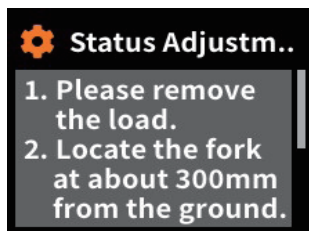
Choose load weight adjust and enter.

##### 3. Unloaded status adjustment

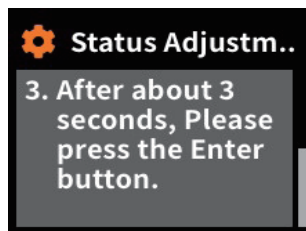


Choose unloaded status adjustment and enter.

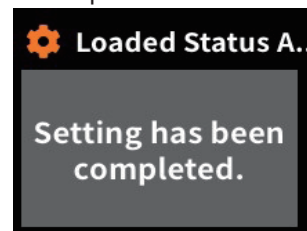
##### 4. Instruction



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



##### 5. Completion



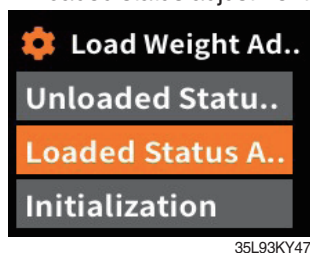
### c. Loaded status adjustment

#### 1. Weight sensor setting



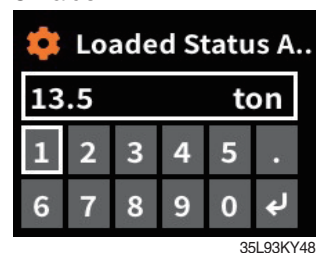
Choose weight sensor setting and enter.

#### 2. Loaded status adjustment



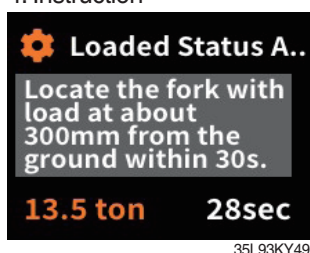
Choose loaded status adjustment and enter.

#### 3. Value



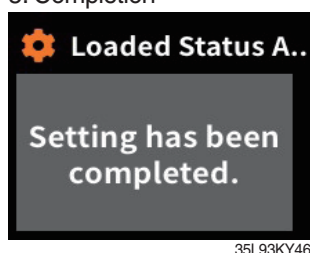
Enter load weight using up/down buttons.

#### 4. Instruction



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

#### 5. Completion



- ※ Must be prepared to lift up by locating the load on the fork before enter the weight.
- ※ MCU recognizes the weight automatically by detecting the pressure change.
- ※ Must be performed only the load lift task within 30 seconds. 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.
- ※ Re-perform the "Load/No-Load Adjustment", if the measurement malfunction is occurred.

### d. Weight sensor reset

Initialize the all values of "No-Load Adjustment" and "Local Adjustment" that were entered previously. (Cylinder cross-sectional area is not initialized.)

#### 1. Weight sensor setting



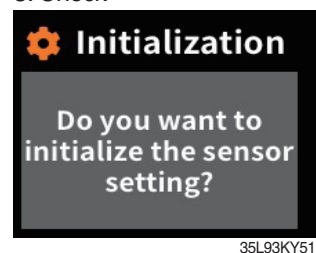
Choose weight sensor setting and enter.

#### 2. Reset



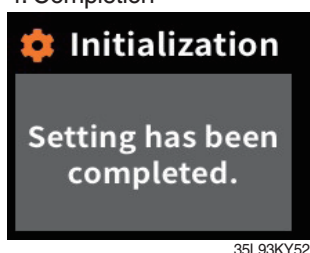
Enter to reset.

#### 3. Check



Press the enter button.

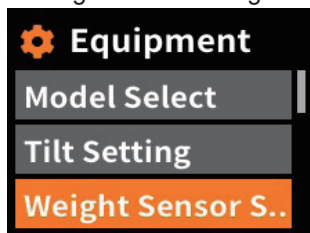
#### 4. Completion



### e. Weight display

Enable to adjust the digit-number of weight of main screen. Weight will be displayed as 0.5 tons if set as 100 kg unit. Weight will be displayed as 0.52 tons if set as 10 kg unit.

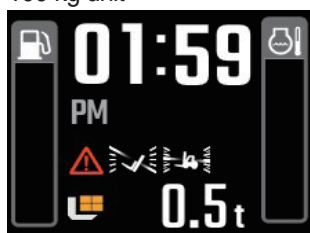
#### 1. Weight sensor setting



35L93KY38

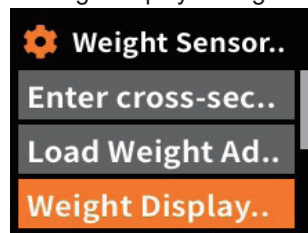
Choose weight sensor setting and enter.

100 kg unit



35L93KY55

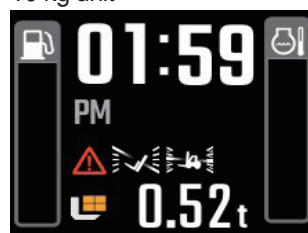
#### 2. Weight display setting



35L93KY53

Enter to weight display setting.

10 kg unit



35L93KY56

#### 3. Unit

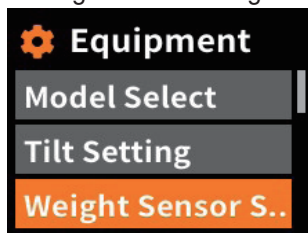


35L93KY54

Choose unit what you want to use.

### f. Overload alarm

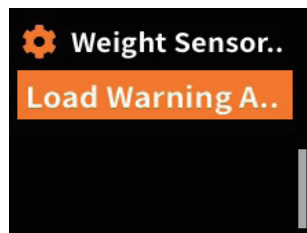
#### 1. Weight sensor setting



35L93KY38

Choose weight sensor setting and enter.

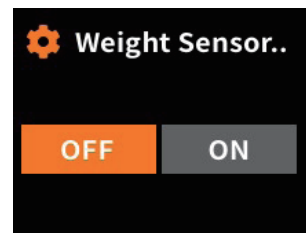
#### 2. Overload alarm



35L93KY57

Enter to overload alarm.

#### 3. Select

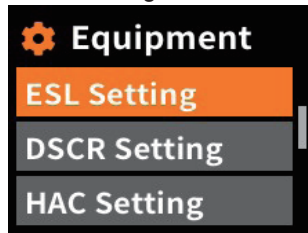


35L93KY58

Select on/off.

④ **ESL setting** (Startup control setting, standard) : **Default is "inactive"**

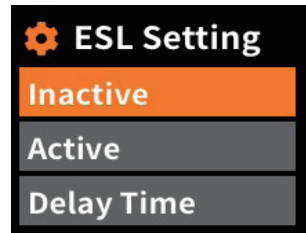
1. ESL setting



35L93KY59

Choose ESL setting and enter.

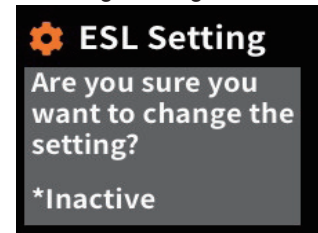
2. Inactive



35L93KY60

Choose inactive.

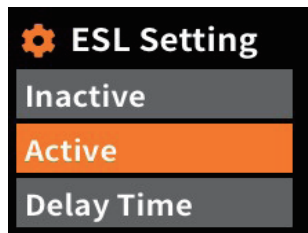
3. Change setting



35L93KY61

If you want to change setting, press enter button.

2-1. Active



35L93KY63

Choose active.

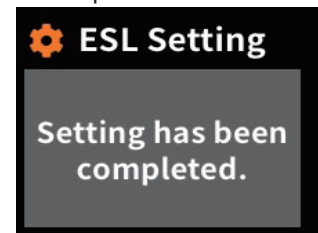
3-1. Change setting



35L93KY64

If you want to change setting, press enter button.

4. Completion



35L93KY62

**a. Check functions**

- (a) Set the active mode can be set when engine is starting.
- (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 truck 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 the truck can start within 5 min and start switch OFF.
- (e) check if the truck requests password after 5 min.

※ **Start switch ON screen (when startup control mode is ON)**



35L93KY65

## b. Delay time

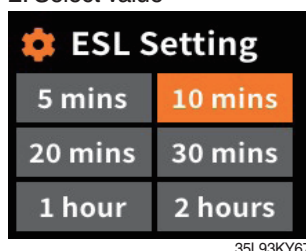
### 1. ESL setting



35L93KY66

Choose delay time.

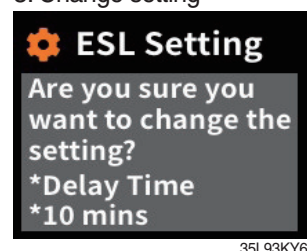
### 2. Select value



35L93KY67

Select value you want to apply.

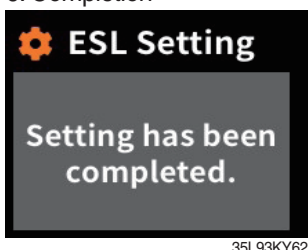
### 3. Change setting



35L93KY68

If you are sure to change ESL, press enter.

### 6. Completion



35L93KY62

## ⑤ DCSR setting (Direction Change Shock Relief)

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 car changes direction and starts to travel.

※ **Restore drive speed cannot be set over the block drive speed.**

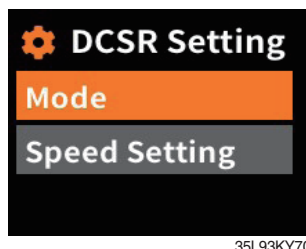
### 1. DCSR setting



35L93KY69

Choose DCSR setting and enter.

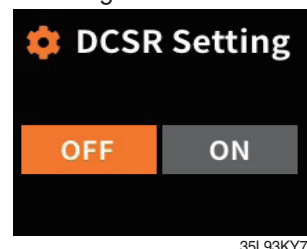
### 3. Mode



35L93KY70

Select mode.

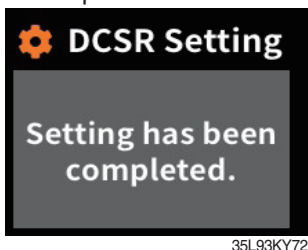
### 4. Setting



35L93KY71

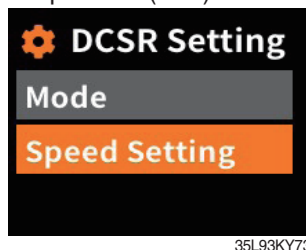
Select on/off.

### 5. Completion



35L93KY72

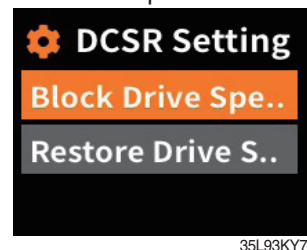
### 6. Speed set (auto)



35L93KY73

If you want to change speed set, enter speed setting.

### 6. Set road speed



35L93KY74

## ⑥ Vehicle maximum speed limit

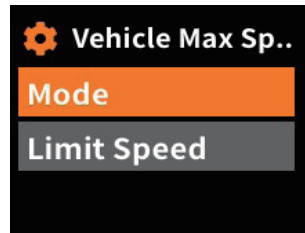
1. Vehicle max speed limit



35L93KY78

Choose vehicle max speed limit.

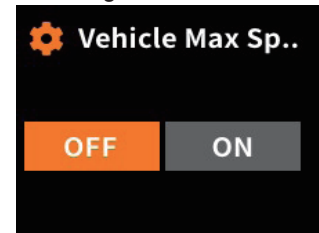
2. Mode



35L93KY79

Enter to mode function.

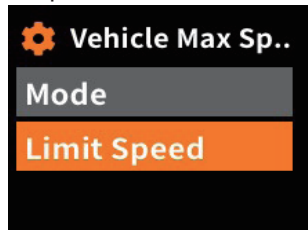
3. Setting



35L93KY80

Select on/off.

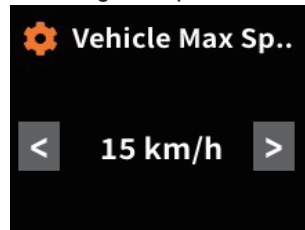
4. Speed limit



35L93KY81

Enter to limit speed menu.

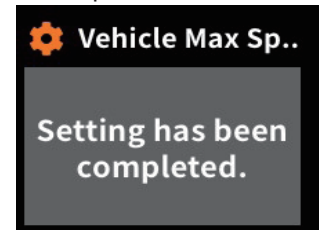
5. Setting limit speed



35L93KY82

Set limit speed.

6. Completion



35L93KY83

· Driving speed < 10 km/h



35L93KY84

· Driving speed ≥ 10 km/h

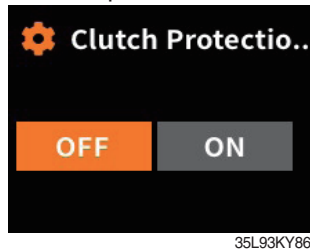


35L93KY85



## ⑦ Clutch protection alarm

1. Clutch protection alarm



Choose clutch protection alarm.

2. Setting



Select on/off.

3. Completion



## ⑧ Zero start setting

1. Zero start setting



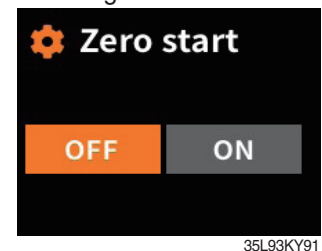
Choose zero start setting.

2. Mode



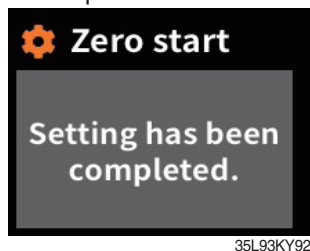
Enter to mode function.

3. Setting



Select on/off.

4. Completion



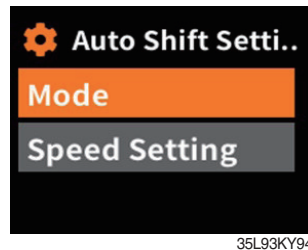
## ⑨ Auto shift setting

1. Auto shift setting



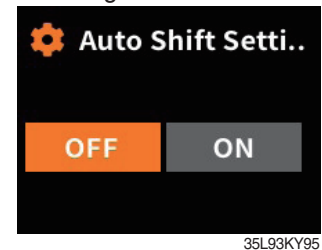
Choose auto shift setting.

2. Mode



Enter to mode function.

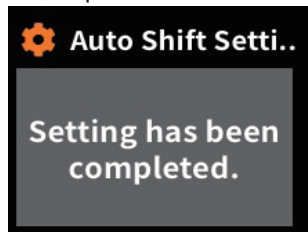
3. Setting



Select on/off.

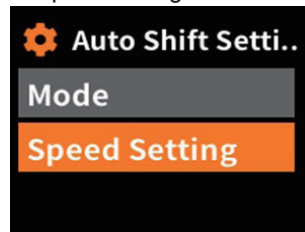


#### 4. Completion



35L93KY96

#### 5. Speed setting



35L93KY97

Enter to speed setting.

#### 6. Gear shift setting



35L93KY98

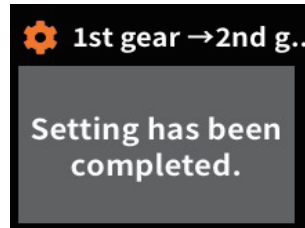
Select the desired change value.

#### 7. Speed setting



35L93KY99

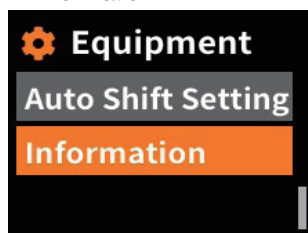
#### 8. Completion



35L93KY100

### ⑩ Cluset information

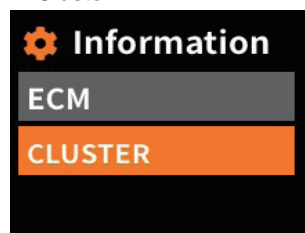
#### 1. Information



35L93KY101

Choose information.

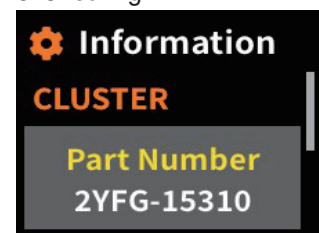
#### 2. Cluster



35L93KY102

Enter to cluster.

#### 3. Checking.



35L93KY103

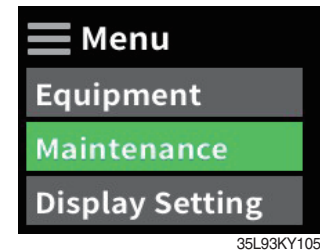


35L93KY104

(3) Maintenance

① Engine failure history

1. Maintenance



Enter to maintenance menu.

a. Check active fault

4. Active fault



Enter to active fault.

b. Check logged fault

4. Logged fault



Enter to logged fault.

c. Delete logged fault

4. Delete logged fault



Enter to delete logged fault.

2. Password



Enter the password.

3. Failure history



Choose failure history.

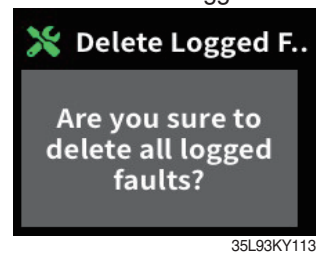
5. Check active fault



5. Check Logged fault



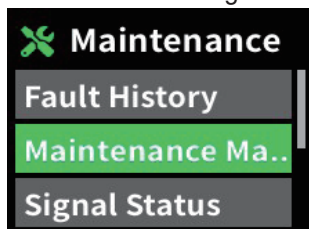
5. Check delete logged fault



## ② Maintenance management

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

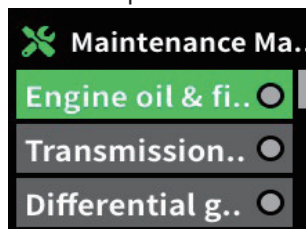
### 1. Maintenance mangement



35L93KY114

Choose maintenance management and enter.

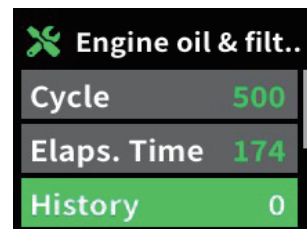
### 2. Select replacement item.



35L93KY115

Select the replace item.

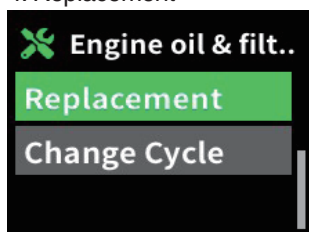
### 3. Check



35L93KY116

Select replacement using Up/Down button and press enter button.

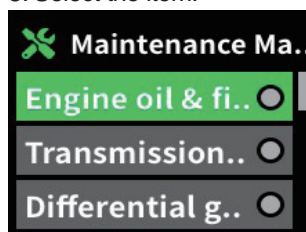
### 4. Replacement



35L93KY117

If you are sure to replace supplies, press enter button.

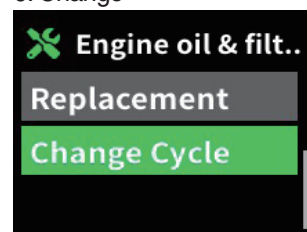
### 5. Select the item.



35L93KY118

Select the item you want to change maintenance interval.

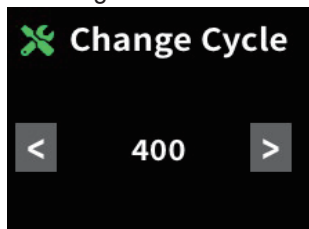
### 6. Change



35L93KY119

Select using Up/Down button and press enter button.

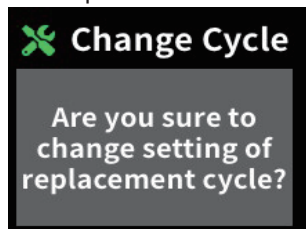
### 7. Setting



35L93KY120

Set the item value using Up/Down button and press enter button

### 8. Completion



35L93KY121

### ③ I/O information

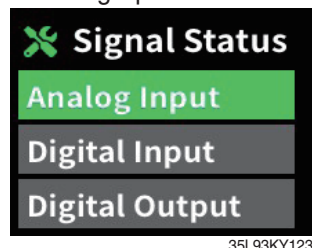
#### a. Analog input

##### 1. I/O information



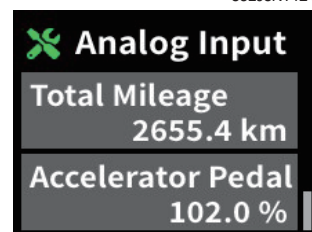
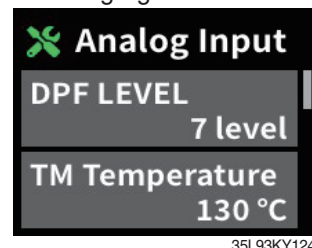
Choose I/O information.

##### 2. Analog input



Enter to analog input.

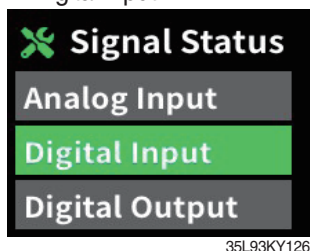
##### 3. Analog signal list



You can check the analog signal list.

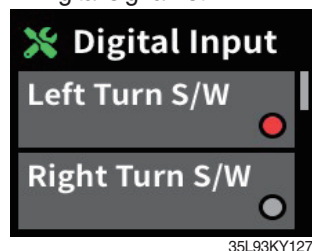
#### b. Digital input

##### 1. Digital input

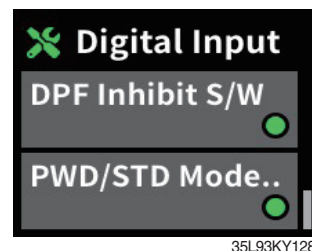


Enter to digital input.

##### 2. Digital signal list

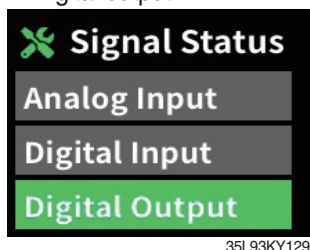


You can check the digital signal list.



#### c. Digital output

##### 1. Digital output

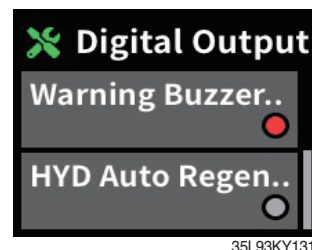


Enter to digital output.

##### 2. Digital signal list



You can check the digital signal list.

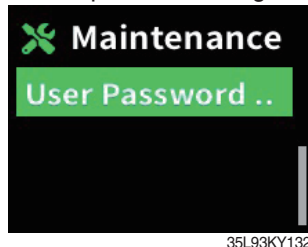


#### ④ User password change

- 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. User password change



Choose password change.

##### 2. Enter current user password



Enter current user password.

##### 3. Enter new user password

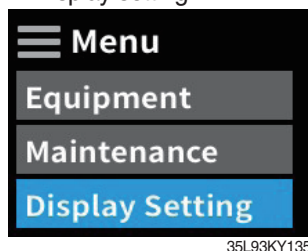


Enter new user password.

### (3) Display setting

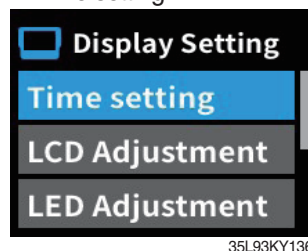
#### ① Time setting

##### 1. Display setting



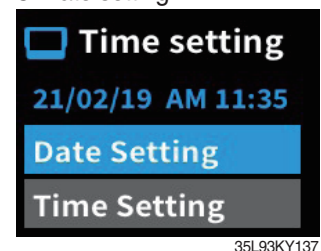
Enter to display setting.

##### 2. Time setting



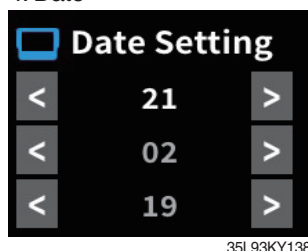
Choose time setting.

##### 3. Date setting



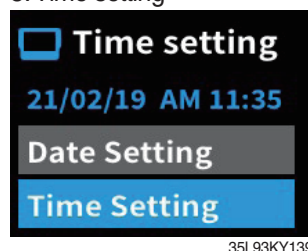
Choose date setting.

##### 4. Date



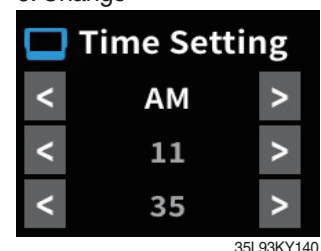
Change time using R/L button and enter button.

##### 5. Time setting



Choose time setting.

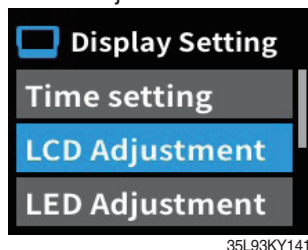
##### 6. Change



Change time using R/L button and enter button.

## ② LCD brightness adjustment

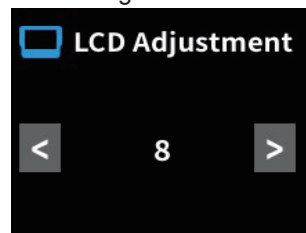
### 1. LCD adjustment



35L93KY141

Choose LCD brightness adjustment

### 2. LCD brightness

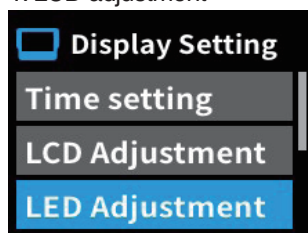


35L93KY142

You can see this display when you choose Display Brightness is automatic.

## ③ LED brightness adjustment

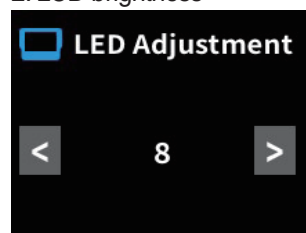
### 1. LCD adjustment



35L93KY143

Choose LED brightness adjustment

### 2. LCD brightness

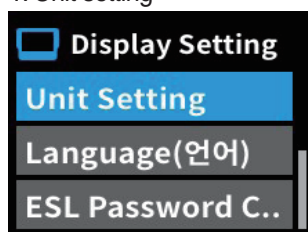


35L93KY144

You can see this LED when you choose LED Brightness is automatic.

## ④ Unit setting

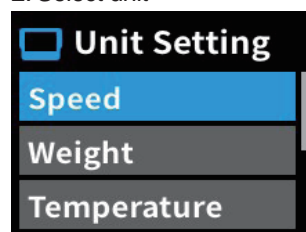
### 1. Unit setting



35L93KY145

Enter to unit setting.

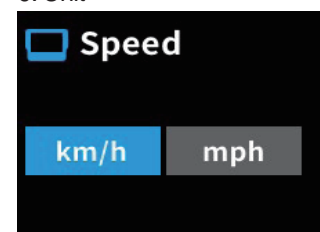
### 2. Select unit



35L93KY146

Select the unit you want to change.

### 6. Unit

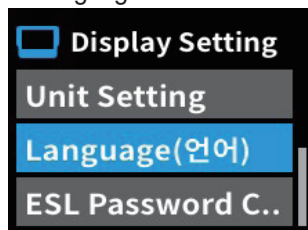


35L93KY147

Select the unit.

## ⑤ Language

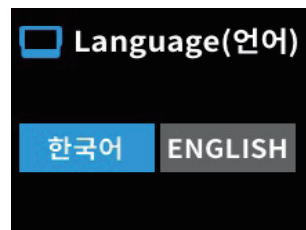
### 1. Language



35L93KY148

Enter to language.

### 2. Select



35L93KY149

Select language.

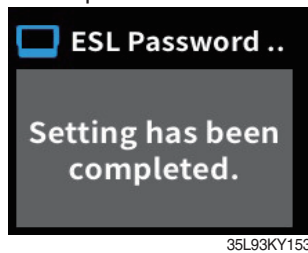
## ⑥ ESL password change

1. ESL password change



Enter ESL password change and enter.

4. Completion



2. Enter current ESL password



Enter current user password.

3. Enter new ESL password








Enter new ESL password.



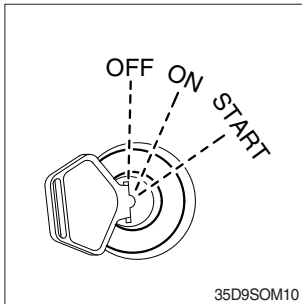
## 8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

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 the engine oil refill.
2	Engine warming up indicator		Engine warming up indicator lamp	Warming up will be started.
3	Water in fuel warning		Water in fuel warning lamp	Please drain the water of the fuel filter.
4	Engine check warning		Engine check warning lamp	Check the failure code of cluster.
5	DPF regeneration warning (null)		DPF regeneration warning lamp	DPF regeneration is required.
6	DPF inhibit warning (null)		DPF inhibit warning lamp	DPF regeneration is inhibited.
7	High Exhaust System Temperature (null)		Exhaust system high temperature waring lamp	Exhaust system high temperature will be started.
8	Fuel warmer indicator		Fuel warmer indicator lamp	Warming up the fuel.
9	TM oil temperature warning		TM oil temperature warning lamp	TM oil is over temperature condition.
10	Parking brake indicator		Parking brake indicator lamp	Parking brake is operating.
11	Battery charging warning		Battery charging warning lamp	Battery is not being charged. Please check alternator and wiring.
12	OPSS indicator		OPSS indicator lamp	Lights up when the operator leaves the seat.
13	Fuel warning		Fuel warning lamp	Fuel level is low. Please refill the diesel oil.
14	Coolant temperature warning		Engine coolant temperature warning lamp	Engine coolant is over temperature condition.
15	Air cleaner filter warning		Air cleaner filter warning lamp	When the air cleaner needs to be checed and replaced.
16	Consumables replacement indicator		Consumables replacement indicator lamp	Consumables replacement cycle has been passed.
17	Communication error warning		Communication error warning lamp	Communication with between MCU and ECU has been failed. Check communication line.

No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
18	Break oil level warning		Brake oil level warning lamp	Brake oil level is low. Please top up brake oil.
19	LH/RH turn		LH/RH turn indicator lamp	-
20	Forward 1st/2nd gear		Foward 1st/2nd gear lamp	-
21	Reverse gear		Reverse gear indicator lamp	-
22	Neutral gear		Neutral gear indicator lamp	-

## 5. OPERATING LEVER AND SWITCH

### 1) START SWITCH



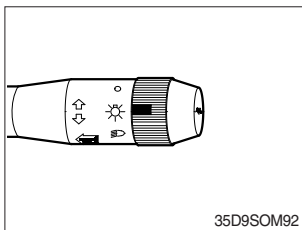
(1) There are three positions, OFF, ON and START.

※ Before starting, set gear shift lever at N, and pull parking brake.

- OFF : None of electrical circuits activates.
- ON : All the systems of machine operate.  
Preheat the system for 10~20 seconds.
- START : Use when starting the engine.  
Release key immediately after starting.

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

### 2) CLEARANCE LAMP SWITCH



(1) Clearance lamp lights up

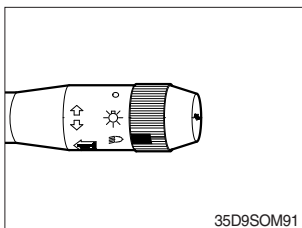
Twist the handle beneath steering wheel and make the notch align to ☀ .

(2) Clearance lamp goes out

Twist the handle just opposite until the notch being aligned to ○ .

※ When clearance lamp light up, then the Clearance lamp and all panel lamps light up too.

### 3) HEAD LAMP SWITCH



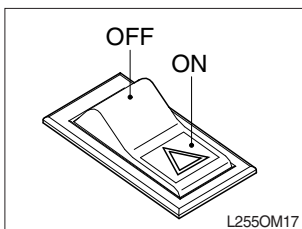
(1) Head lamp lights up

Twist the handle beneath steering wheel and make the notch align to ☀ .

(2) Small lamp goes out

Twist the handle just the opposite direction described as above.

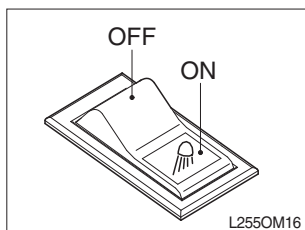
### 4) HAZARD LAMP SWITCH



(1) Use for parking, or loading machine.

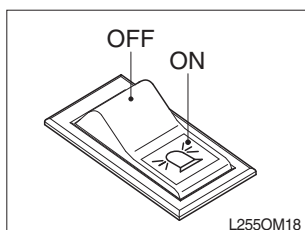
※ If the switch is left ON for a long time, the battery may be discharged.

## 5) REAR WORK LAMP SWITCH (option)



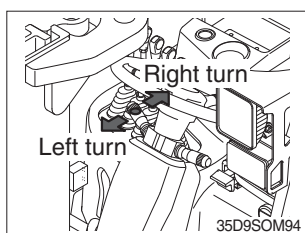
- (1) This switch is used to operate work lamps.  
Press this switch to turn on work lamps.

## 6) BEACON SWITCH (option)



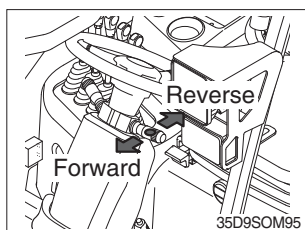
- (1) This switch turn ON the rotary light.

## 7) TURN SIGNAL SWITCH



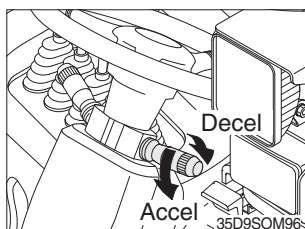
- (1) This lever makes the turn signal lamp flash.
- ① Turning LEFT : Push lever forward
  - ② Turning RIGHT : Pull lever backward
- ※ **When the steering wheel is returned to straight, the turn signal is not cancelled. Return the lever to central position by hand.**

## 8) DIRECTION CONTROL LEVER



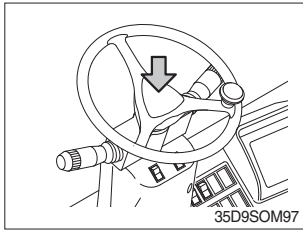
- (1) Push lever for forward driving.
- (2) Pull lever for reverse driving.
- ※ **When changing direction or speed, there can be some sound but it's nothing to do with performance.**

## 9) GEAR SELECTOR LEVER



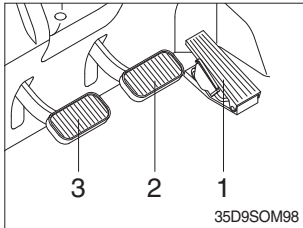
- (1) This lever is used for gear selection, forward 2 stage and reverse 2 stage.
- (2) If turning the gear selector lever forward, the machine increases the speed, but if turning it backward, the machine reduces the speed.

## 10) HORN BUTTON



- (1) The horn sounds when the button is depressed.

## 11) PEDALS



- (1) 1 : Accelerator pedal

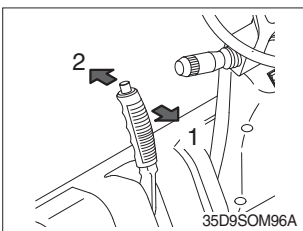
2 : Brake pedal

3 : Inching pedal

※ The 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.

## 12) PARKING BRAKE LEVER



- (1) Position 1

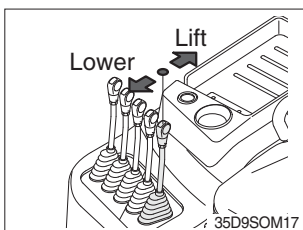
Parking brake is applied and front wheel is locked.

- (2) Position 2

Parking brake is released.

※ Before moving the truck be sure the parking brake is released.

## 13) LIFT LEVER



- (1) LIFT

PULL the lever BACK to LIFT the load.

- (2) LOWER

PUSH the lever FORWARD to LOWER the load.

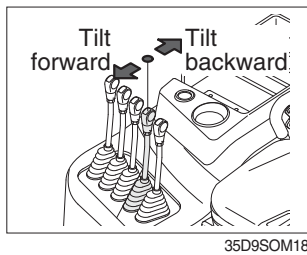
- (3) HOLDING

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

※ Lifting speed is controlled by accelerator pedal.

Lowering speed is controlled by lever only.

#### 14) TILT LEVER



##### (1) TILT FORWARD

PUSH the lever FORWARD to tilt mast FORWARD.

##### (2) TILT BACK

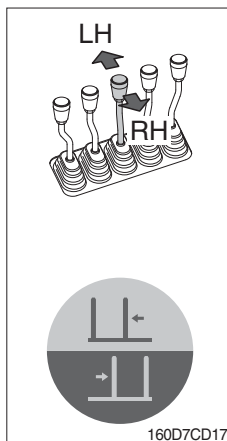
PULL the lever BACK to tilt mast BACKWARD.

##### (3) HOLDING

When the lever is released, tilting action stops.

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

#### 15) LEVER FOR SIDE SHIFT



##### (1) LH MOVEMENT

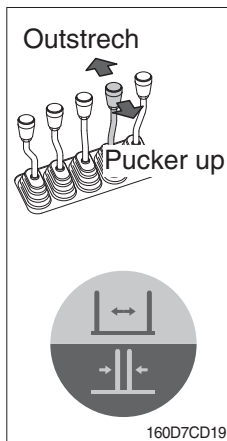
Push the lever forward to move the left hand for the side shift.

##### (2) RH MOVEMENT

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

#### 16) LEVER FOR SIDE SHIFT WITH FORK POSITIONER

##### (1) Fork positioner (synchronizer type)



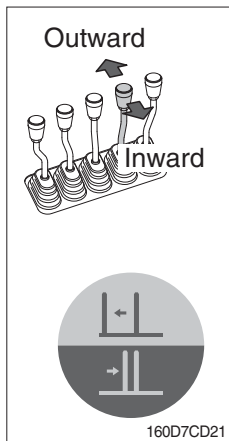
##### ① OUTSTRECH THE FORKS

Push the lever forward to outstretch simultaneously outward of the both forks.

##### ② PUCKER UP THE FORKS

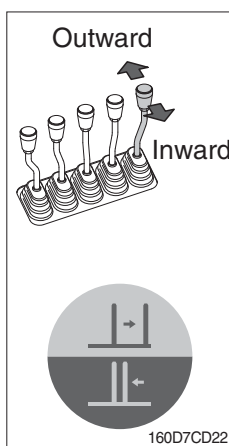
Pull the lever backward to pucker up simultaneously inward of the both forks.

## (2) Fork positioner (independent type)



### ① LH FORK MOVEMENT

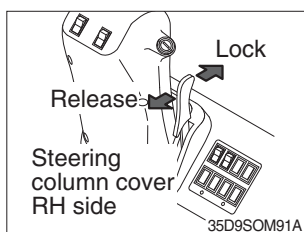
- Push the lever forward to move outward for the LH fork.
- Pull the lever backward to move inward for the LH fork.



### ② RH FORK MOVEMENT

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

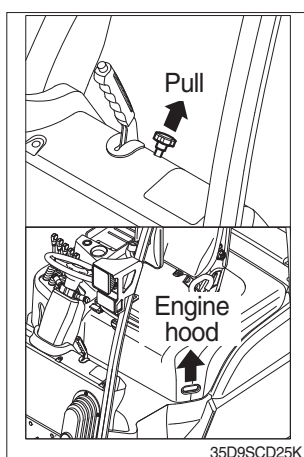
## 17) STEERING WHEEL LOCK KNOB



- (1) The angle of the steering shell can be adjusted forward and backward.

- ① **Release** : Pull the knob backward.
- ② **Lock** : Release the knob.

## 18) ENGINE HOOD



- (1) Pull the knob on the dashboard and raise the engine hood to open it.
- (2) Inspection and maintenance can then be carried out easily.

## 19) MONITOR (OPTION)

It is possible to adjust the angle to the up, down, left, or right.

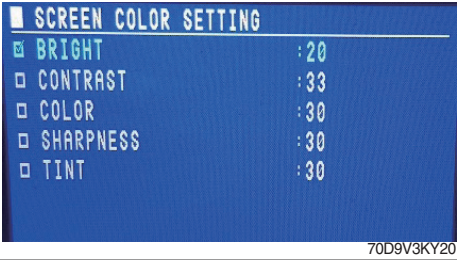
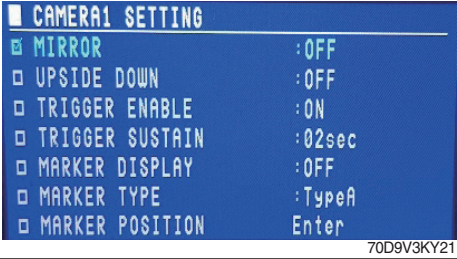
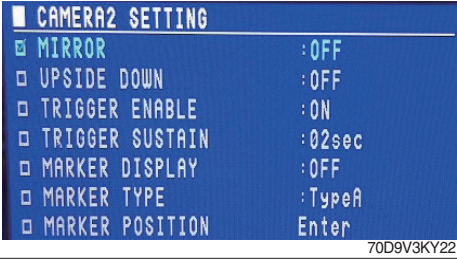
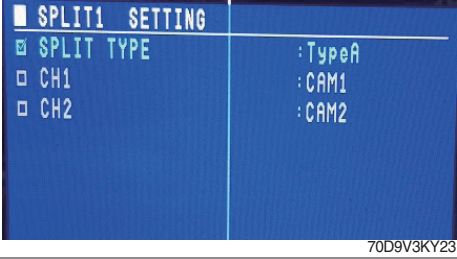
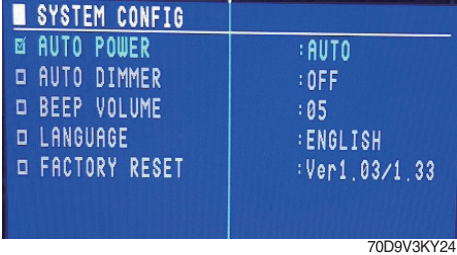


70D9V3KY14

No.	Symbol	Name	Description
1		Power	<ul style="list-style-type: none"><li>- Alarm off or off release</li><li>- Display on or off</li><li>- Menu save and exit</li></ul>
2		Select	<ul style="list-style-type: none"><li>- Parking line on or off</li><li>- Select the menu</li><li>- Adjust the menu</li></ul>
3		Menu	<ul style="list-style-type: none"><li>- Enter and change the menu</li><li>- Adjust the parking line (press the button for 2 seconds.)</li></ul>
4		Up	<ul style="list-style-type: none"><li>- Return the previous display</li><li>- Maximum volume or alarm off release (press the button for long time)</li><li>- Move or adjust upward</li></ul>
5		Down	<ul style="list-style-type: none"><li>- Move the next display</li><li>- Mute volume (press the button for long time)</li><li>- Move or adjust downward</li></ul>



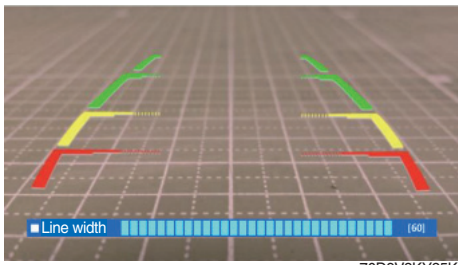
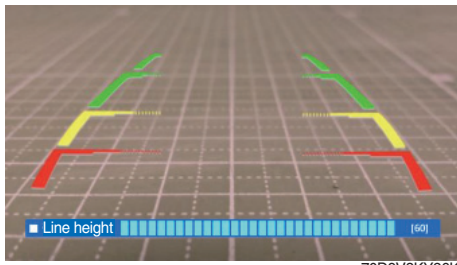
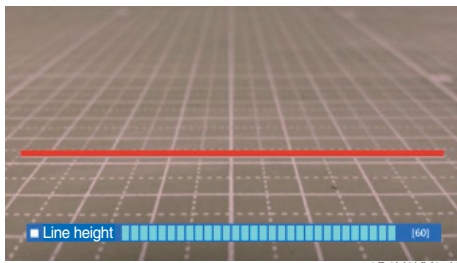
## (1) Menu function

No.	Menu	Display	Setting value
1	Screen color setting	 <p>70D9V3KY20</p>	<ul style="list-style-type: none"> <li>- Bright : 0 ~ 60 (1 step)</li> <li>- Contrast : 0 ~ 60 (1 step)</li> <li>- Color : 0 ~ 60 (1 step)</li> <li>- Sharpness : 0 ~ 60 (1 step)</li> <li>- Tint : 0 ~ 60 (1 step)</li> </ul>
2	Camera 1 setting	 <p>70D9V3KY21</p>	<ul style="list-style-type: none"> <li>- Mirror : on or off</li> <li>- Upside down : on or off</li> <li>- Trigger enable : on or off</li> <li>- Trigger sustain : 1 ~ 20 seconds (1 second)</li> <li>- Marker display : on or off</li> <li>- Marker type : type A or B</li> <li>- Marker position : enter</li> </ul>
3	Camera 2 setting	 <p>70D9V3KY22</p>	<ul style="list-style-type: none"> <li>- Mirror : on or off</li> <li>- Upside down : on or off</li> <li>- Trigger enable : on or off</li> <li>- Trigger sustain : 1 ~ 20 seconds (1 second)</li> <li>- Marker display : on or off</li> <li>- Marker type : type A or B</li> <li>- Marker position : enter</li> </ul>
4	Split 1 setting	 <p>70D9V3KY23</p>	<ul style="list-style-type: none"> <li>- Split type : type A or B</li> <li>- CH 1 : cam 1 or 2</li> <li>- CH 2 : cam 1 or 2</li> </ul>
5	System config	 <p>70D9V3KY24</p>	<ul style="list-style-type: none"> <li>- Auto power : on, off or auto</li> <li>- Auto dimmer : on or off</li> <li>- Beep volume : 0 ~ 10 (1 step)</li> <li>- Language : english or korean</li> <li>- Factory reset : Ver 1.xx</li> </ul>

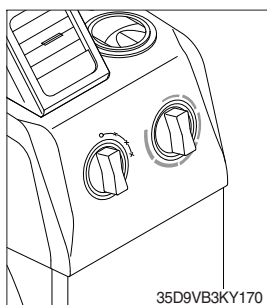
## (2) Parking line adjusting

Press the menu button for 2 seconds or enter the marker position in the camera 1 setting menu or the camera 2 setting menu.

※ To set the marker position, the marker display should be ON in the camera 1 setting menu or the camera 2 setting menu.

No.	Type	Display	
1	A	 70D9V3KY25K	 70D9V3KY26K
2	B	 70D9V3KY27K	

## 20) HEATER CONTROLLER (OPTION)



- (1) The left knob turns the system ON/OFF and controls fan speed to 3 steps.
- (2) The right knob controls the air temperature of the heater.