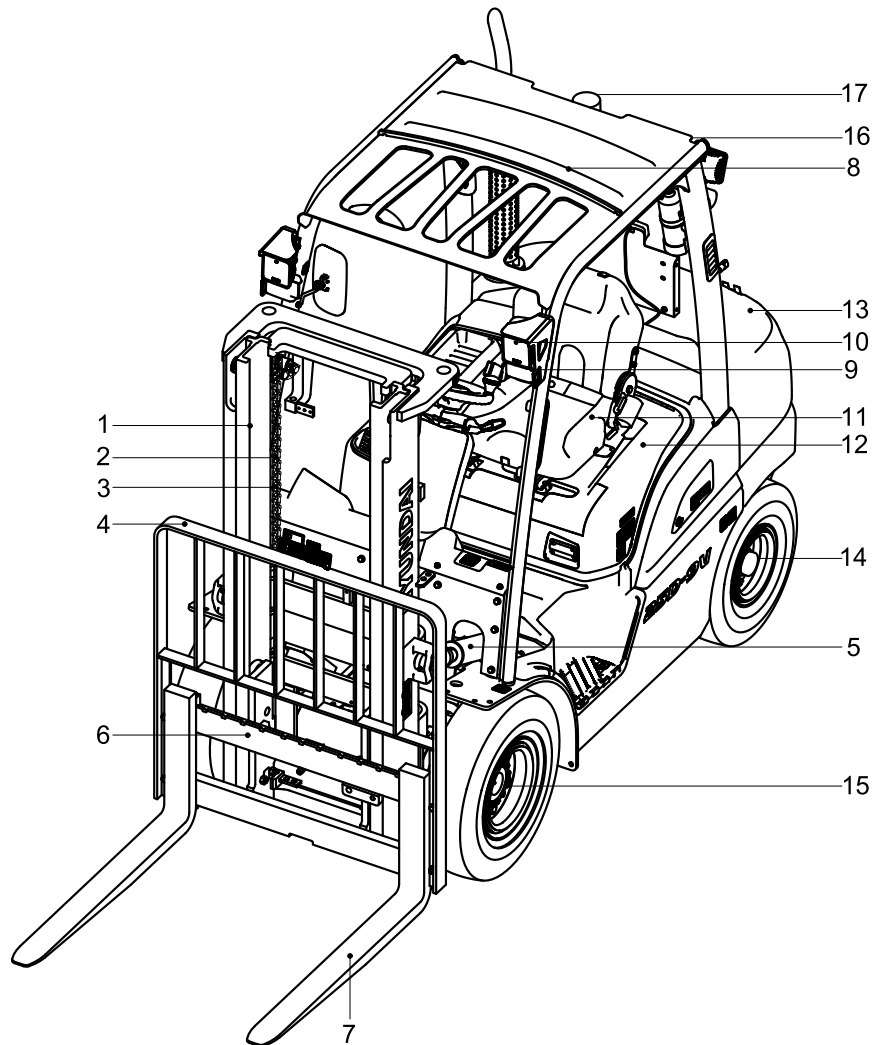


3. KNOW YOUR TRUCK

1. GENERAL LOCATIONS

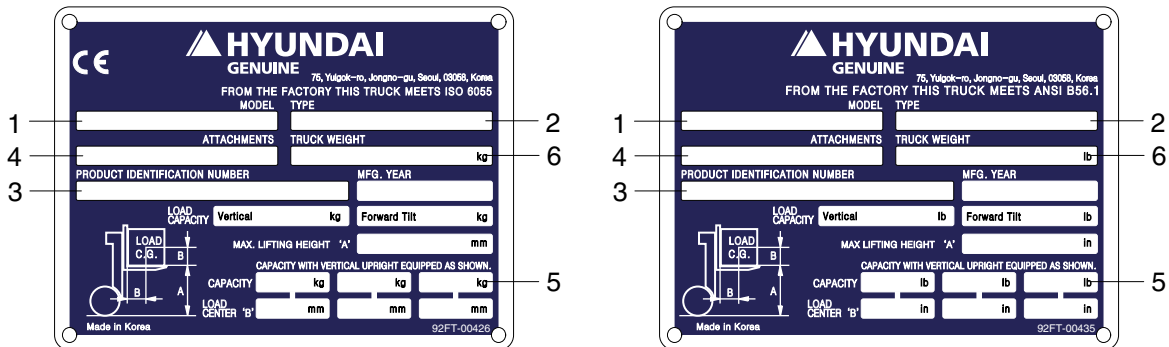


25D9V3KY01

- | | | |
|-----------------|--------------------|--------------------------|
| 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 | 17 Rear camera |
| 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.

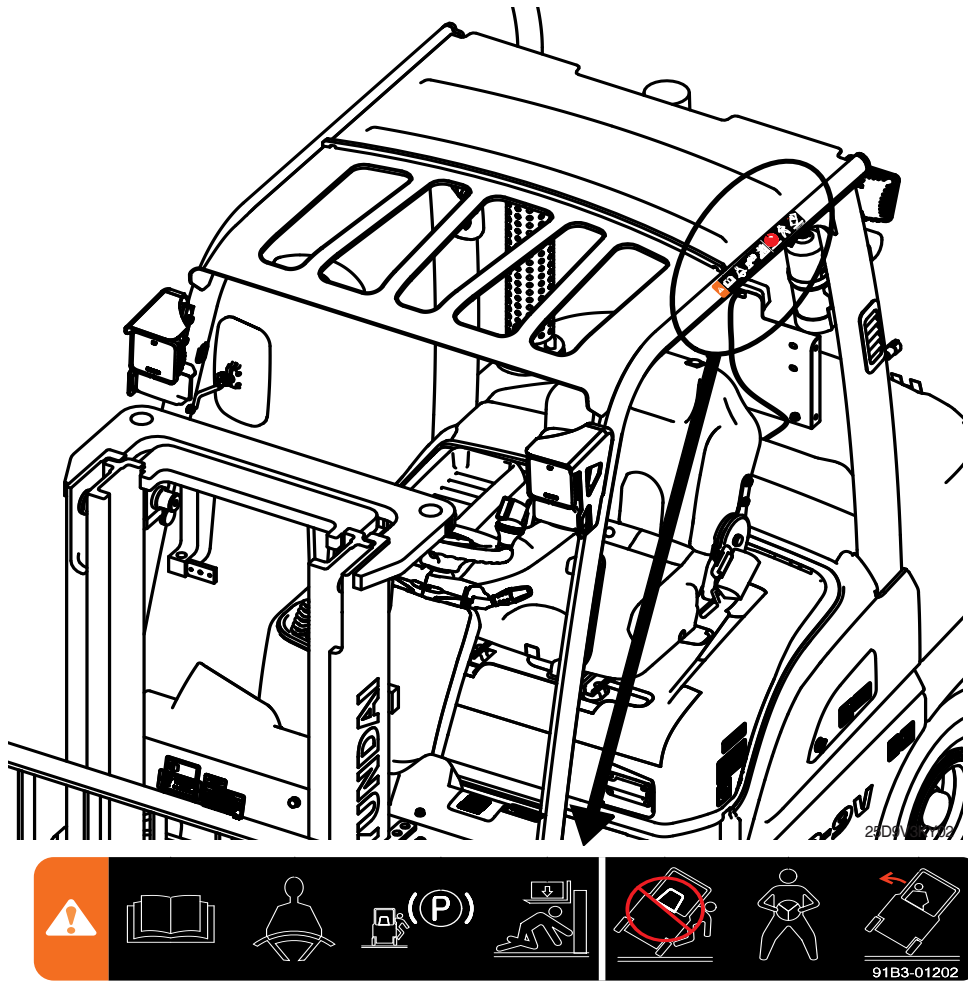
Do not exceed the maximum capacity specified.

(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. This is an OSHA requirement. Contact your authorized HYUNDAI dealer for a new nameplate showing the revised capacity.

2) OPERATOR SAFETY WARNING DECAL



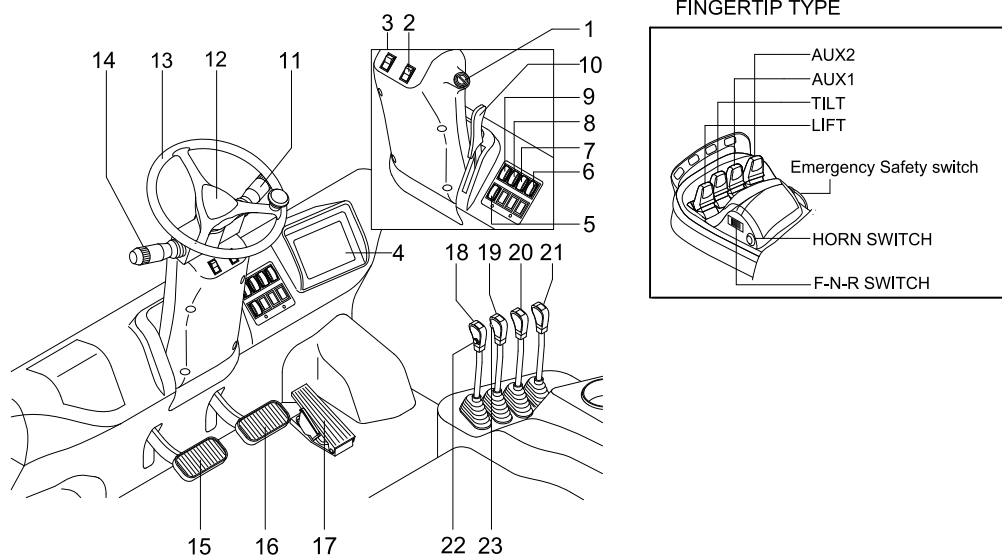
▲ Safety and warning decals are placed in conspicuous locations on the truck to remind you of essential procedures or to prevent you from making an error that could damage the truck or possibly cause personal injury. You should know, understand, and follow these instructions. Safety and warning decals. 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 upper left side 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.

3. INSTRUMENTS AND CONTROLS



25D9V3KY03

- | | | |
|-----------------------------------|------------------------------|------------------------------------|
| 1 Start switch | 9 Engine mode switch | 17 Accelerator pedal |
| 2 Parking brake switch | 10 Steering wheel lock lever | 18 Lift lever |
| 3 Hazard lamp switch (opt) | 11 Turn signal switch | 19 Tilt lever |
| 4 Cluster | 12 Horn button | 20 Attach lever 1 (opt) |
| 5 DPF Regeneration switch | 13 Steering wheel | 21 Attach lever 2 (opt) |
| 6 Front wiper/washer switch (opt) | 14 Forward-reverse lever | 22 FNR and horn switch (opt) |
| 7 Beacon switch (opt) | 15 Inching pedal | 23 Auto tilt leveling switch (opt) |
| 8 Main light switch | 16 Brake pedal | |

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

4. CLUSTER (25/30D-9V, 35DN-9V)

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.



35D9VB3KY03

2) GAUGE

(1) Operation screen

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



35D9VB3KY04

1 Speed meter

3 Coolant temperature gauge

2 Fuel gauge

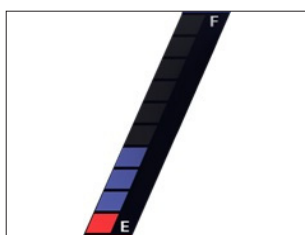
4 Clock

(2) Speed meter

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

※ Speed unit can be set in the speed unit menu of display set up at page 3-38.

(3) Fuel gauge

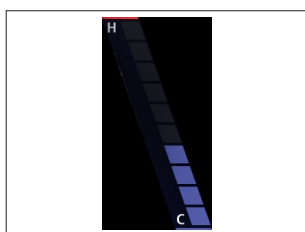


35D9VB3KY05

① Fuel gauge displays the approximate amount of fuel remaining in the fuel tank.

② It shall be obtained fuel as soon as warning lamp  lights on.

(4) Coolant temperature gauge




35D9VB3KY06

① 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)

② If the gauge display in the red zone, or warning lamp  comes on, please stop the engine and inspect the coolant system.

(5) Clock



35D9VB3KY07

① It displays current time.

② The time can be adjusted at display Set Up > Time Set Up menu.

3) WARNING LAMPS

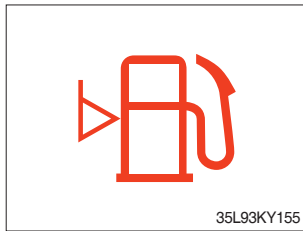


35D9VB3KY08

No.	Warning lamp		No.	Warning lamp	
1		Fuel Level warning lamp	10		DPF regeneration warning lamp
2		Coolant temperature warning lamp	11		DPF inhibit warning lamp
3		Engine oil pressure warning lamp	12		DPF high temperature warning lamp
4		Air cleaner warning lamp	13		Clutch protection warning lamp
5		Water in fuel warning lamp	14		Communication error warning lamp
6		Engine check warning lamp	15		Brake oil level warning lamp
7		Engine stop warning lamp	16		Fingertip warning lamp
8		Battery charge warning lamp	17		Transmission warning lamp
9		Transmission oil temperature warning lamp	-	-	-

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

(1) Fuel level warning lamp



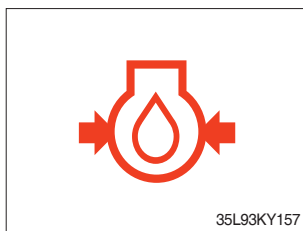
- Warning lamp will be displayed if fuel level is low.
- Please refuel immediately if the lamp is ON.

(2) Coolant temperature warning lamp



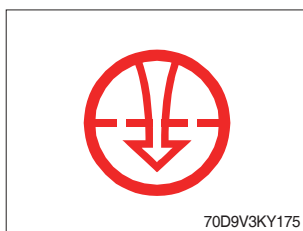
- Coolant temperature warning will be lit up when temperature is over 115 °C (239 °F).
- If the warning lamp is on continuously, please inspect the coolant system.

(3) Engine oil pressure warning lamp



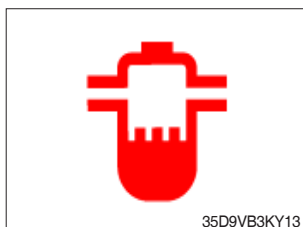
- This warning lamp will be lit up when engine oil pressure is low.
- Stop the engine immediately if the warning lamp is lit up. Please check the engine oil.

(4) Air cleaner warning lamp



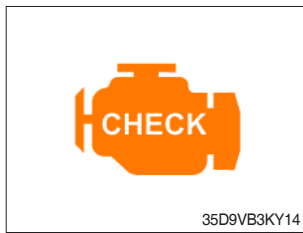
- This warning lamp is lit when air cleaner filter is clogged up.
- Please clean up or replace the filter.

(5) Water in fuel warning lamp



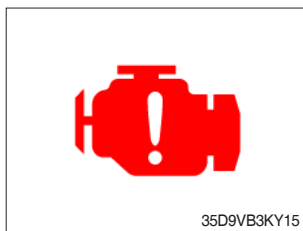
- Light up when water in fuel.
- Stop the engine and please drain the water of the fuel filter.

(6) Engine check warning lamp



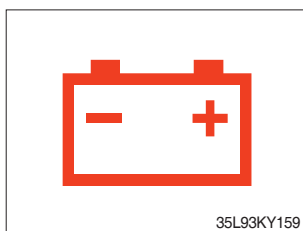
- When the engine is ON, it blinks for about 3 seconds. If the warning light remains on after 3 seconds, there is something wrong with the engine control, fuel supply and so on.
- Check the failure code of cluster.
- ※ **Some engine controls may not start if there is a problem.**
- ※ **Continued operation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

(7) Engine stop warning lamp



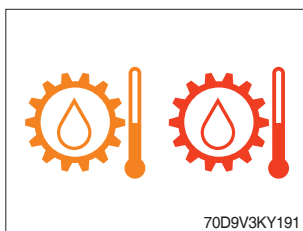
- If the lamp lights on, stop the engine immediately and check the engine.
- ※ **Please contact your Hyundai service center or local dealer.**

(8) Battery charge warning lamp



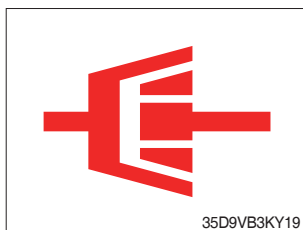
- This warning lamp is lit when battery charging voltage is low.
- Please inspect the battery charging circuit if the warning lamp is lit.

(9) Transmission oil temperature warning lamp



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

(10) Clutch protection warning lamp



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

(11) Communication error warning lamp



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

(12) DPF





- ※ During auto regeneration, it is possible to operate the truck (driving and handling the load).
- ※ Sufficient automatic regeneration could reduce the frequency of parked regeneration.

① Inhibit regeneration switch : OFF

Level	Warning lamp				Stage of regeneration
	DPF inhibit	DPF regeneration	DPF high temp	Engine check	
Level 0 (No need regeneration)			★On		Regeneration is not required.
Level 1 (Auto regeneration)			★On		Regeneration starts automatically when the PM (particulate matter) level reaches to this level.
Level 2 (Request parked regeneration)		On	★On		ECU requests parked regeneration. Operator needs to follow parked regeneration method. Automatic regeneration does not stop in this level.
Level 3 (Parked regeneration)		On	★On	On	Automatic regeneration stops. Operator had better park the machine and start parked regeneration as soon as possible. During parked regeneration, machine operation is restricted. Engine output will be limited from Level 3.
Level 4 (Regeneration with service tools)		Blink	Blink	Blink	Parked regeneration is impossible. Regeneration is possible with service tools only.

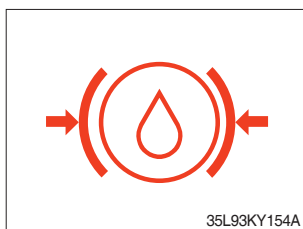
★ : When regenerating

② Inhibit regeneration switch : ON

Level	Warning lamp				Stage of regeneration
	DPF inhibit	DPF regeneration	DPF high temp	Engine check	
					
Level 0 (No need regeneration)	On				Regeneration is not required.
Level 1 (Auto regeneration)	On				Automatic regeneration inhibit.
Level 2 (Request parked regeneration)	On	Blink			ECU requests parked regeneration. Operator needs to follow parked regeneration method. (Automatic regeneration inhibit)
Level 3 (Parked regeneration)	On	Blink		On	Operator had better park the machine and start parked regeneration as soon as possible. During parked regeneration, machine operation is restricted. Engine output will be limited from Level 3.
Level 4 (Regeneration with service tools)	On	Blink		Blink	Parked regeneration is impossible. Regeneration is possible with service tools only.

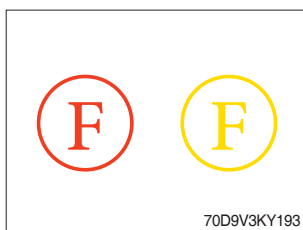
※ Sufficient automatic regeneration could reduce the frequency of parked regeneration.

(13) Brake oil level warning lamp



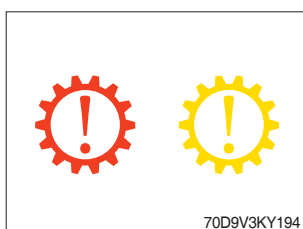
- Warning lamp will be displayed if brake oil is low of reservoir tank.
- Please refill immediately if the lamp is on.

(14) Fingertip warning lamp



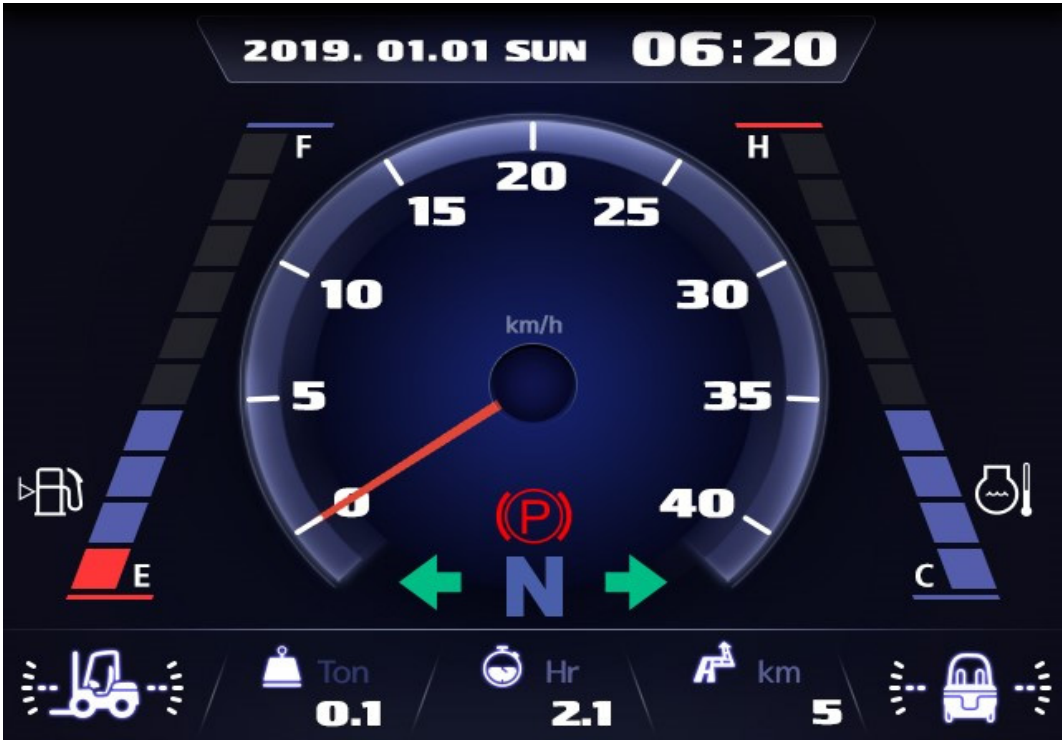
- If this warning light is lighted, check the finger tips.
- If the warning lights are lit while driving, stop the engine and check the forklift.

(15) Transmission warning lamp



- If this warning light is lighted, check the transmission.
- If the warning lights are lit while driving, stop the engine and check the forklift.

4) INDICATOR LAMPS



35D9VB3KY24

No.	Indicator lamp		No.	Indicator lamp	
1		Engine warning up indicator lamp	6		OPSS indicator lamp
2		Fuel warmer indicator lamp	7		Driving Indicator lamp
3		Consumables replacement indicator lamp	8		Driving Indicator lamp
4		Tilt lock indicator lamp	9		Driving RT/LT Turn lamp

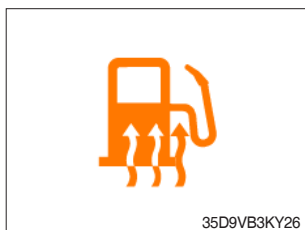
※ Warning and indicator lamps will display only items that were set as ON, and all warning and indicator except turning warning lamp and driving warning lamp will be displayed in order from the left of screen.

Engine warm-up indicator lamp



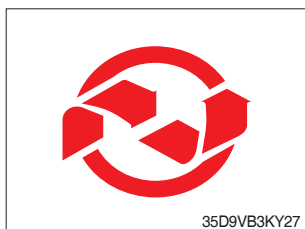
- ① The truck senses the engine coolant temperature and warms-up engine when needed.
- ② When it is happening, the indicator lamp is ON.

Fuel warmer indicator lamp



- ① Light up when fuel warmer is operating. (Controlled by ECU)

Consumables replacement indicator lamp



- ① Light up if consumable which must be replaced are exist.
- ② The warning lamp will light up only 3 minutes since start switch ON, and then light OFF.
- ③ Please check the consumable management list in maintenance menu.

Tilt lock indicator lamp



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

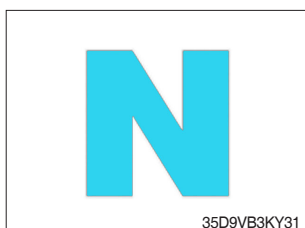
OPSS indicator lamp



- ① Light up if driver leave seat during operation.
 - ② Truck driving and/or mast control will be blocked if lamp is lit up.
- ※ Please refer to page 0-11 for details.

Driving indicator lamp

Neutral



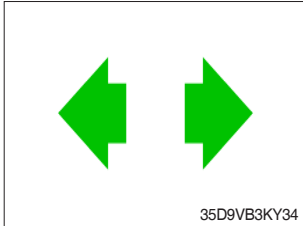
This indicator lamp will be lit up when direction lever is located in neutral.

Forward or Reverse



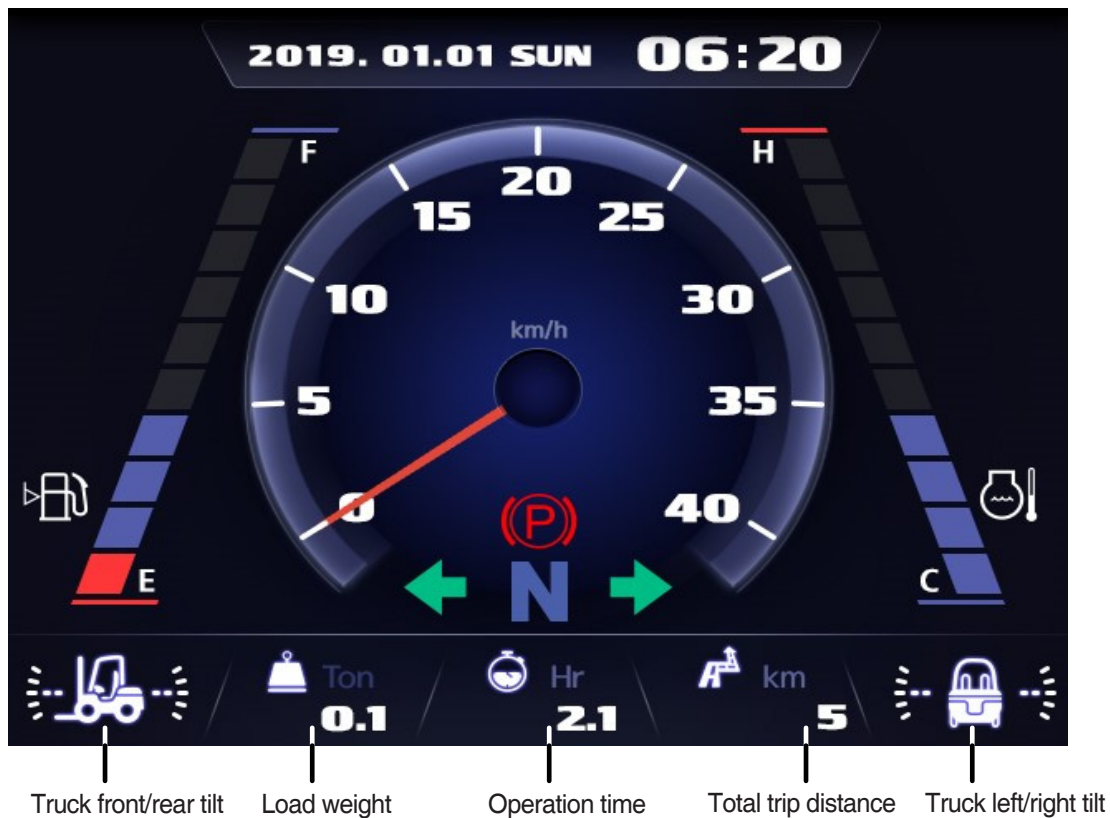
This indicator lamp is displayed if the forward gear or reverse gear is selected.

Right or left turning indicator lamp



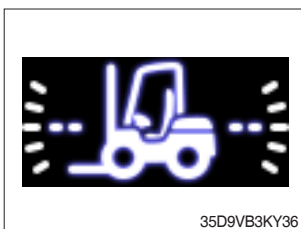
This indicator lamp will flash if turns on the right or left turn signal.

5) INFORMATION DISPLAY



35D9VB3KY35

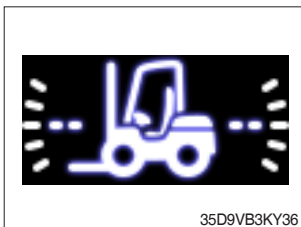
Mast front/rear tilt



35D9VB3KY36

Display the real time tilt of mast.

Truck front/rear tilt

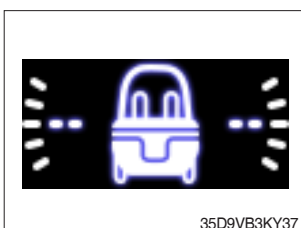


35D9VB3KY36

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°
- Driving : Tilt angle is higher than 10.2°

Truck left/right tilt



35D9VB3KY37

Display the left/right tilt of truck in real time.
The red warning symbol turned on condition.

- Stop : Tilt angle is higher than 3.4°
- Driving : Tilt angle is higher than 20.8°

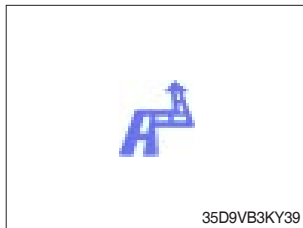
Load weight



Display the load weight.

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

Total trip distance



Display total trip distance of the truck.

Unit of distance is kilometer.

Operation time



Display the used time of the truck.

Explanation of warning lamp and indicator lamp



When warning lamp or indicator lamp comes on, please press the enter button to check detailed explanation.

During pressing the enter button, it keeps the screen to be shown explanation for warning lamp or indicator.

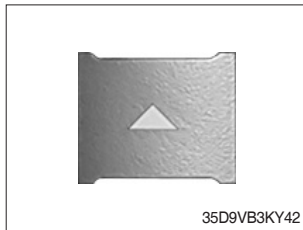
6) BUTTONS

(1) Camera



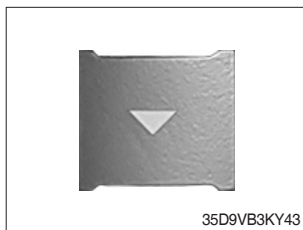
- ① This switch displays rear camera images. (if the camera is mounted)

(2) UP/Left



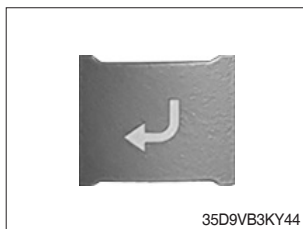
- ① This switch is used to move upward or leftward in menu or increase the value.

(3) Down/Right



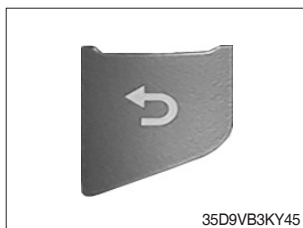
- ① This switch is used to move downward or rightward in menu or decrease the value.

(4) Select



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

(5) Cancel (ESC)



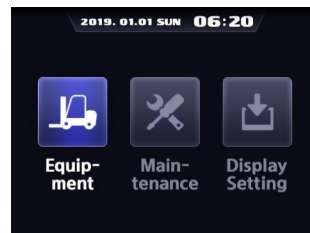
- ① This switch is used to cancel or move to upper menu.

7) MAIN MENU

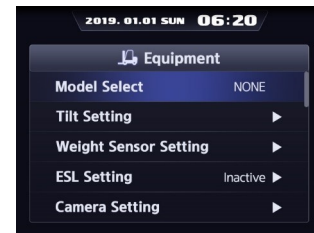
Operation Screen



Main Menu Screen




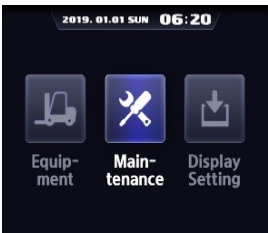
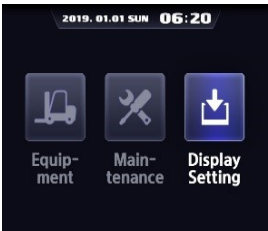
Sub-Menu Screen



35D9VB3KY46

A menu consists of main menu and sub-menu.

(1) Structure

No	Main menu	Sub menu	Explanation
1		Model select Tilt setting Weight sensor setting ESL setting Rear Camera setting DCSR setting HAC setting Vehicle max speed limit Zero start setting CSC Setting Clutch protection alarm Seat belt interlock Fingertip setting TCU Calibration Cluster-Information	Diesel, LPG Vehicle tilt Initialize Enter the cylinder cross section area , Adjust load weight, Weight display setup ESL setting, Engine Start Limit, Delay time Reverse gear interworking DCSR On, Block driving speed, Restore driving speed Maximum speed limitation
2		Failure History Maintenance Management I/O information	Engine/TM failure history Change oil and filter replacement cycle Analog, Digital
3		LCD Brightness adjustment User Setting A/S phone No. Password change Consumable management	Automatic, Manual Time, Unit, Language Change A/S contact E/G starting password connect Maintenance parts management

(2) Equipment menu

① Model select (Required setting)

How to check the Model Select (Check under the start switch ON status)

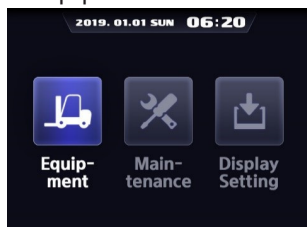
Selection will be canceled if press the cancel button.

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



35D9VB3KY50

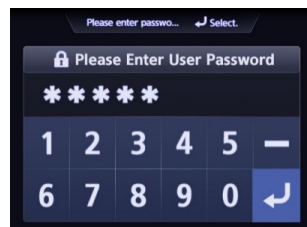
1. Equipment



35D9VB3KY47

Enter to equipment menu.

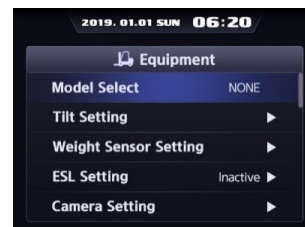
2. Password



35D9VB3KY51

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

3. Model select



35D9VB3KY52

Choose model select

4. Diesel or LPG



35D9VB3KY53

Please select the fuel type.

5. Truck weight



35D9VB3KY54

Please select the vehicle weight level.

6. Truck model



35D9VB3KY55

Please select the exact model name.

7. Confirm



35D9VB3KY56

Confirm the model which you select.

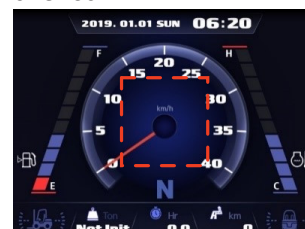
8. Completion



35D9VB3KY57

Model selection is completed.

9. Check



35D9VB3KY58

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

Selection will be canceled if press the cancel button.

※ 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 vehicle.

② Tilt setting (Required setting)

How to check the tilt setting (Check under the start switch ON status)

- ※ The tilt sensor has already been initialized when deliver the vehicle from factory.
- ※ Initialize vehicle tilt if the tilt sensor figure or vehicle tilt is not horizontal in the flatland.
- ▲ You must set tilt in the flatland since this is a horizontal set up.

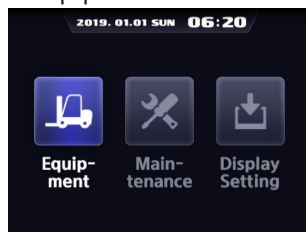
Vehicle that has not applied the mast angle sensor



Vehicle that has applied the mast angle sensor



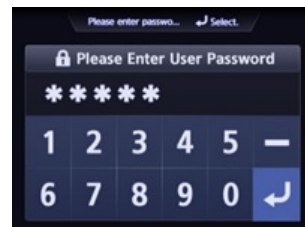
1. Equipment



35D9VB3KY47

Enter to equipment menu.

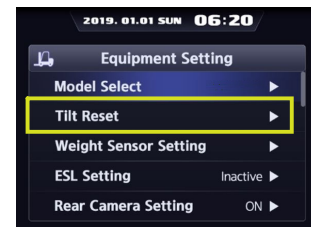
2. Password



35D9VB3KY60-1

Enter the password.

3. Tilt Reset



25D9V3KY60

Choose Tilt Reset.

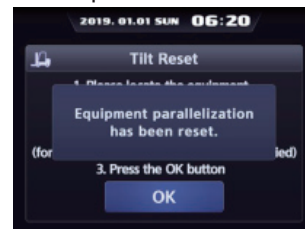
4. Instruction



25D9V3KY61

Follow the instruction showing in the screen.

5. Completion



25D9V3KY62

- ※ If tilt sensor for mast is mounted (option), locates the mast vertically.
- ※ Mast maximum angle depends on the vehicle.

· Check functions

(1) Check the real time operation by changing angles of vehicle tilt and mast tilt.

(2) Auto-leveling (option)

- ① Tilt mast forward or backward.
- ② Start tilting mast toward its vertical position, pushing the auto tilt leveling switch.
- ③ Check if the mast stops traveling when it becomes vertical to ground.

(3) Forward or backward tilt warning (red)

- ① Stop : $\pm 2.3^\circ$ (1.5 tons ~ 5.0 tons)
- ② Driving : $\pm 10.2^\circ$ (1.5 tons ~ 5.0 tons)

(4) Left/Right Tilt Warning (red)

- ① Stop : $\pm 3.4^{\circ}$ (1.5 tons~5.0 tons)
- ② Driving

Vehicle 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 setting (option)

How to check the Weight sensor setting (Check under the start switch ON status)

There are three settings for weight sensor. (unload, lad, initialization)

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

a. Setting cylinder cross section



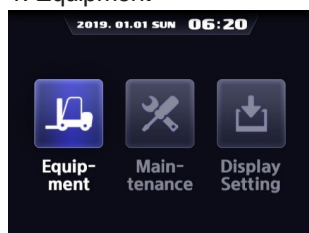
35D9VB3KY63

Vehicle that has not reset the weight sensor.

※ Cylinder cross section area information

No.	Capacity	Unit	Mast Type					
			V	TF	TS	VF	VS	QF
1	2.5 / 3 T	cm ²	39.3	44.2	47.5	56.7	56.6	88.4
2	3.5 T	cm ²	47.5	56.7	56.6	56.7	56.6	88.4

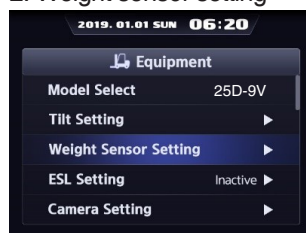
1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

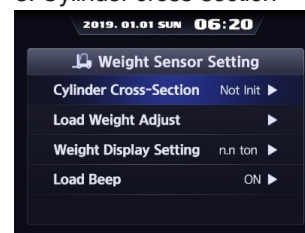
2. Weight sensor setting



25D9V3KY64

Choose weight sensor setting and enter.

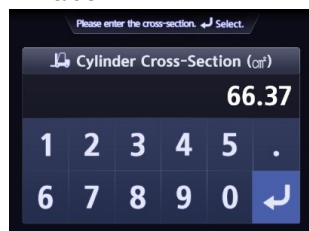
3. Cylinder cross-section



35D9VB3KY65

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

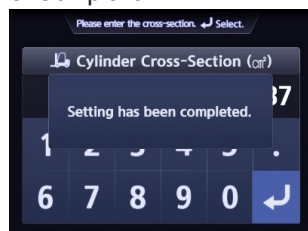
4. Value



35D9VB3KY66

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

5. Completion



35D9VB3KY67

Setting has been completed.

6. Check

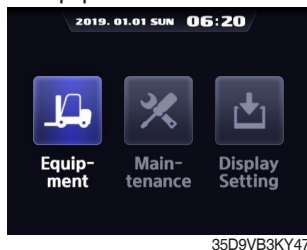


35D9VB3KY68

Check the value whether it is right.

b. Unloaded status adjustment

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Weight sensor setting



25D9V3KY64

Choose weight sensor setting and enter.

3. Load weight adjust



35D9VB3KY69

Choose load weight adjust and enter.

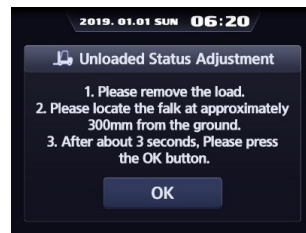
4. Unloaded status adjustment



35D9VB3KY70

Choose unloaded status adjustment and enter.

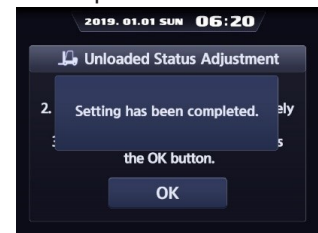
5. Instruction



35D9VB3KY71

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

6. Completion

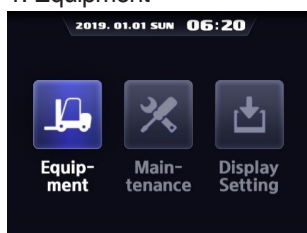


35D9VB3KY72

Setting has been completed.

c. Loaded status adjustment

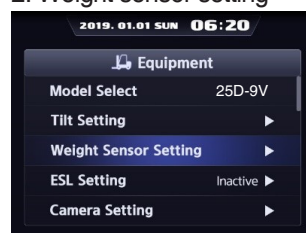
1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Weight sensor setting



25D9V3KY64

Choose weight sensor setting and enter.

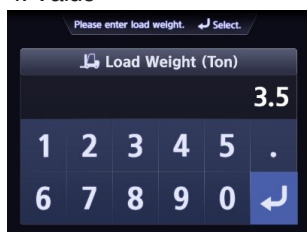
3. Loaded status adjustment



35D9VB3KY73

Choose loaded status adjustment and enter.

4. Value



35D9VB3KY74

Enter load weight using up/down buttons.

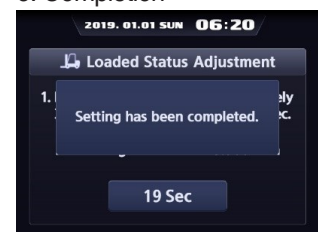
5. Instruction



35D9VB3KY75

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

6. Completion



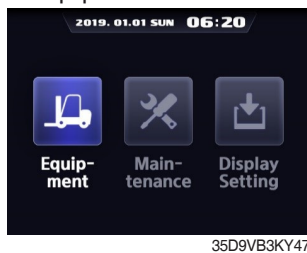
35D9VB3KY76

- ※ Must be prepared to lift up by locating the load on the fork before enter the weight.
- ※ Must be performed within 30 seconds of lift task. If it is not completed within 30 seconds, this process will be canceled automatically.
- ※ Accurate weight value is not recognized if other pressure changes that are occurred besides salvage work.
- ※ Re-perform the "Load/No-Load Adjustment", if the measurement malfunction is occurred.

d. Weight Sensor Reset (Initialization)

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

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Weight sensor setting



25D9V3KY64

Choose weight sensor setting and enter.

3. Load Weight Adjustment



35D9VB3KY77

Choose Load Weight Adjustment and enter.

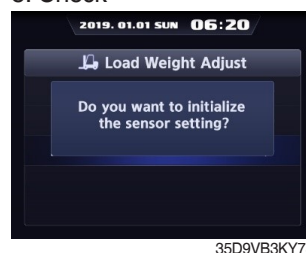
4. Reset



35D9VB3KY77-1

Enter to reset.

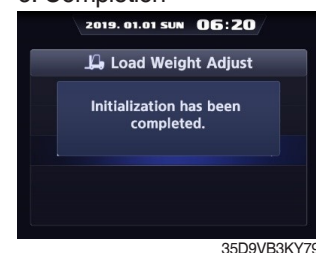
5. Check



35D9VB3KY78

Press the enter button.

6. Completion

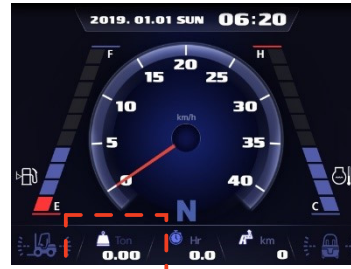


35D9VB3KY79

Initialization has been completed.

e. Weight display

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



35D9VB3KY83

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

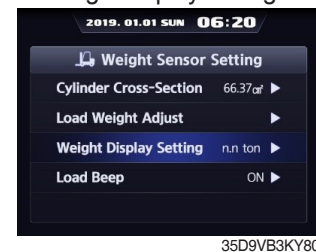
2. Weight sensor setting



25D9V3KY64

Choose weight sensor setting and enter.

3. Weight display setting



35D9VB3KY80

Enter to weight display setting.

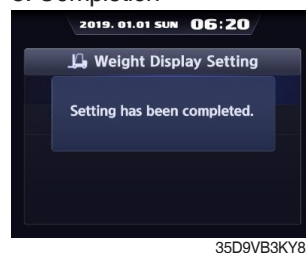
4. Unit



35D9VB3KY81

Choose unit what you want to use.

5. Completion

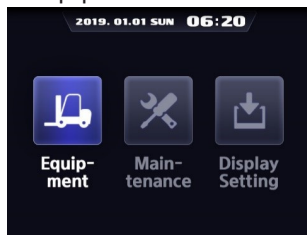


35D9VB3KY82

Setting has been completed.

f. Over Load Alarm

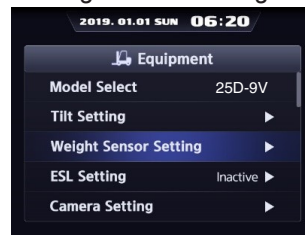
1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Weight sensor setting



25D9V3KY64

Choose weight sensor setting and enter.

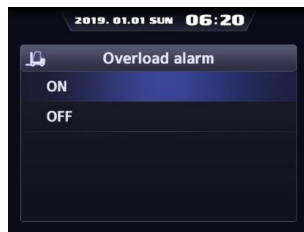
3. Overload alarm



35D9VB3KY80

Enter to Overload alarm.

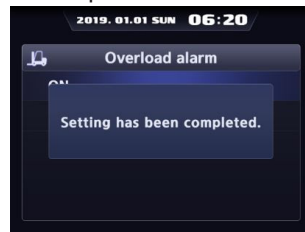
4. Select



35D9VB3KY82-1

Choose ON or OFF.

5. Completion



35D9VB3KY82-2

Setting has been completed.

④ ESL Setting (Startup control setting, standard) : Default is "Inactive"

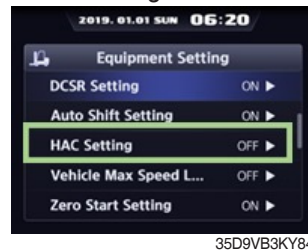
a. Inactive

1. Equipment



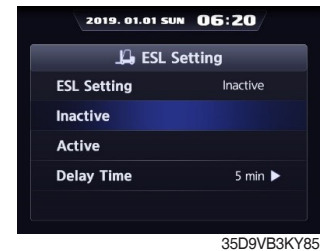
Enter to equipment menu and type the password.

2. ESL setting



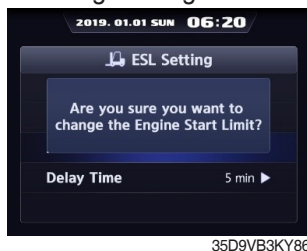
Choose ESL setting and enter.

3. Inactive



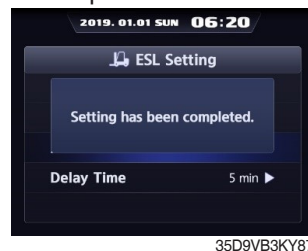
Choose inactive.

4. Change setting



If you want to change setting, press enter button.

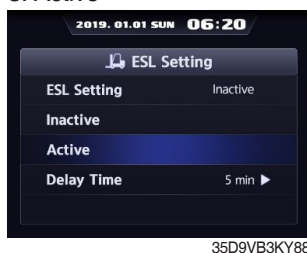
5. Completion



Setting has been completed.

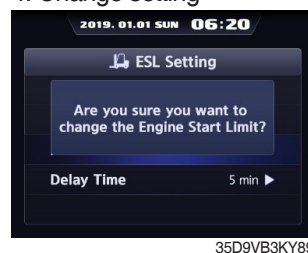
b. Active

3. Active



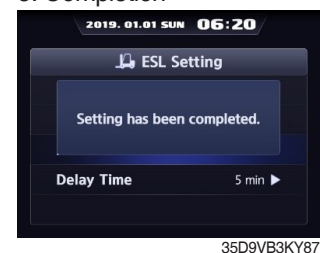
Choose active.

4. Change setting



If you want to change setting, press enter button.

5. Completion



Setting has been completed.

· Check functions

- (1) Set the active mode can be set when engine is starting. (cf. inactive mode can change anytime)
- (2) Upon start switch ON, the password screen pops up and starting is prohibited until the right password has been offered. (But, driver still can start the vehicle if starts within 10 seconds from start switch OFF)
- (3) Set the mode as 5 min of delay time and start switch OFF.
- (4) Check if vehicle can start within 5 min and start switch OFF.
- (5) check if vehicle requests password after 5 min.

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



c. Delay time

1. Equipment



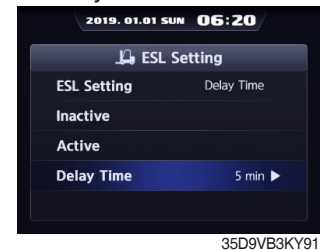
Enter to equipment menu and type the password.

2. ESL setting



Choose ESL setting and enter.

3. Delay time



Choose delay time.

4. Select value



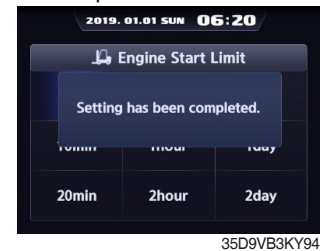
Select value you want to apply.

5. Change setting



If you are sure to change ESL, press enter.

6. Completion



Setting has been completed.

⑤ Rear Camera setting

a. Device setup > Camera setup

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

1. Equipment



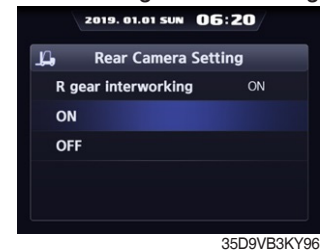
Enter to equipment menu and type the password.

2. Rear Camera setting



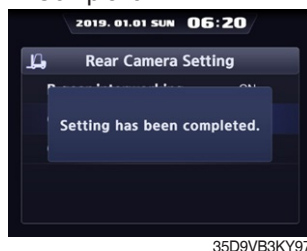
Choose camera setting and enter.

3. Reverse gear interworking



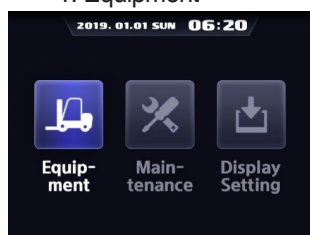
Choose ON or OFF.

4. Completion



⑥ DCSR setting (Direction Change Shock Relief)

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

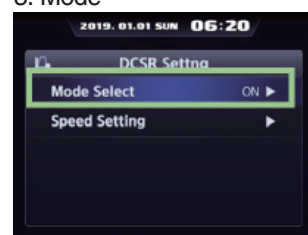
2. DCSR setting



25D9V3KY107

Choose DCSR setting and enter.

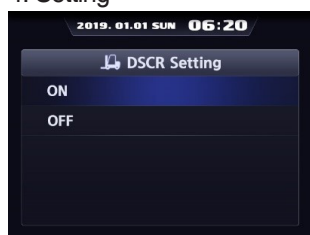
3. Mode



25D9V3KY108

Choose mode.

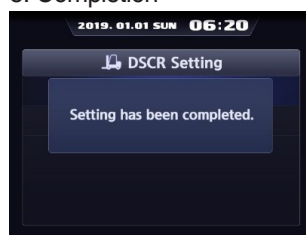
4. Setting



35D9VB3KY109

Select DCSR setting.

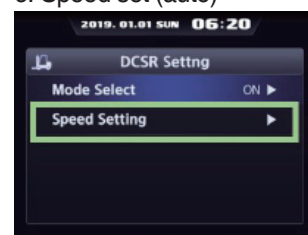
5. Completion



35D9VB3KY110

Setting has been completed.

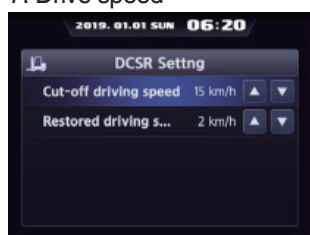
6. Speed set (auto)



25D9V3KY111

If you want to change speed set, enter speed set (auto).

7. Drive speed



25D9V3KY112

Change speed.

Set the mode ON. Above is how this feature functions.

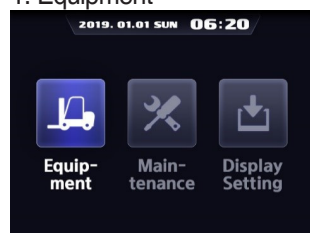
If you are driving at over the block drive speed and then change gear from forward to reverse (or reverse to forward), the gear stays as neutral until the vehicle reaches the restore drive speed. The car changes direction and starts to travel.

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

⑦ HAC Setting

Set the mode ON. Below is how this feature functions. If you are trying to drive in stop status on the hill, the car does not move backward.

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

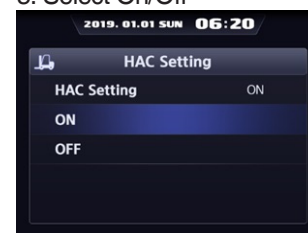
2. HAC setting



35D9VB3KY84

Choose HAC setting.

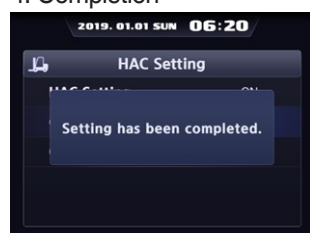
3. Select On/Off



35D9VB3KY85

Select ON/OFF.

4. Completion



35D9VB3KY86

Setting has been completed.

⑧ Vehicle max speed limit

Driving speed < 10 km/h

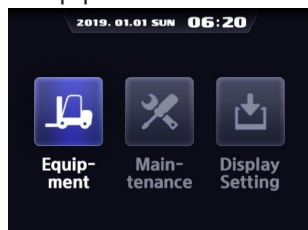


Driving speed ≥ 10 km/h



35D9VB3KY119

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Vehicle max speed limit



35D9VB3KY113

Choose Vehicle max speed limit.

3. Mode



35D9VB3KY114

Enter to mode function.

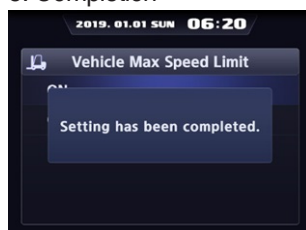
4. Use



35D9VB3KY115

Select use.

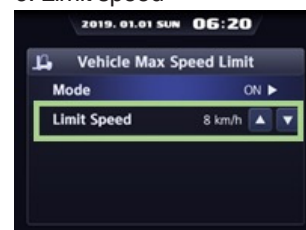
5. Completion



35D9VB3KY116

Setting has been completed.

6. Limit speed



35D9VB3KY117

Enter to limit speed menu.

7. Setting limit speed

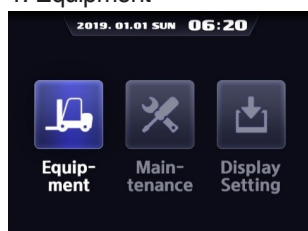


35D9VB3KY118

Set limit speed.

⑨ Zero Start Setting

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

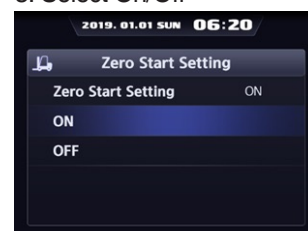
2. Zero Start Setting



35D9VB3KY113-1

Choose Zero Start Setting.

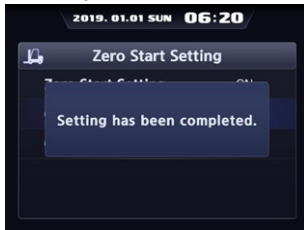
3. Select On/Off



35D9VB3KY114-1

Select On/Off.

4. Completion



35D9VB3KY115-1

Setting has been completed.

⑩ CSC Setting

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. CSC Setting



35D9VB3KY113-2

Choose CSC Setting.

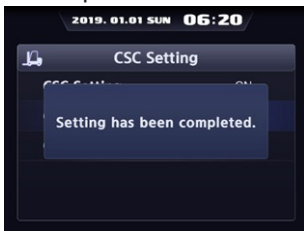
3. Select On/Off



35D9VB3KY114-2

Select On/Off.

4. Completion

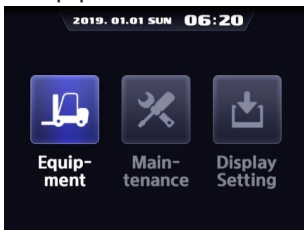


35D9VB3KY115-2

Setting has been completed.

⑪ Clutch Protection Alarm

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Clutch Protection Alarm



35D9VB3KY113-3

Choose Clutch Protection Alarm.

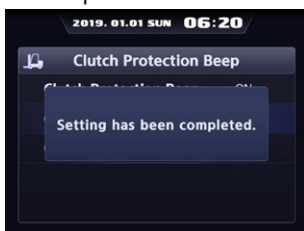
3. Select On/Off



35D9VB3KY114-3

Select On/Off.

4. Completion



35D9VB3KY115-3

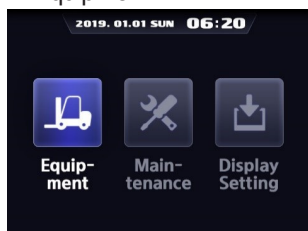
Setting has been completed.

⑫ Seat belt interlock

· Check functions

- (1) OPSS is related with neutral gear, seat switch, and seat belt switch.
 - (2) If you want to operate OPSS function using seat belt switch, please select seat belt interlock ON.
 - (3) Seat belt interlock menu is activated only if seat belt switch signal has been turned on during entering password.
- ※ If there is no seat belt switch or it has not been turned on during entering password, Seat belt interlock menu is not activated.

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

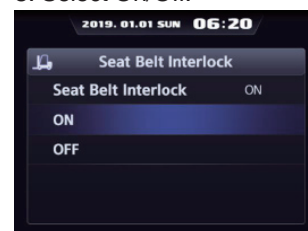
2. Seat Belt Interlock



35D9VB3KY113-4

Choose Seat Belt Interlock.

3. Select On/Off.



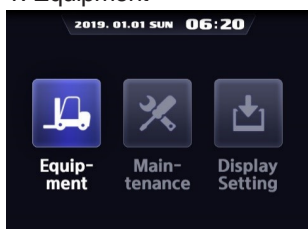
35D9VB3KY114-4

Select On/Off, then Setting has been completed.

⑬ Fingertip Setting

- Lever Position Setting

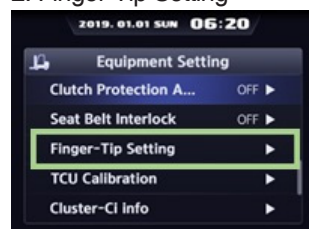
1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Finger-Tip Setting



35D9VB3KY113-4

Choose Finger-Tip Setting and enter.

3. Lever Position Setting



35D9VB3KY114-4

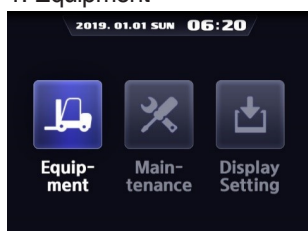
Choose Lever Position Setting and enter.



35D9VB3KY115-4

- Lever Dead Zone Setting

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

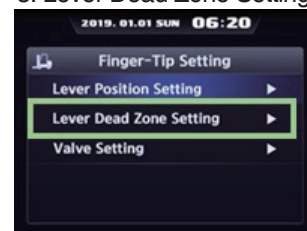
2. Finger-Tip Setting



35D9VB3KY113-4

Choose Finger-Tip Setting.

3. Lever Dead Zone Setting



35D9VB3KY113-5

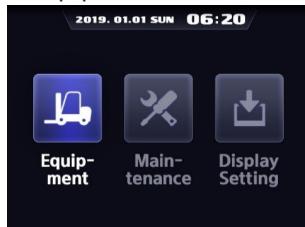
Choose Lever Dead Zone Setting and Enter.



35D9VB3KY114-5

- Valve Setting

1. Equipment



35D9VB3KY47

Enter to equipment menu and type the password.

2. Finger-Tip Setting



35D9VB3KY113-4

Choose Finger-Tip Setting.

3. Valve Setting



35D9VB3KY113-6

Enter to Valve Setting.

4. Lift Section Valve



35D9VB3KY113-7

Enter Lift Section Valve.

5. Setting



35D9VB3KY114-7

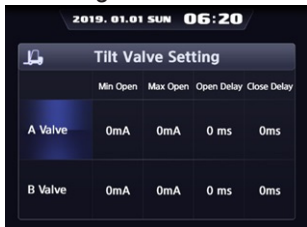
4. Tilt Section Valve



35D9VB3KY115-7

Enter Tilt Section Valve.

5. Setting



35D9VB3KY116-7

4. Aux1 Section Valve



35D9VB3KY117-7

Enter Lift Section Valve.

5. Setting



35D9VB3KY118-7

4. Aux2 Section Valve



35D9VB3KY119-7

Enter Aux2 Section Valve.

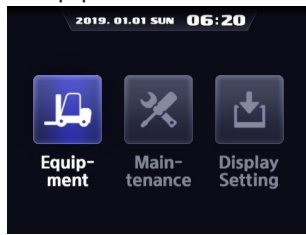
5. Setting



35D9VB3KY120-7

⑭ Cluster-CI Info.

1. Equipment



Enter to equipment menu and type the password.

2. Cluster-CI Info.



Choose Cluster-CI Info.

3. Information

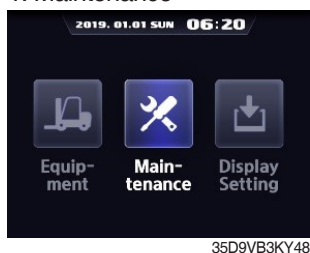


(2) Maintenance

① Engine Failure History

a. Check Current Engine Failure

1. Maintenance



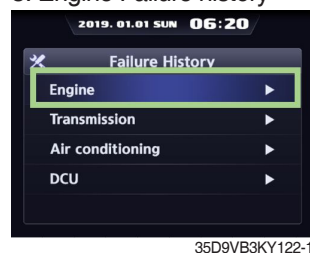
Enter to maintenance menu and type the password.

2. Failure history



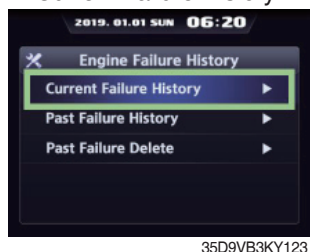
Choose Failure history and enter.

3. Engine Failure history



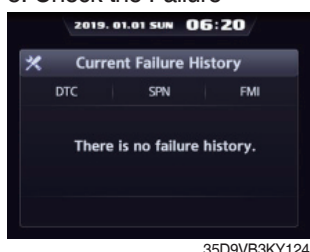
Enter to Engine.

4. Current Failure History



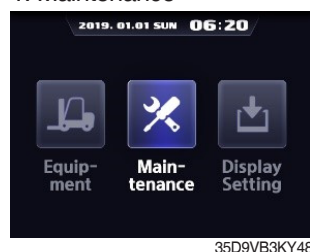
Enter to Current Failure History.

5. Check the Failure



b. Check past Engine Failure

1. Maintenance



Enter to maintenance menu and type the password.

2. Failure History



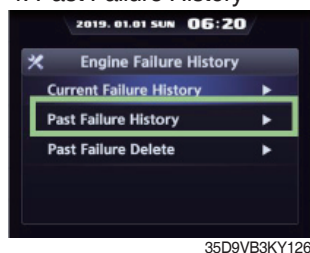
Choose Failure History.

3. Engine Failure History



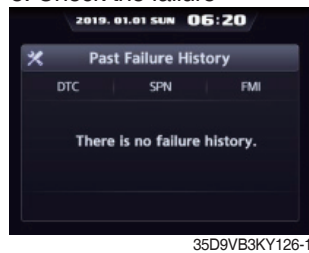
Enter to Engine.

4. Past Failure History



Enter to Past Failure History.

5. Check the failure



c. Delete failure history

1. Maintenance



Enter to maintenance menu and type the passwork.

2. Failure History



Choose Failure History.

3. Engine Failure History



Enter to Engine Failure History.

4. Delete Fault History



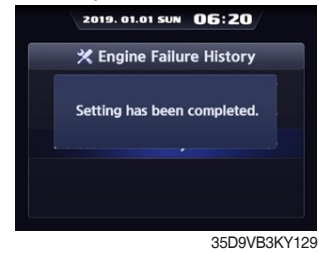
Select Past Failure Delete.

5. Check



If you are sure to delete the failure history, then push the enter button.

6. Completion



② T/M Failure History

a. Check Current Failure History

1. Maintenance



Enter to maintenance menu and type the passwork.

2. Failure History



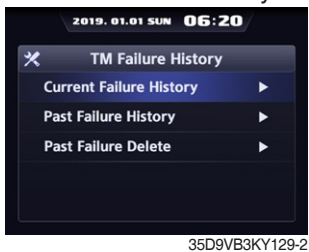
Choose Failure History.

3. TM Failure History



Enter to Transmission.

4. Current Failure History



Enter to Current Failure History.

5. Check



b. Check Past Failure History

1. Maintenance



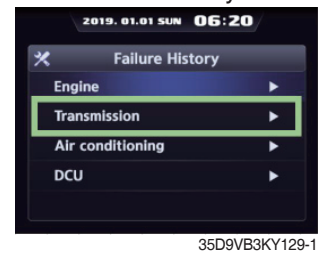
Enter to maintenance menu and type the password.

2. Failure History



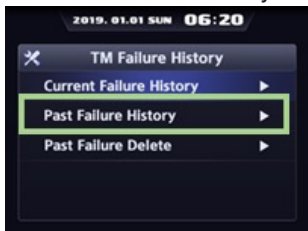
Choose Failure History.

3. TM Failure History



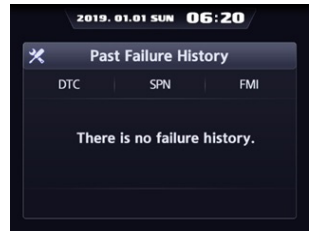
Enter to Transmission.

4. Current Failure History



Enter to Past Failure History.

5. Check



c. Delete Failure History

1. Maintenance



Enter to maintenance menu and type the password.

2. Failure History



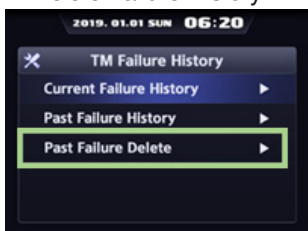
Choose Failure History.

3. TM Failure History



Enter to Transmission.

4. Delete Failure History



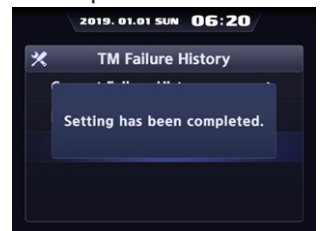
Enter to Past Failure Delete.

5. Check



If you are sure to delete the failure history, then push enter button.

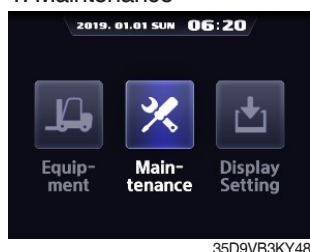
6. Completion



③ Consumables Management

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

1. Maintenance



35D9VB3KY48

Enter to maintenance menu and type the password.

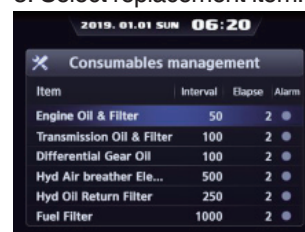
2. Consumables Mangement



35D9VB3KY130

Choose Consumables management.

3. Select replacement item.



35D9VB3KY131-1

Select the replace item.

4. Replacement



35D9VB3KY132

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

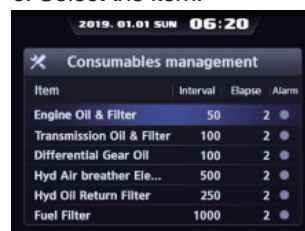
5. Check.



35D9VB3KY133

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

6. Select the item.



35D9VB3KY134

Select the item you want to change maintenance interval.

7. Change



35D9VB3KY134-1

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

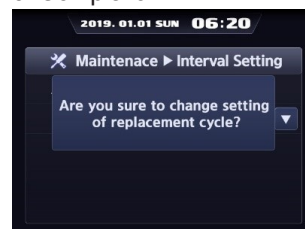
8. Setting



35D9VB3KY136

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

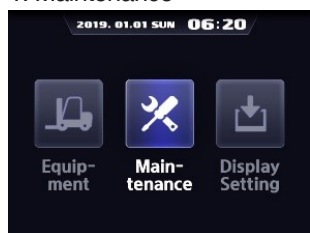
9. Completion



35D9VB3KY137

④ I/O Information

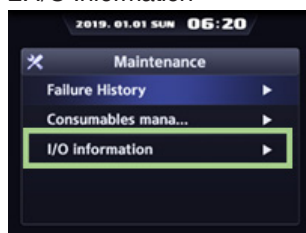
1. Maintenance



35D9VB3KY48

Enter to maintenance menu and type the password.

2. I/O Information



35D9VB3KY138

Choose I/O Information

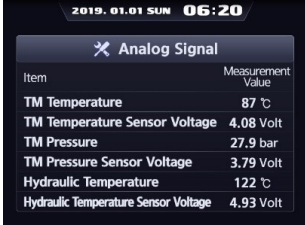
3. Analog signal



35D9VB3KY139

Enter to analog signal

4. Analog signal list



Item	Measurement Value
TM Temperature	87 °C
TM Temperature Sensor Voltage	4.08 Volt
TM Pressure	27.9 bar
TM Pressure Sensor Voltage	3.79 Volt
Hydraulic Temperature	122 °C
Hydraulic Temperature Sensor Voltage	4.93 Volt

35D9VB3KY140

You can check the Analog signal list.

5. Digital signal



35D9VB3KY141

Enter to digital signal

6. Digital signal list



Item	I/O	Status
Alternator L	I	●
Left Turn S/W	I	●
Right Turn S/W	I	●
Forward Gear S/W	I	●
Neutral Gear S/W	I	●
Reverse Gear S/W	I	●

35D9VB3KY142

You can check the Digital signal list.

(3) Display setting

① Adjust LCD brightness

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

1. Display setting



35D9VB3KY49

Enter to display setting.

2. LCD brightness adjustment



35D9VB3KY145

Choose LCD brightness adjustment and enter.

3. LCD brightness



35D9VB3KY146

You can see this display when you choose display brightness is automatic.

4. LCD Brightness (Day/Night)



35D9VB3KY147

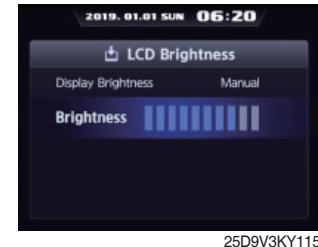
5. Brightness



35D9VB3KY148

Brightness can be changed using Up/Down button when it is manual mode.

5. Save



25D9V3KY115

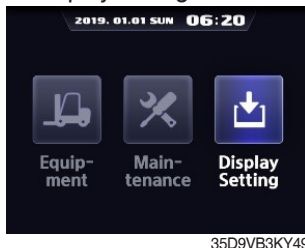
After changing the brightness, Press enter to save.

② User setting

- Time setting

Set time in following order. (year > month > day > hour > minute)

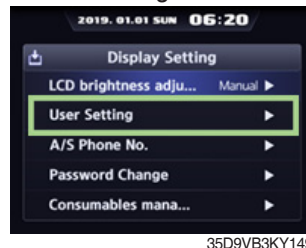
1. Display setting



35D9VB3KY49

Enter to display setting.

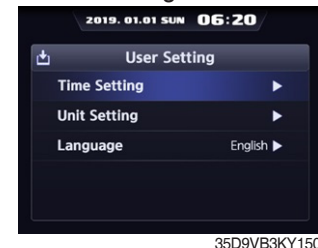
2. User Setting



35D9VB3KY149

Choose User setting and enter.

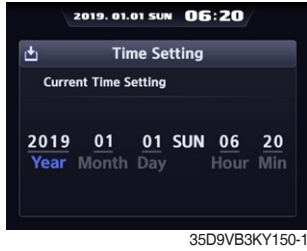
3. Time setting



35D9VB3KY150

Choose Time Setting.

4. Time setting

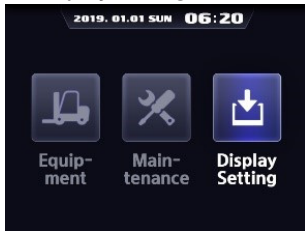


35D9VB3KY150-1

Change time using Up/Down button and enter.

- Unit setting

1. Display setting



35D9VB3KY49

Enter to display setting.

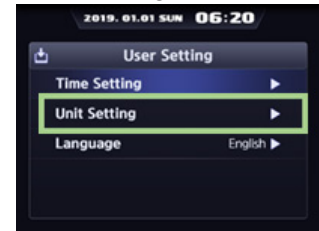
2. User setting



35D9VB3KY149

Choose User setting and enter.

3. Unit Setting



35D9VB3KY152

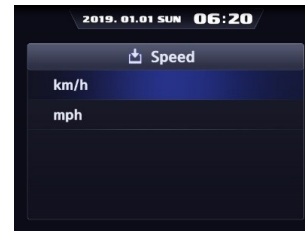
Enter to Unit setting.

3. Setting list



35D9VB3KY152

Select item which you want to set the unit.

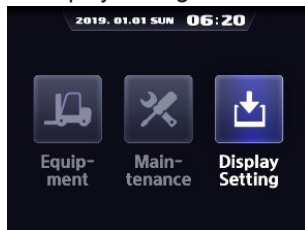


35D9VB3KY153

Select unit what you want to use.

- Language Setting

1. Display setting



35D9VB3KY49

Enter to display setting.

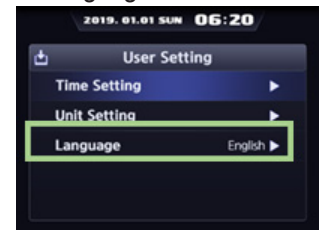
2. User setting



35D9VB3KY154

Choose User setting and enter.

3. Language



35D9VB3KY155-1

Enter to Language.

4. Select

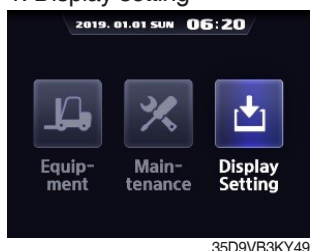


35D9VB3KY155

Select language.

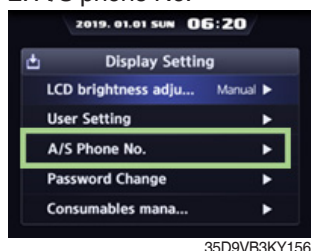
③ A/S phone No.

1. Display setting



Enter to display setting.

2. A/S phone No.



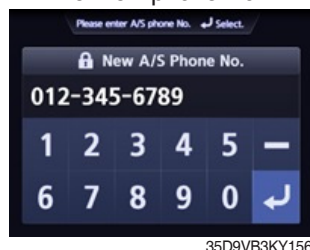
Choose A/S phone No. and enter.

3. Change A/S phone No.



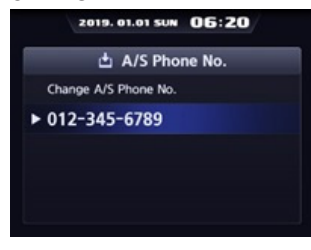
Select phone No. if you want to change.

4. Enter new phone No.



Enter new phone No. using up/down button and press enter button.

5. Finish



Contact will be displayed as the modified value.

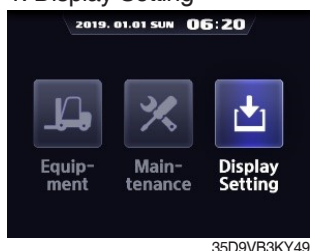
④ Password Change

- 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.

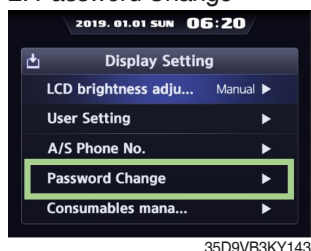
※ Since, if you forget the password, you must request the A/S, do not forget the password.

1. Display Setting



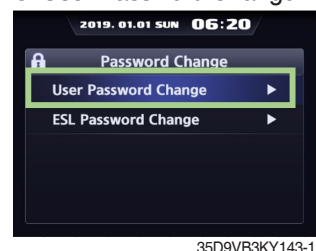
Enter to maintenance menu and type the password.

2. Password Change



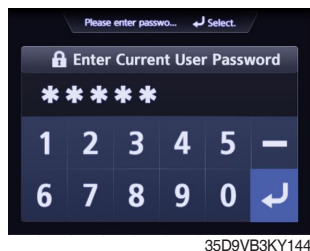
Choose Password Change and enter.

3. User Password Change



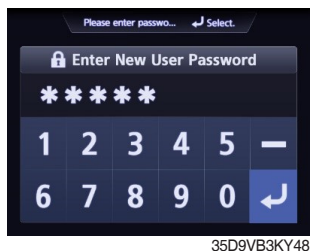
Choose User Password Change and enter.

4. Enter Current User Password



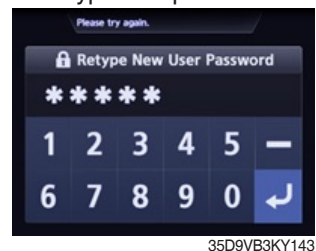
Enter current user password.

4. Enter New User Password



Enter new user password.

5. Retype new password



Enter new user password again.

- ESL Password Change

1. Display setting



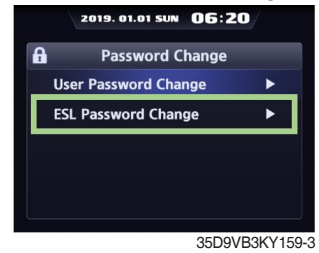
Enter to display setting.

2. Password change



Choose Password Change and enter.

3. ESL Password Change



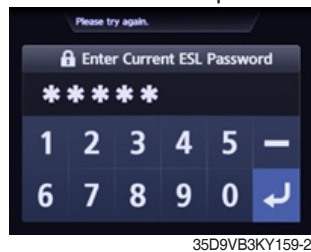
Choose ESL Password Change and enter.

4. Enter current ESL password.



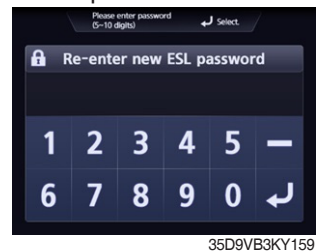
Enter current ESL password.

5. Enter new ESL password.



Enter new ESL password.

6. Completion



Enter New ESL Password again.

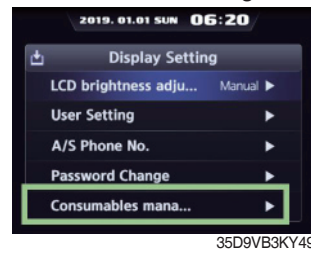
⑤ Consumables Management

1. Display setting



Enter to display setting.

2. Consumables management





Choose Consumables management.












3. Maintenance Management



Check the items that have passed the maintenance period.

8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

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

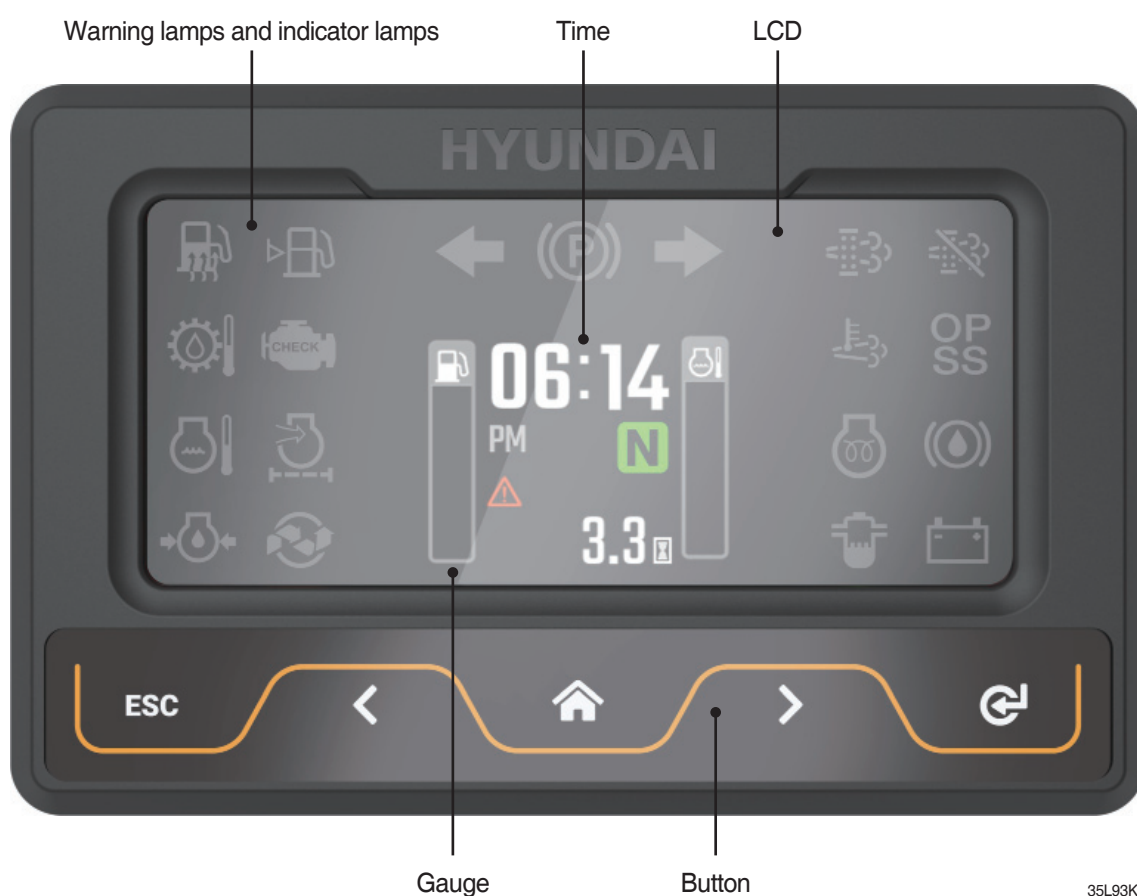
No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
18	Clutch protection warning		Clutch protection warning lamp	Clutch protection warning operation
19	Consumables replacement indicator		Consumables replacement indicator lamp	Consumables replacement cycle has been passed.
20	LH Turn indicator		LH Turning indicator lamp	-
21	RH Turn indicator		RH Turning indicator lamp	-
22	Forward gear		Forward gear indicator lamp	-
23	Reverse first gear		Reverse gear indicator lamp	-
24	Communication error warning (ECU)		Communication error warning lamp	Communication between cluster-CI and ECU has been failed. Check communication line.
25	DEF low warning		DEF low warning lamp	DEF level is low. Please fill the DEF.
26	Brake oil level warning		Brake oil level warning lamp	Brake oil level is low. Please refill the brake oil
27	Fingertip warning		Fingertip warning lamp	Check the fingertip.
28	Transimission warning		Transimission warning lamp	Check the transimission.

4-1. CLUSTER (25/30D-9VS, 35DN-9VS)

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.



35L93KY04

1 Speed meter

2 Fuel gauge

3 Coolant temperature gauge

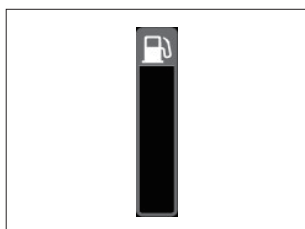
4 Operating time

(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 3-43-26.

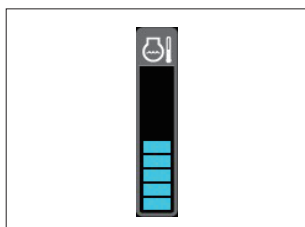
(3) Fuel gauge




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

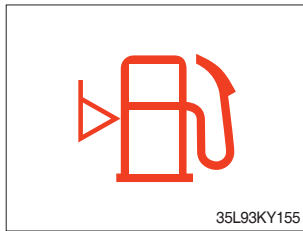


35L93KY08

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			

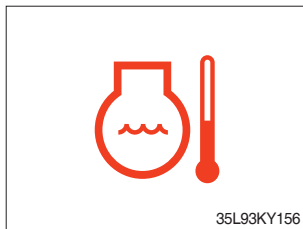
※ Warning and indicator lamp will display only items that were set as ON, and all warning and indicator will be displayed in the left or right side of screen. And directional indicator lamp will display at the center.

(1) Fuel level warning lamp



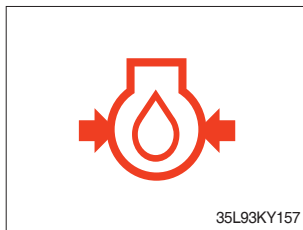
- Warning lamp will be displayed if fuel level is low.
- Please refuel immediately if the lamp is on.

(2) Coolant temperature warning lamp



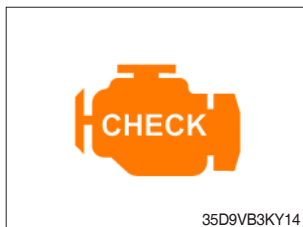
- Coolant temperature warning will lit up when temperature is over 115 °C (239 °F).
- If the warning lamp is on continuously, please inspect the coolant system.

(3) Engine oil pressure warning lamp



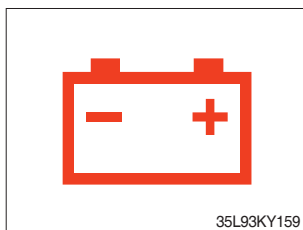
- This warning lamp will be lit up when engine oil pressure is low.
- Stop the engine immediately if the warning lamp is lit up.
- Please check the engine oil.

(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



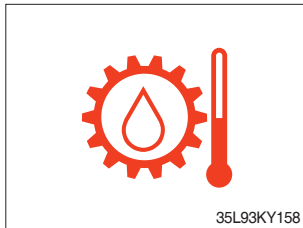
- This warning lamp is lit up when battery charging voltage is low.
- Please inspect the battery charging circuit if the warning lamp lights up.

(6) Communication error warning lamp



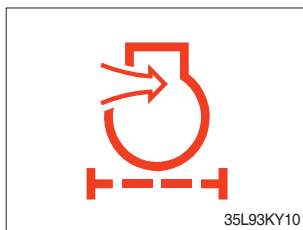
- This warning lamp will be lit up if the communication between MCU and ECU is fail.
- Please check the communication line if the warning lamp is lit up.

(7) Transmission oil temperature warning lamp



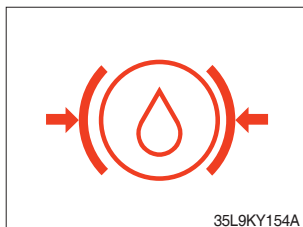
- Transmission oil temperature warning lamp will be lit up and flashing when temperature is 120 °C (248 °F) or higher.
- When this lamp lights up during operation, stop the engine and check the truck.

(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		

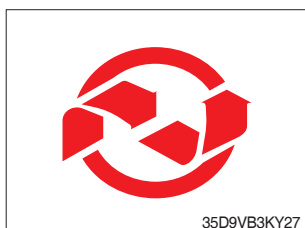
※ Warning and indicator lamp will display only items that were set as ON, and all warning and indicator will be displayed in the left or right side of screen. And directional indicator lamp will display at the center.

(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) 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 0-11 for details.

(6) Driving indicator lamp

① Neutral



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

② Forward



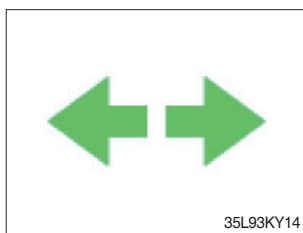
- This indicator lamp is displayed if the forward gear is selected.
- First gear will be displayed as **F₁** , and second gear will be displayed as **F₂** .

③ Reverse



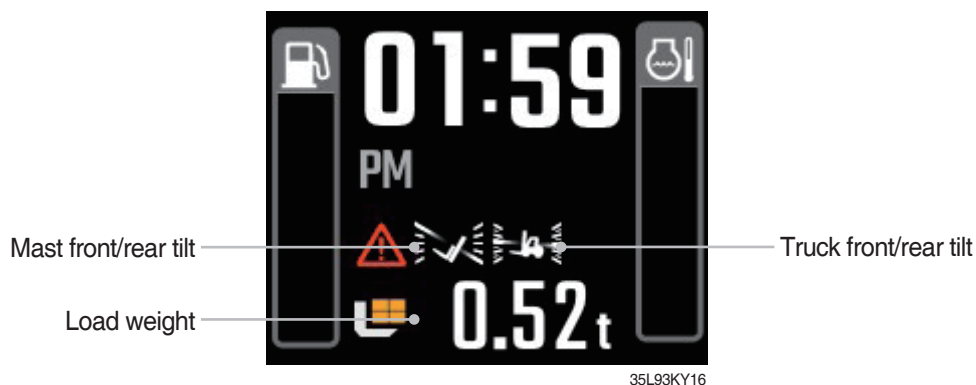
- This indicator lamp is displayed if the reverse gear is selected.

④ Right or left turning indicator lamp

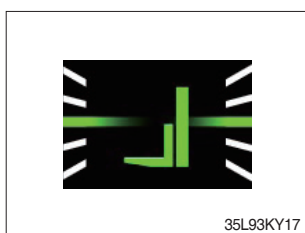


- This indicator lamp will flash if turns on the right or left turn signal.

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°
 - Driving : Tilt angle is higher than 10.2°

(3) Load weight



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

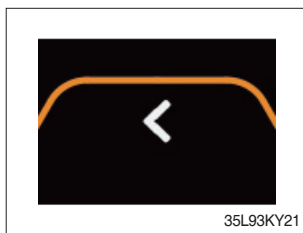
6) BUTTONS

(1) Enter (select)



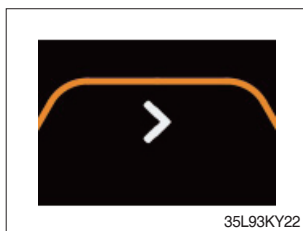
- This switch is used to enter into the menu or to select.

(2) UP/Left



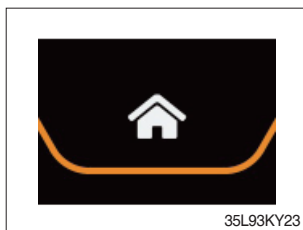
- This switch is used to move upward or leftward in menu or increase the value.

(3) Down/Right



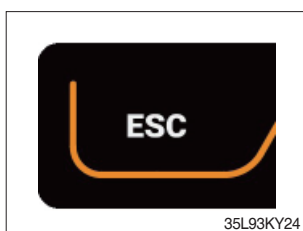
- This switch is used to move downward or rightward in menu or decrease the value.

(4) Menu or Home



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

(5) Cancel (ESC)



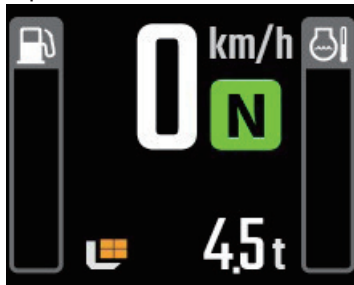
- This switch is used to cancel or move to upper menu.

7) MAIN MENU

(1) Structure

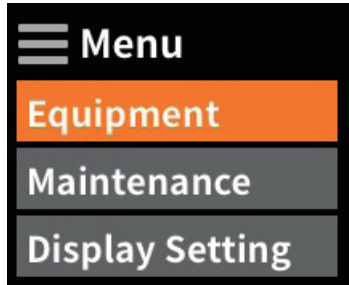
A menu consists of main menu and sub-menu.

Operation Screen



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Main Menu Screen

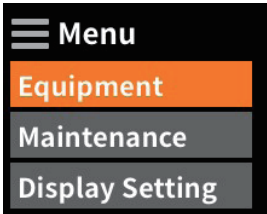
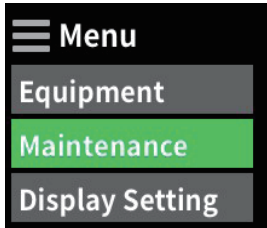
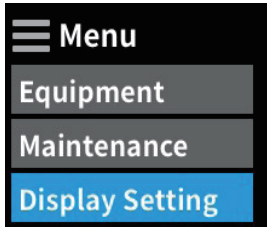


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Sub-Menu Screen



35L93KY27

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

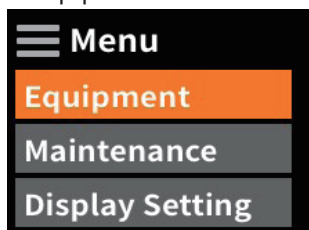
(2) Equipment menu

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



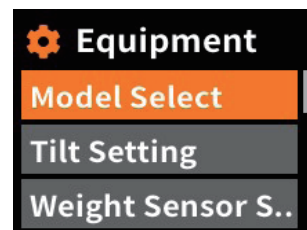
Enter to equipment menu.

2. Password



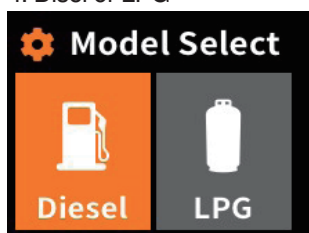
Enter the password.
Default password is "00000".
Password length must be 5~10 digits.

3. Model select



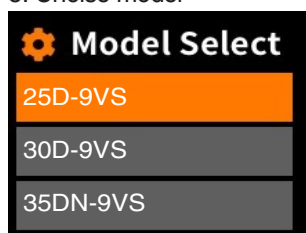
Choose model select

4. Diesel or LPG



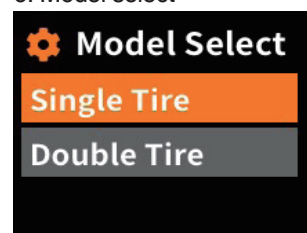
Please select the fuel type.

5. Choose model



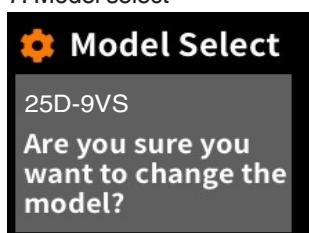
Select the your model.

6. Model select



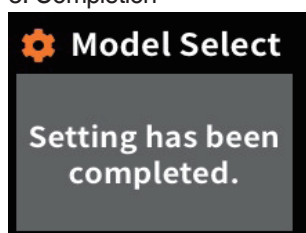
Select the your tire.

7. Model select



Change on select button.

8. Completion



- ※ 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.

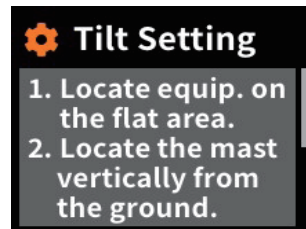
1. Tilt setting



35L93KY35

Choose tilt reset.

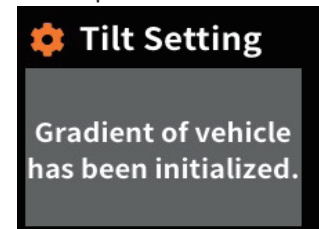
2. Instruction



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.

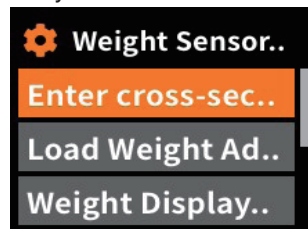
a. Setting cylinder cross section

1. Weight sensor setting



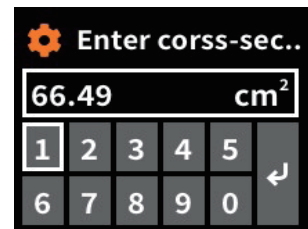
Choose weight sensor setting.

2. Cylinder cross-section



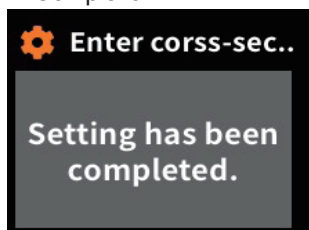
Choose Cylinder Cross-Section. If Cylinder Cross-Section is already set up, setting value is shown in initial screen.

3. Value



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

4. Completion



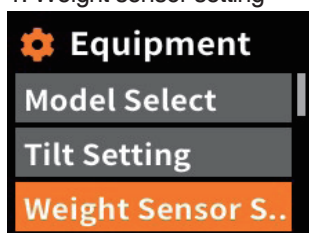
Setting has been completed.

※ Cross-section value

Model	V-mast	TF-mast	TS-mast	VF-mast	VS-mast	QF-mast
25/30D-9VS	39.3	44.2	47.5	56.7	56.6	88.4
35DN-9VS	47.5	56.7	56.6	56.7	56.6	88.4

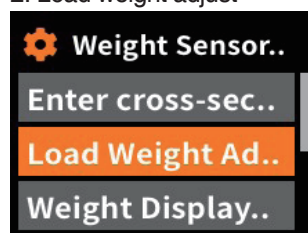
b. Unloaded status adjustment

1. Weight sensor setting



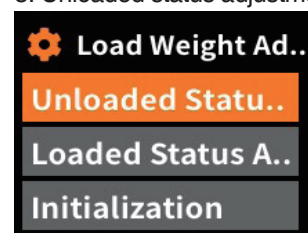
Choose weight sensor setting and enter.

2. Load weight adjust



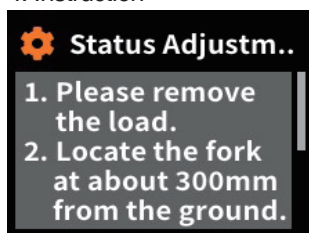
Choose load weight adjust and enter.

3. Unloaded status adjustment

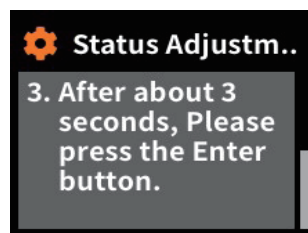


Choose unloaded status adjustment and enter.

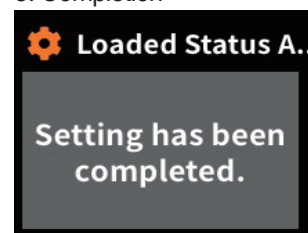
4. Instruction



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

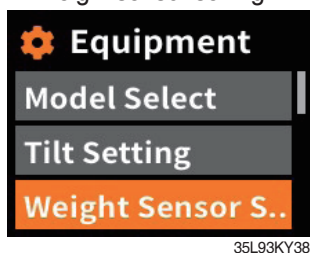


5. Completion



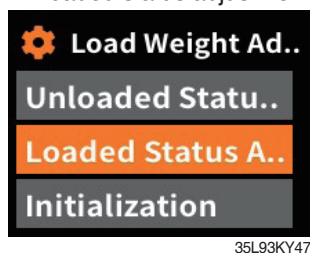
c. Loaded status adjustment

1. Weight sensor setting



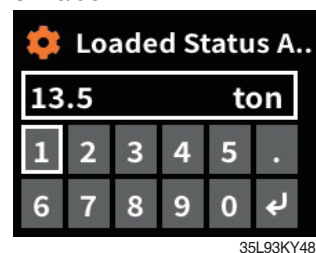
Choose weight sensor setting and enter.

2. Loaded status adjustment



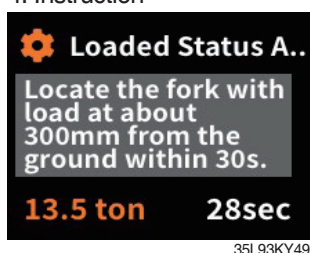
Choose loaded status adjustment and enter.

3. Value



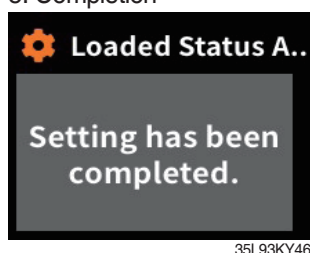
Enter load weight using up/down buttons.

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



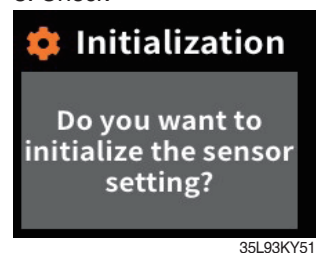
Choose weight sensor setting and enter.

2. Reset



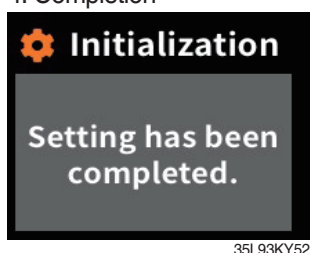
Enter to reset.

3. Check



Press the enter button.

4. Completion



e. Weight display

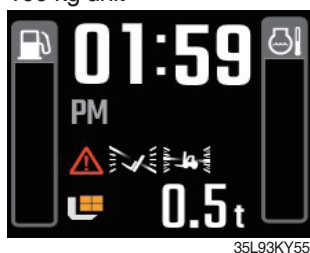
Enable to adjust the digit-number of weight of main screen. Weight will be displayed as 0.5 tons if set as 100 kg unit. Weight will be displayed as 0.52 tons if set as 10 kg unit.

1. Weight sensor setting

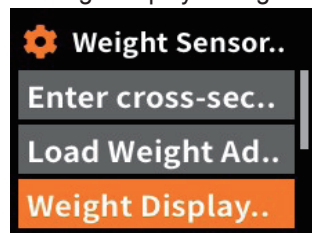


Choose weight sensor setting and enter.

100 kg unit

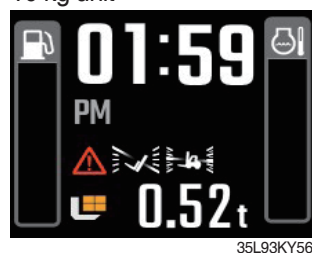


2. Weight display setting



Enter to weight display setting.

10 kg unit



3. Unit



Choose unit what you want to use.

f. Overload alarm

1. Weight sensor setting



Choose weight sensor setting and enter.

2. Overload alarm



Enter to overload alarm.

3. Select



Select on/off.

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

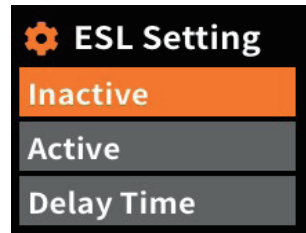
1. ESL setting



35L93KY59

Choose ESL setting and enter.

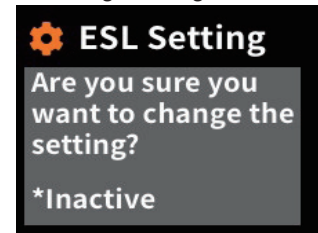
2. Inactive



35L93KY60

Choose inactive.

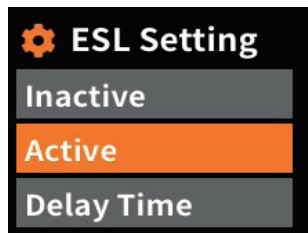
3. Change setting



35L93KY61

If you want to change setting, press enter button.

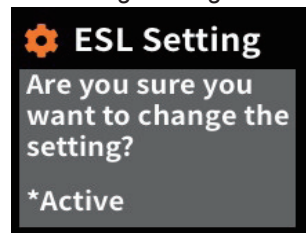
2-1. Active



35L93KY63

Choose active.

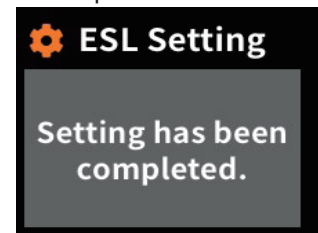
3-1. Change setting



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

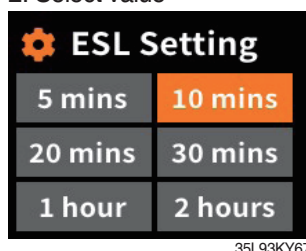
1. ESL setting



35L93KY66

Choose delay time.

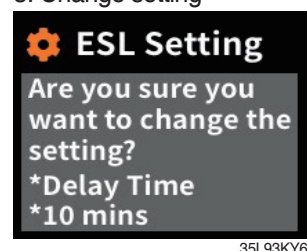
2. Select value



35L93KY67

Select value you want to apply.

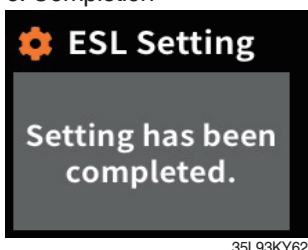
3. Change setting



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.**

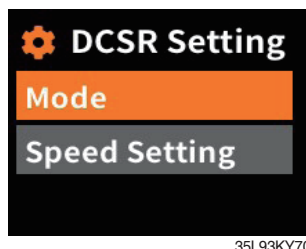
1. DCSR setting



35L93KY69

Choose DCSR setting and enter.

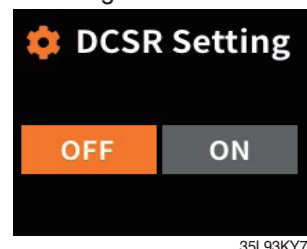
3. Mode



35L93KY70

Select mode.

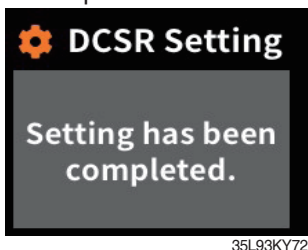
4. Setting



35L93KY71

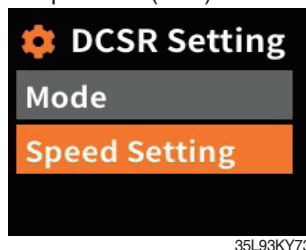
Select on/off.

5. Completion



35L93KY72

6. Speed set (auto)



35L93KY73

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

6. Set road speed



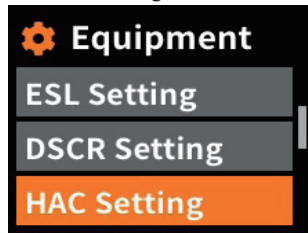
35L93KY74

⑥ HAC setting (option)

Set the mode ON. Below is how this feature functions.

- If you are trying to drive in stop status on hill, the truck does not move backward.

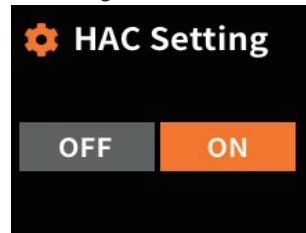
1. HAC setting



35L93KY75

Choose HAC setting.

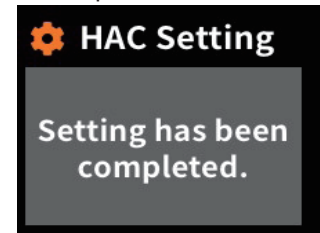
2. Setting



35L93KY76

Select on/off.

3. Completion



35L93KY77

⑦ Vehicle maximum speed limit

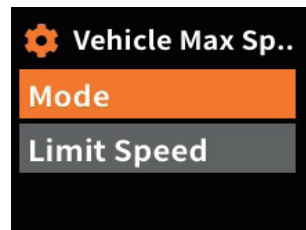
1. Vehicle max speed limit



35L93KY78

Choose vehicle max speed limit.

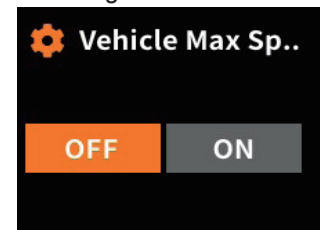
2. Mode



35L93KY79

Enter to mode function.

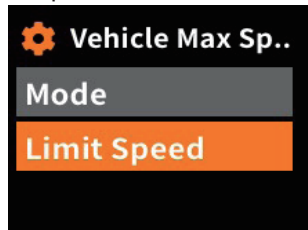
3. Setting



35L93KY80

Select on/off.

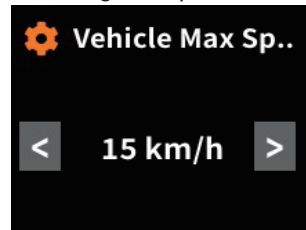
4. Speed limit



35L93KY81

Enter to limit speed menu.

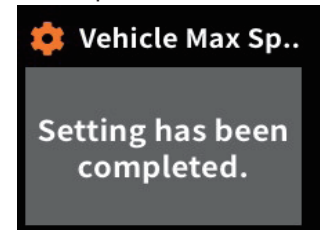
5. Setting limit speed



35L93KY82

Set limit speed.

6. Completion



35L93KY83

- Driving speed < 10 km/h



35L93KY84

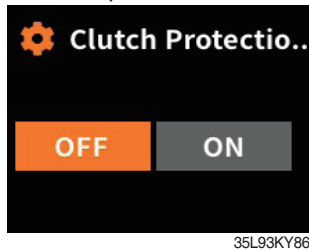
- Driving speed ≥ 10 km/h



35L93KY85

⑧ Clutch protection alarm

1. Clutch protection alarm



Choose clutch protection alarm.

2. Setting



Select on/off.

3. Completion



⑨ Zero start setting

1. Zero start setting



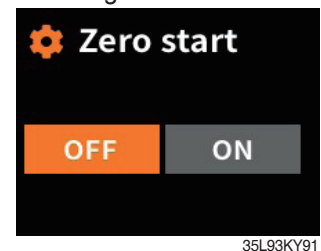
Choose zero start setting.

2. Mode



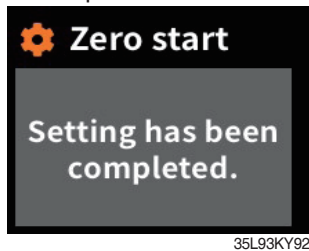
Enter to mode function.

3. Setting



Select on/off.

4. Completion



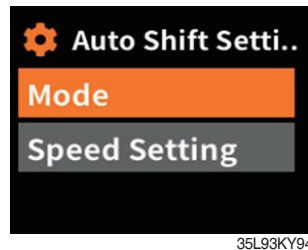
⑩ Auto shift setting

1. Auto shift setting



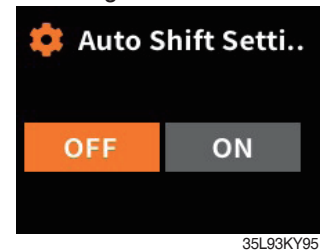
Choose auto shift setting.

2. Mode



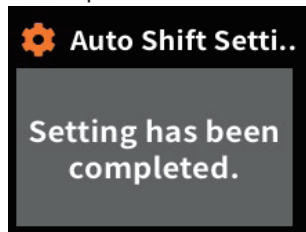
Enter to mode function.

3. Setting



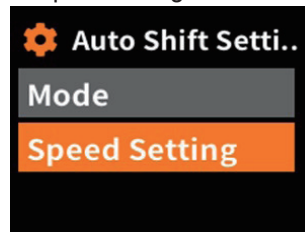
Select on/off.

4. Completion



35L93KY96

5. Speed setting



35L93KY97

Enter to speed setting.

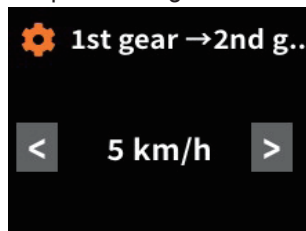
6. Gear shift setting



35L93KY98

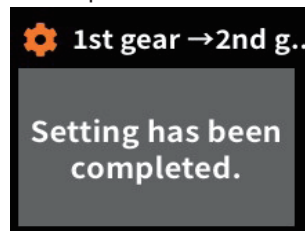
Select the desired change value.

7. Speed setting



35L93KY99

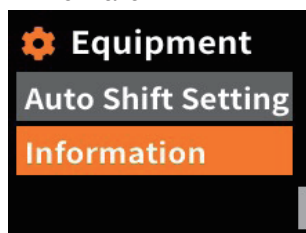
8. Completion



35L93KY100

⑪ Cluset information

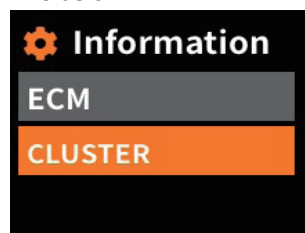
1. Information



35L93KY101

Choose information.

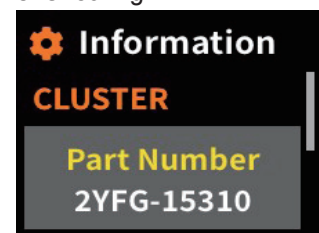
2. Cluster



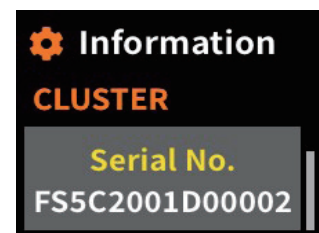
35L93KY102

Enter to cluster.

3. Checking.



35L93KY103

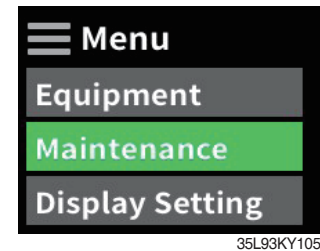


35L93KY104

(3) Maintenance

① Engine failure history

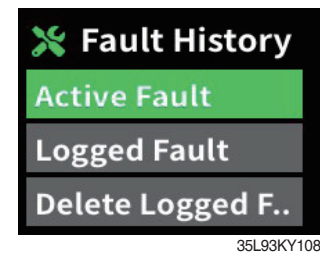
1. Maintenance



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.

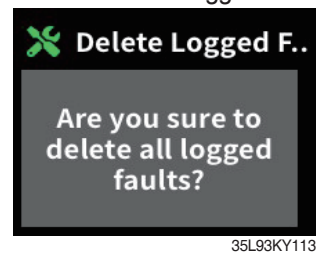
5. Check active fault



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.

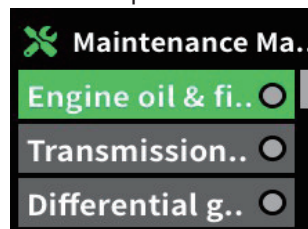
1. Maintenance mangement



35L93KY114

Choose maintenance management and enter.

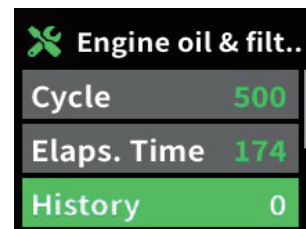
2. Select replacement item.



35L93KY115

Select the replace item.

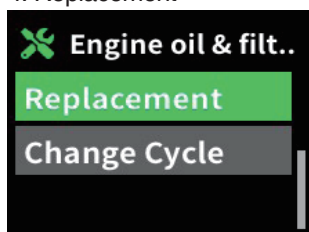
3. Check



35L93KY116

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

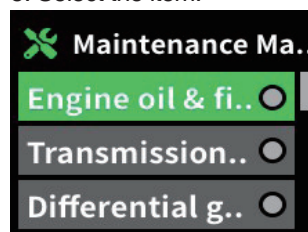
4. Replacement



35L93KY117

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

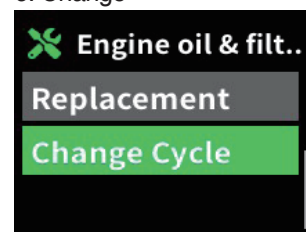
5. Select the item.



35L93KY118

Select the item you want to change maintenance interval.

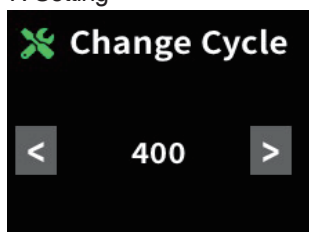
6. Change



35L93KY119

Select using Up/Down button and press enter button.

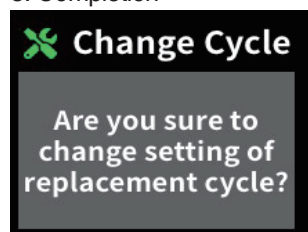
7. Setting



35L93KY120

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

8. Completion

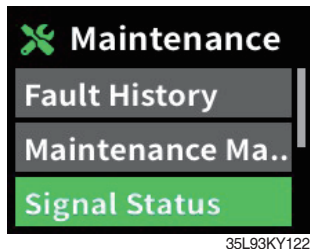


35L93KY121

③ I/O information

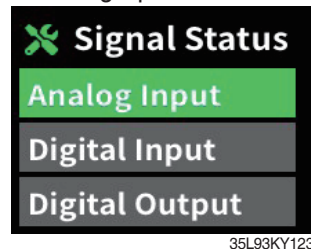
a. Analog input

1. I/O information



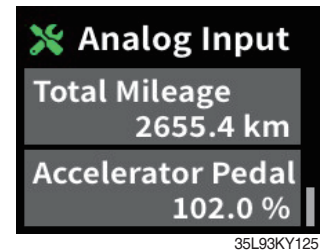
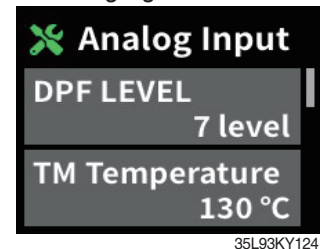
Choose I/O information.

2. Analog input



Enter to analog input.

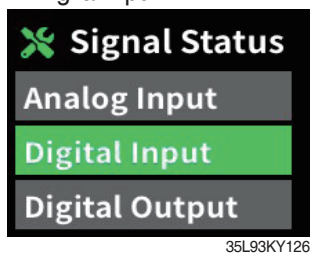
3. Analog signal list



You can check the analog signal list.

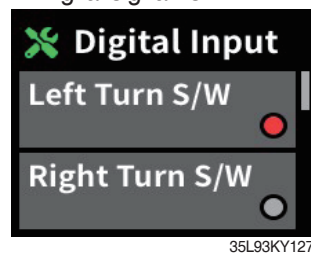
b. Digital input

1. Digital input

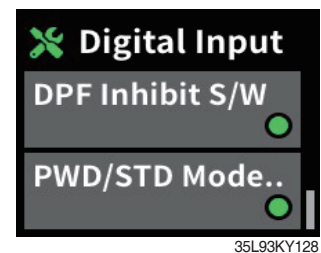


Enter to digital input.

2. Digital signal list

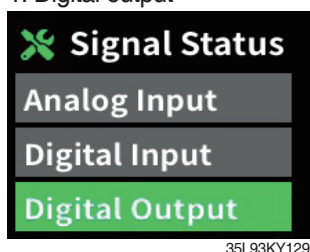


You can check the digital signal list.



c. Digital output

1. Digital output

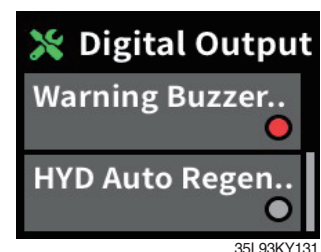


Enter to digital output.

2. Digital signal list



You can check the digital signal list.

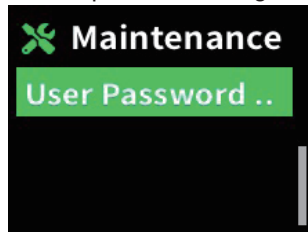


④ User password change

- 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.

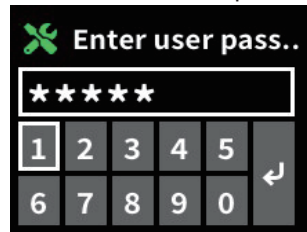
1. User password change



35L93KY132

Choose password change.

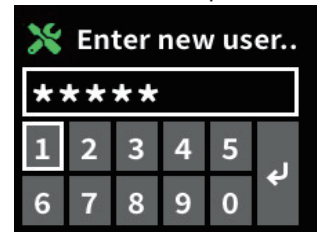
2. Enter current user password



35L93KY133

Enter current user password.

3. Enter new user password



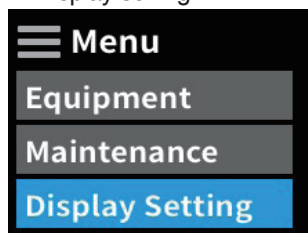
35L93KY134

Enter new user password.

(3) Display setting

① Time setting

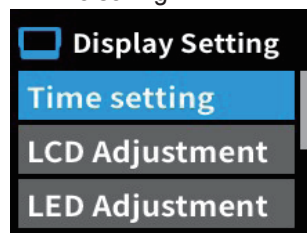
1. Display setting



35L93KY135

Enter to display setting.

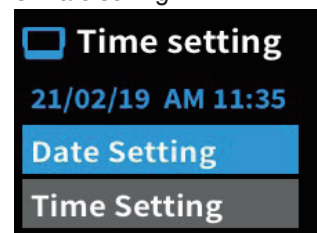
2. Time setting



35L93KY136

Choose time setting.

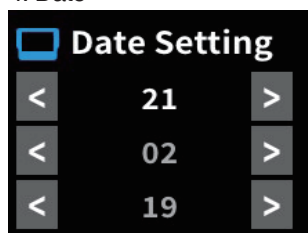
3. Date setting



35L93KY137

Choose date setting.

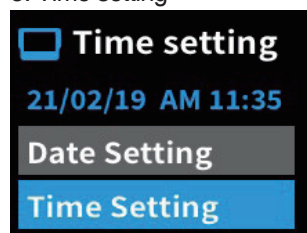
4. Date



35L93KY138

Change time using R/L button and enter button.

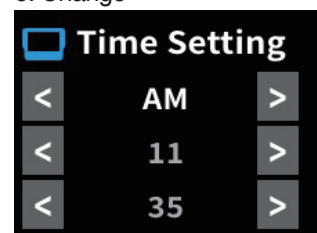
5. Time setting



35L93KY139

Choose time setting.

6. Change

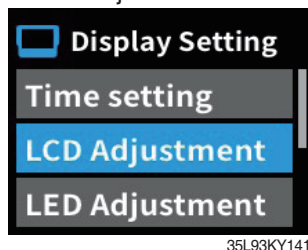


35L93KY140

Change time using R/L button and enter button.

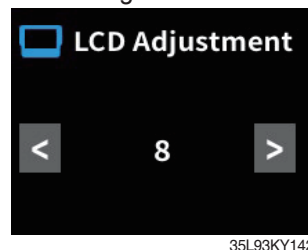
② LCD brightness adjustment

1. LCD adjustment



Choose LCD brightness adjustment

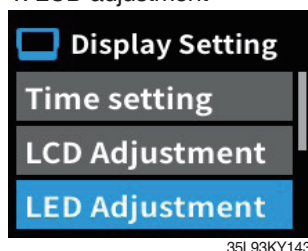
2. LCD brightness



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

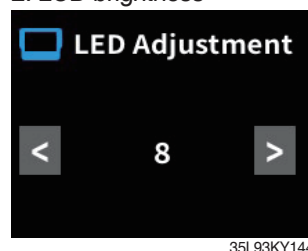
③ LED brightness adjustment

1. LCD adjustment



Choose LED brightness adjustment

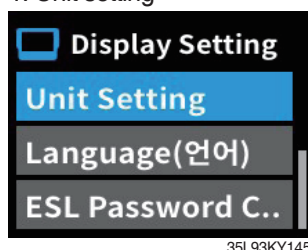
2. LCD brightness



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

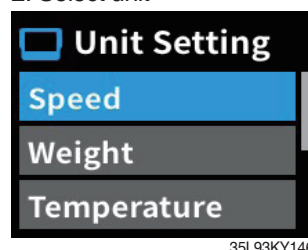
④ Unit setting

1. Unit setting



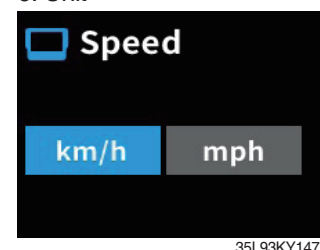
Enter to unit setting.

2. Select unit



Select the unit you want to change.

6. Unit



Select the unit.

⑤ Language

1. Language



Enter to language.

2. Select



Select language.

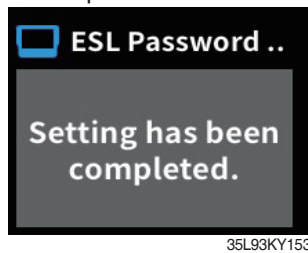
⑥ ESL password change

1. ESL password change



Enter ESL password change and enter.

4. Completion

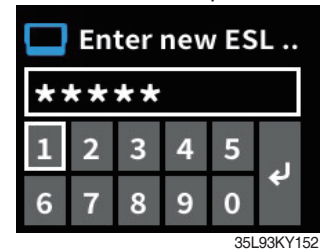


2. Enter current ESL password




Enter current user password.






3. Enter new ESL password



Enter new ESL password.

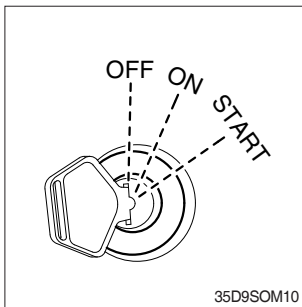
8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

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



There are three positions, OFF, ON and START.

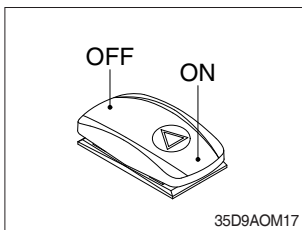
※ Before starting, set gear shift lever at NEUTRAL and press parking brake switch to LOCK position.

- OFF : None of electrical circuits activates.
- ON : All the electrical systems are ON.
- 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.

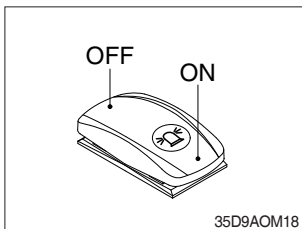
2) HAZARD LAMP SWITCH (option)



Use when emergency situation or while loading operation.

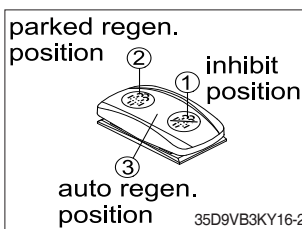
※ If the switch is left on for a long time while the engine does not run, the battery would be dead (discharged).

3) BEACON SWITCH (option)



This switch turn ON the rotary light.

4) REGENERATION SWITCH

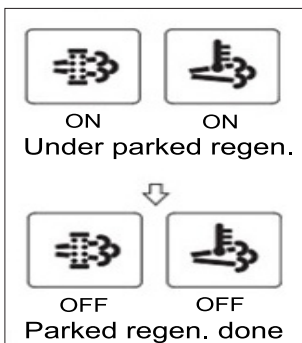


Inhibit position (①)

The inhibit position disallows any automatic or manual DPF regeneration. This may be used by operator to prevent DPF regeneration when the machine is operating in a hazardous environment and is concerned about high temperature. It is strongly recommended that the this position is only activated when high temperatures may cause a hazardous condition.

Auto Regeneration position (③)

This position will initiate a automatic DPF regeneration when needed.

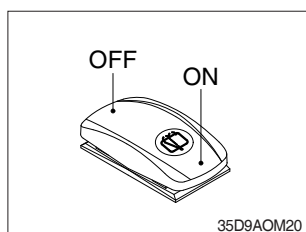


Parked Regeneration Position (②)

Parked regeneration applied if the machine is in a fireproof area and there is no plan to turn off.

- (1) Stop and park the machine (Must Parking brake switch ON)
- (2) Put the gear in neutral position and wait until coolant temperature reaches 65°C.
- (3) Push parked regeneration switch ON button 3 seconds to initiate the parked regeneration of DPF. The engine speed may increase up to 2000 rpm and DPF regeneration begins and it will take approximately 20~25 minutes.
- (4) The DPF regeneration and exhaust high temperature warning lamp will light ON during the regeneration function is operating
- (5) The DPF regeneration and/or exhaust high temperature warning lamp will light OFF when the regeneration function is done.

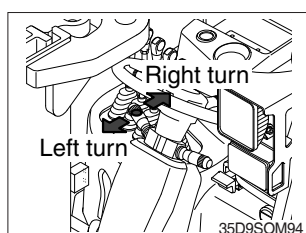
5) FRONT WIPER/WASHER SWITCH (option)



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

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

6) TURN SIGNAL SWITCH

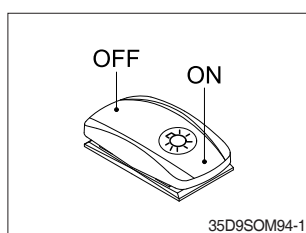


- (1) This lever makes the turn signal lamp flash.

- 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.**

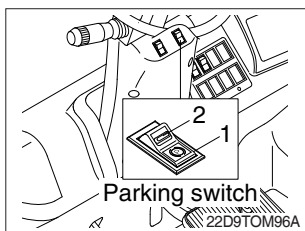
7) MAIN LIGHT SWITCH



This switch is used to operate the head lamp, clearance lamp and rear lamp by two steps.

- * First step : Head lamp and clearance lamp operates.
- * Second step : Head lamp, clearance lamp operates and rear lamp operates.

8) PARKING BRAKE SWITCH



(1) Position 1

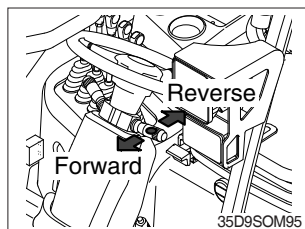
Parking brake is applied and front wheel is locked.

(2) Position 2

Parking brake is released.

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

9) FORWARD-REVERSE LEVER

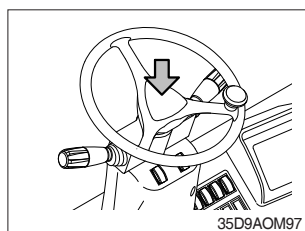


(1) Push lever for forward driving.

(2) Pull lever for reverse driving.

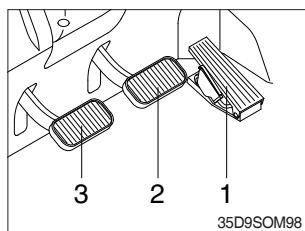
※ **When changing direction or speed, there can be some sound but it's nothing to do with performance.**

10) HORN BUTTON



(1) The horn sounds when the button is pressed.

11) PEDALS



(1) 1 : Accelerator pedal

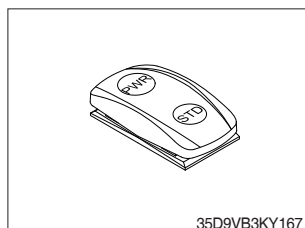
2 : Brake pedal

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) ENGINE MODE S/W



(1) This switch offers two selectable operating mode.

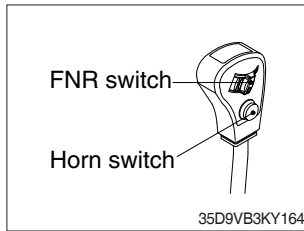
The operator can adjust the truck's performance with this selection switch.

(2) Function

① **STD MODE** : This mode provides maximum fuel efficiency for general loading.

② **PWR MODE** : This mode provides maximum power output for heavy loading or hill climb.

13) FNR AND HORN SWITCH (Option)



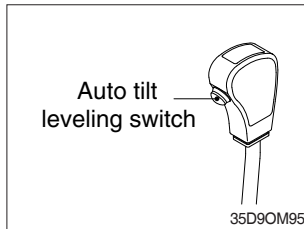
(1) FNR Switch

The operator can select direction of the truck by this switch.
F-N-R (Forward-Neutral-Reverse)

(2) Horn Switch

The Horn sounds when the button is pressed.

14) AUTO TILT LEVELING SWITCH (option)



(1) When the lever is operated on pressing this auto tilt leveling switch, the auto tilt leveling function is activated.

(2) Auto tilt leveling function

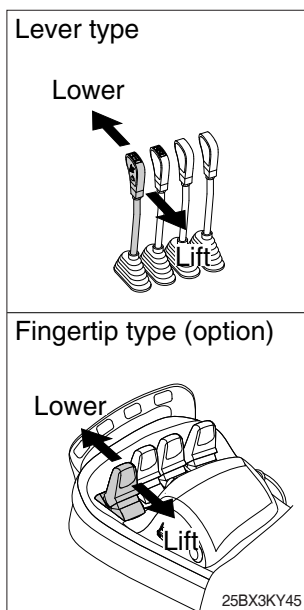
This function is mast tilt angle adjust to zero (0) degree (refer to the truck position).

※ This function have to be used at the engine low idle rpm and stop position. If this function is activated at the high idle rpm or during starts, do not guarantee the mast stop at upright vertical position.

※ Operate the auto tilt function with unload conditions.

⚠ When used in load condition, the load on the fork can fall down.

15) LIFT LEVER



(1) LIFT

PULL the lever (fingertip) BACK to LIFT the load.

(2) LOWER

PUSH the lever (fingertip) FORWARD to LOWER the load.

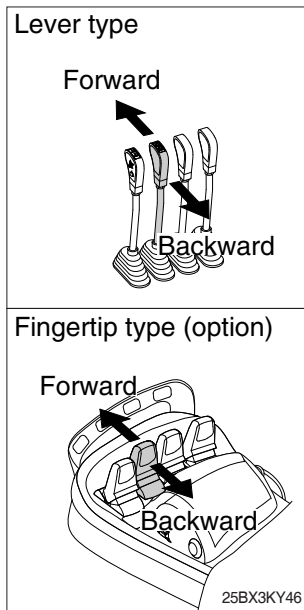
(3) HOLDING

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.

16) TILT LEVER



(1) TILT FORWARD

PUSH the lever FORWARD to tilt mast FORWARD.

(2) TILT BACK

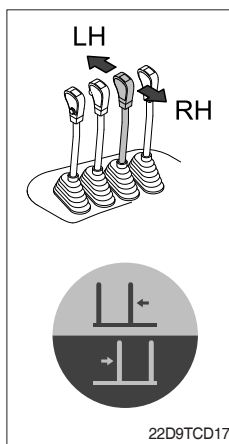
PULL the lever BACK to tilt mast BACKWARD.

(3) HOLDING

When the lever is released, tilting action stops.

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

17) LEVER FOR SIDE SHIFT



(1) LH MOVEMENT

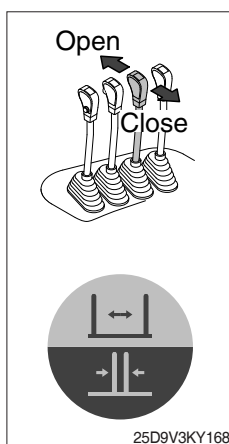
Push the lever forward to move the side shift to the left hand.

(2) RH MOVEMENT

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

18) LEVER FOR SIDE SHIFT WITH FORK POSITIONER

(1) Fork positioner (synchronizer type)



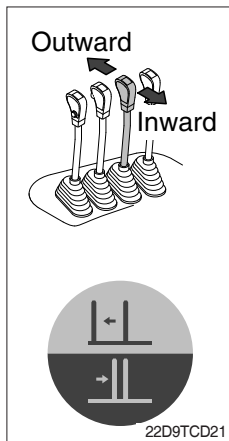
① OPEN THE FORKS

Push the lever forward to open both forks simultaneously.

② CLOSE THE FORKS

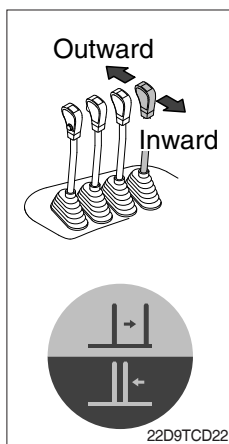
Pull the lever backward to close both forks simultaneously.

(2) Fork positioner (independent type)



① LH FORK MOVEMENT

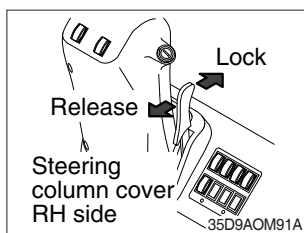
- Push the lever forward to move the LH fork outward.
- Pull the lever backward to move the LH fork inward.



② RH FORK MOVEMENT

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

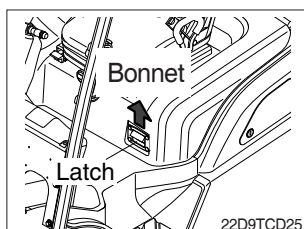
19) STEERING WHEEL LOCK LEVER



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

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

20) BONNET LATCH



- (1) Pull the latch and raise the bonnet to open it.
- (2) Inspection and maintenance can then be carried out easily.

6. REGENERATION SYSTEM

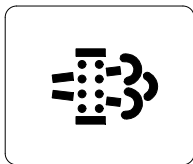
Regeneration

Particulate matter (mainly soot) filtered in DPF (diesel particulate filter) occurs poor performance caused by increasing exhaust gas pressure, incinerating process to convert from accumulated soot to ash is required. When emissions are accumulated in the DPF, regenerative operation is carried out on a regular basis. This process named regeneration.

The type of regeneration composes of automatic regeneration (active, auto-play by exhaust gas heat) and parked regeneration (passive play by the artificial aid).

- ▲ Sufficient automatic regeneration could reduce the frequency of parked regeneration.
- ▲ Regeneration generates hot exhaust and causes hot exhaust system components.
- ▲ Exhaust system components get very hot and can cause severe burns. Risk for fire.
- ▲ Do not touch the surface of the DPF muffler during or up to 40 minutes after operation.
- ▲ Do not perform regeneration in a flammable environment.

1) DPF (Diesel Particulate Filter) regeneration lamp

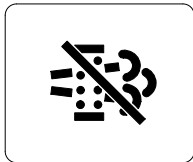


2609A3CD19

This warning lamp will light ON or blink during the regeneration function is operating.

- ※ Refer to page 3-11 for details.
- ※ The machine must be in a fireproof area during the entire regeneration process.

2) DPF (Diesel Particulate Filter) regeneration inhibit warning lamp

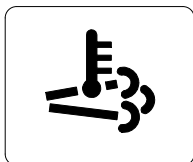


2609A3CD20

This warning lamp will light ON when the DPF switch is OFF position.

- ※ Refer to page 3-11 for details.

3) Exhaust high temperature warning lamp

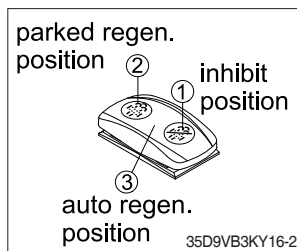


2609A3CD21

This warning lamp will light ON when the exhaust temperatures are high due to regeneration of the DPF.

- ※ Refer to page 3-11 for details.

4) DPF (DIESEL PARTICULATE FILTER) REGENERATION SWITCH



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

(2) Inhibit position (①)

- ① The inhibit position disallows any automatic or manual DPF regeneration.
- ② This may be used by operator to prevent DPF regeneration when the machine is operating in a hazardous environment and is concerned about high temperature.
- ③ It is strongly recommended that the this position is only activated when high temperatures may cause a hazardous condition.

(3) Auto regen. position (③)

This position will initiate a automatic DPF regeneration when needed.

(4) Parked Regeneration position (②)

This position will only initiate a manual DPF regeneration and the DPF regeneration lamp is illuminated.

HEST lamp will be illuminated during the entire DPF regeneration.

Refer to page 3-11 for details.

This switch can be move to the manual DPF regeneration position (②) only when the safety button is pulled to backward. Also, this switch return to the OFF position when released the manual DPF regeneration position (②).

5) DPF cleaning

Every 3000 hours.

※ **Refer to page 7-21 for details.**