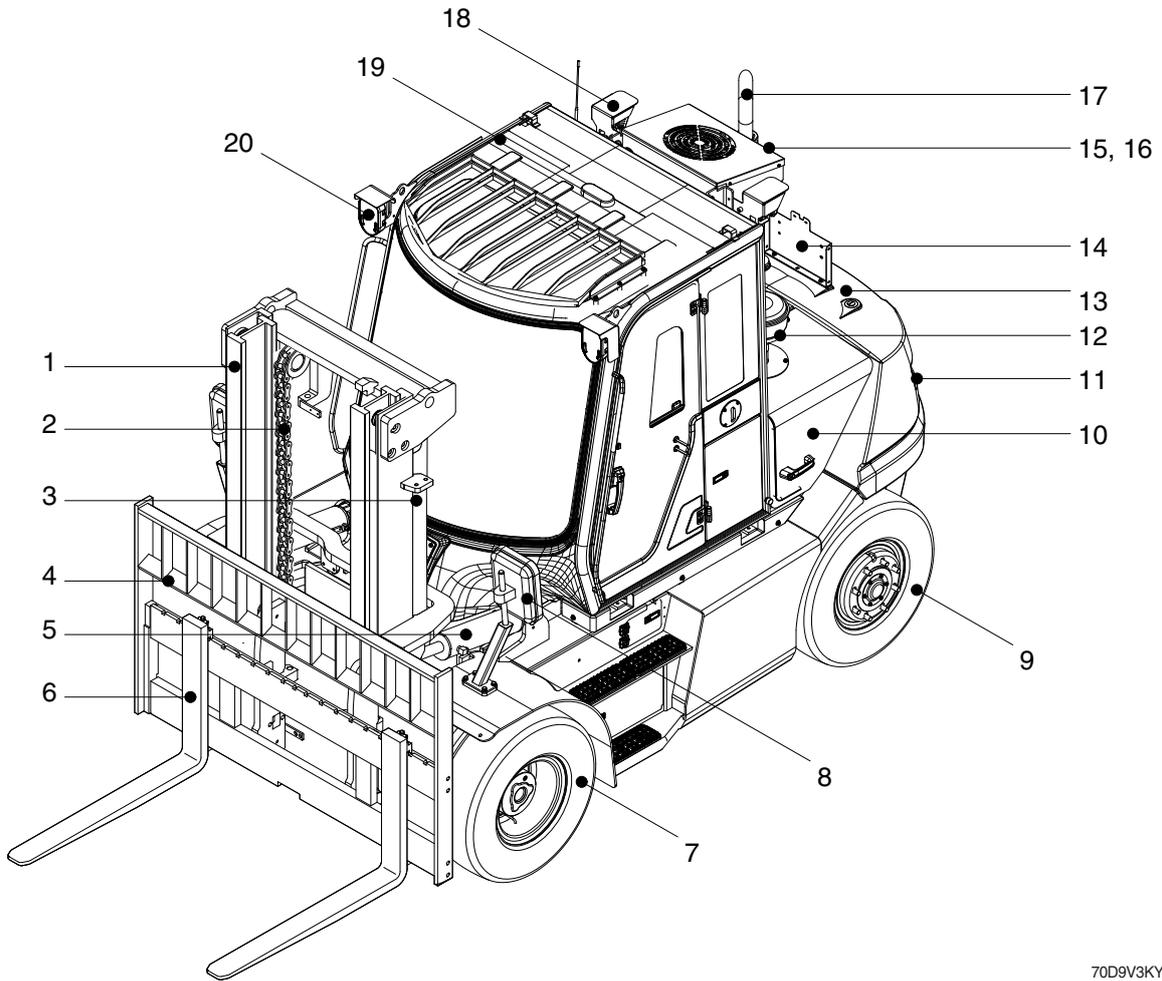


# 3. KNOW YOUR TRUCK

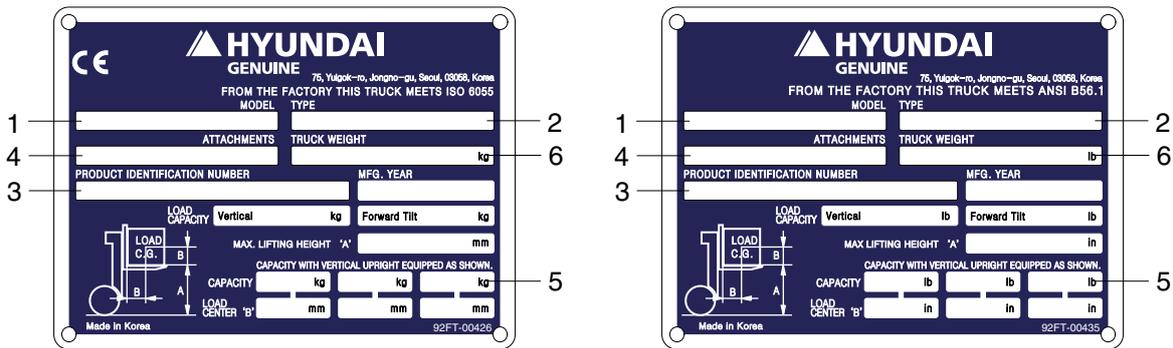
## 1. GENERAL LOCATIONS



70D9V3KY01

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

## 2. NAME PLATE



### 1) TRUCK MODEL NUMBER OR REGISTERED NAME

### 2) TRUCK TYPE

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

### 3) TRUCK SERIAL NUMBER

An identification number assigned to this particular truck and should be used when requesting information or ordering service parts for this truck from your authorized HYUNDAI dealer. The serial number is also stamped on the frame.

### 4) ATTACHMENT DESCRIPTION (IF ANY INSTALLED)

The user must see that the truck is marked to identify the attachment (s), including the weight of the truck/attachment combination and truck capacity with the attachment.

### 5) CAPACITY RATING, LOAD CENTER, AND LIFTING HEIGHT DATA

Shows the maximum load capacity of this truck with relation to load centers and fork heights (See diagram on plate). Personal injury and damage to the truck can occur if these capacities are exceeded.

Do not exceed the maximum capacity specified.

### 6) TRUCK WEIGHT

The approximate weight of the truck without a load on the forks. This weight plus the weight of the load must be considered when operating on elevators, elevated floors, etc. to be sure they are safe.

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

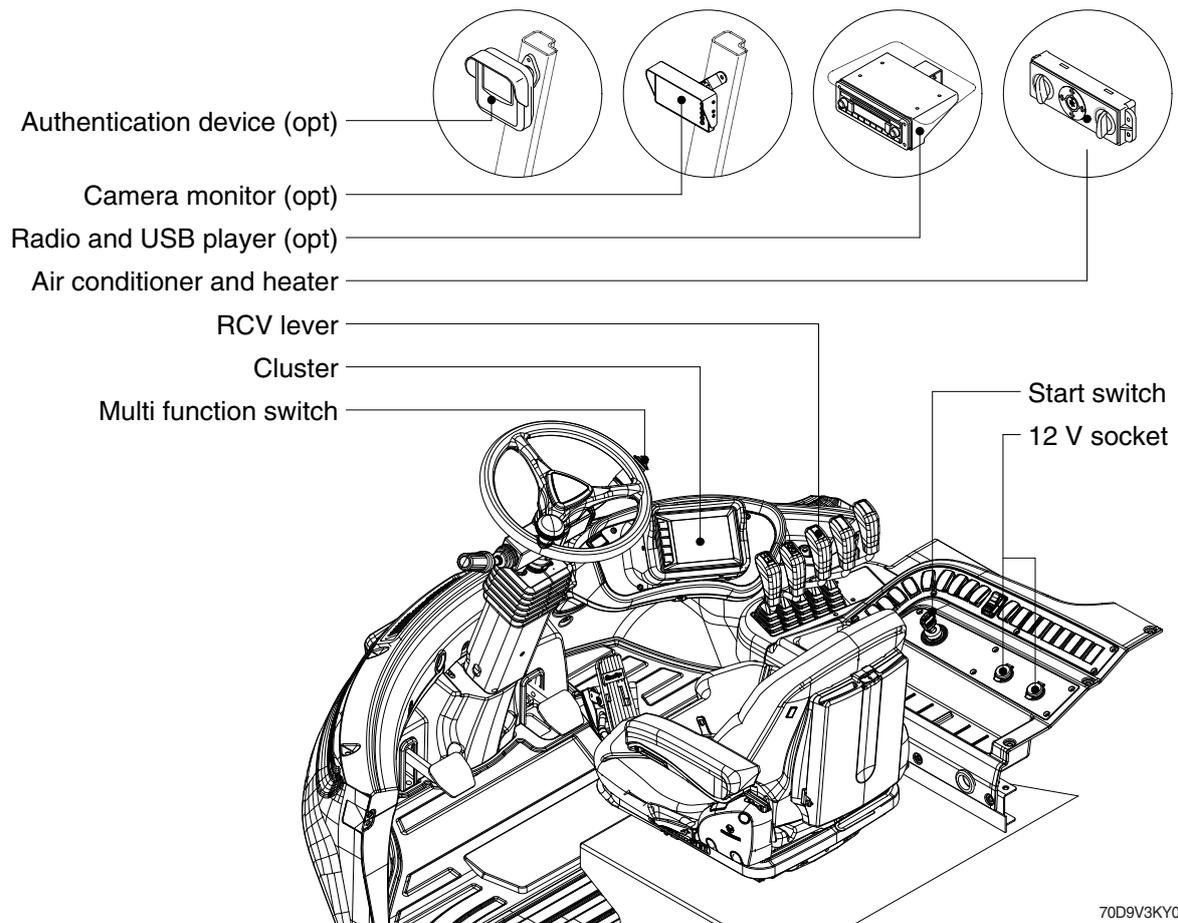
### 3. CAB DEVICES

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

#### 2) ELECTRONIC MONITOR SYSTEM

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

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



70D9V3KY02

## 4. CLUSTER

### 1) STRUCTURE

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

- ※ The cluster installed on this truck does not entirely guarantee the condition of the truck. Daily inspection should be performed according to chapter 7. PLANNED MAINTERNACNE AND LUBRICATION.
- ※ When the cluster provides a warning immediately check the problem, and perform the required action.



## 2) GAUGE

### (1) Operation screen

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



70D9V3KY30

- |   |             |   |                           |   |                                    |
|---|-------------|---|---------------------------|---|------------------------------------|
| 1 | Speed meter | 3 | Coolant temperature gauge | 5 | Transmission oil temperature gauge |
| 2 | Fuel gauge  | 4 | DEF gauge                 | 6 | 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 3-32.

### (3) Fuel gauge



70D9V3KY31

- 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



70D9V3KY32

- 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) DEF (Diesel Exhaust Fluid) gauge



70D9V3KY33

- This gauge indicates the level of DEF.
- Fill the DEF when the level is low.

### (6) Transmission oil temperature gauge



70D9V3KY34

- This range indicates the temperature of transmission oil.
  - White range : 40 ~ 109 °C (104 ~ 228 °F)
  - Amber range : 110 °C (230 °F) or higher
  - Red range : 120 °C (248 °F) or higher
- Keep idling engine at low speed until the indicator is in the operating range.
- If the indicator is in the red range, it means the transmission is overheated. Be careful that the indicator does not move into the red range.

### (7) Clock



35D9VB3KY07

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

### 3) WARNING LAMPS

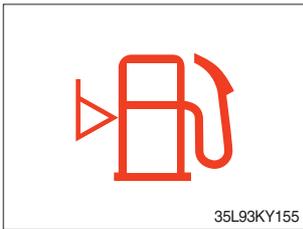


70D9V3KY35

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

No.	Warning lamp		No.	Warning lamp	
1		Fuel Level warning lamp	11		DPF inhibit warning lamp
2		Coolant temperature warning lamp	12		DPF high temperature warning lamp
3		Engine oil pressure warning lamp	13		Clutch protection warning lamp
4		Air cleaner warning lamp	14		Communication error warning lamp
5		Water in fuel warning lamp	15		DEF low warning lamp
6		Engine check warning lamp	16		Brake fail warning lamp
7		Engine stop warning lamp	17		SCR defect warning lamp
8		Battery charge warning lamp	18		DCU warning lamp
9		Transmission oil temperature warning lamp	19		Fingertip warning lamp
10		DPF regeneration warning lamp	20		Transmission warning lamp

### (1) Fuel level warning lamp



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

### (2) Coolant temperature warning lamp



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

### (3) Engine oil pressure warning lamp



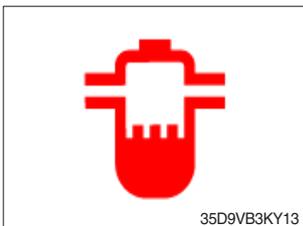
- This warning lamp will be lit up when engine oil pressure is low.
- Stop the engine immediately if the warning lamp is lit up. Please check the engine oil.

### (4) Air cleaner warning lamp



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

### (5) Water in fuel warning lamp



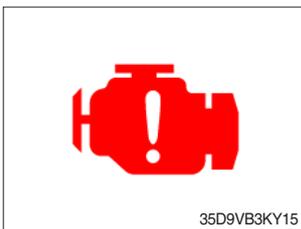
- Light up when water in fuel.
- Stop the engine and please drain the water of the fuel filter.

### (6) Engine check warning lamp



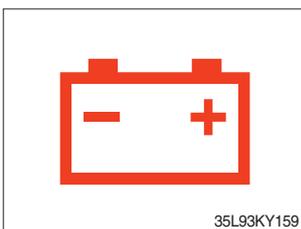
- When the engine is ON, it blinks for about 3 seconds. If the warning light remains on after 3 seconds, there is something wrong with the engine control, fuel supply and so on.
- Check the failure code of cluster.
- ※ **Some engine controls may not start if there is a problem.**
- ※ **Continued operation 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



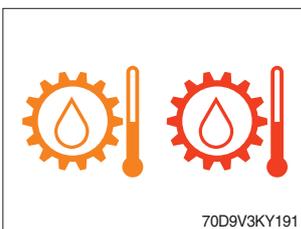
- If the lamp lights on, stop the engine immediately and check the engine.
- ※ **Please contact your Hyundai service center or local dealer.**

### (8) Battery charge warning lamp



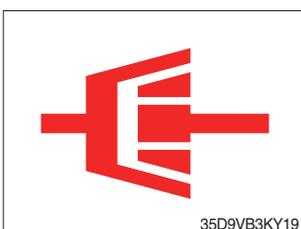
- This warning lamp is lit when battery charging voltage is low.
- Please inspect the battery charging circuit if the warning lamp is lit.

### (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) Communication error warning lamp



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

### (13) 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

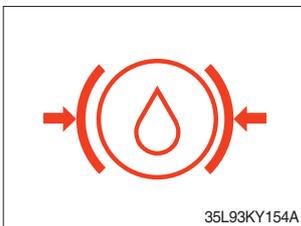
Level	Warning lamp				Stage of regeneration
	DPF inhibit	DPF regeneration	DPF high temp	Engine check	
					
Level 0 (No need regeneration)	On				Regeneration is not required.
Level 1 (Auto regeneration)	On				Automatic regeneration inhibit.
Level 2 (Request parked regeneration)	On	Blink			ECU requests 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.

### (14) DEF (Diesel Exhaust Fluid) low warning lamp



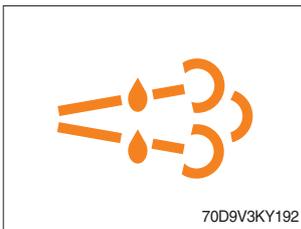
- This warning lamp indicates, when illuminated or flashing, that the diesel exhaust fluid level is low.
- ※ **Add the diesel exhaust fluid into DEF tank.**

### (15) Brake fail warning lamp



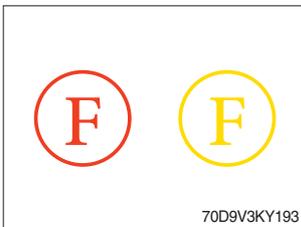
- The lamp lights ON when the oil pressure of service brake drops below the normal range.
- When the lamp is ON, stop the engine and check for its cause.
- ※ **Do not operate until any problems are corrected.**

### (16) DCU warning lamp



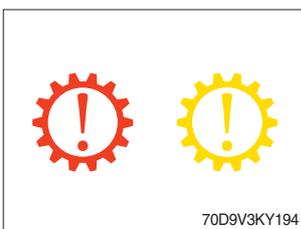
- If the lamp lights ON, check the engine.
- If the warning lights are lit while driving, stop the engine and check the forklift.

### (17) 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.

### (18) 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.

**(19)SCR (Selective Catalytic Reduction) system warning lamp**

The urea water system is an exhaust gas reduction system that uses urea to convert the remaining nitrogen oxides (NOx) in the exhaust gas into nitrogen and water. The urea consumption depends on the driving pattern and environment, so it is recommended to supplement it based on the time when the urea shortage warning light is turned on.

**① Warning system due to shortage of urea**

Setp	Urea residue	Warning lamp		Torque limit
		DEF low	SCR defect	
				
Warning	Less than 12 %	On	Off	X
Warning escalation	Less than 6 %	Blink	Off	X
Low level inducement	Less than 4 %		Blink	O
Severe level inducement	1 % or less		Off	X
Deactivation of inducement	12 % or over	Off	Off	X

**② Warning system due to defect of SCR system**

Setp	EGR valve clogging	Manipulation	Urea consumption deviation	Unsuitable urea	SCR defect warning lamp	Torque limit
						
Warning	Determine and activate defects				On	X
Low level inducement	36 hours after defect		10 hours after defect		Blink	O
Severe level inducement	100 hours after defect		20 hours after defect			
Deactivation of inducement	After 40 hours of repair, it is deactivated. If a defect occurs within 40 hours of engine operation after repair, In the case of low level inducement : Count from time of repair				X	X
	In the case of severe level inducement : Count from 95 hours		In the case of severe level inducement : Count from 18 hours			

#### 4) INDICATOR LAMPS

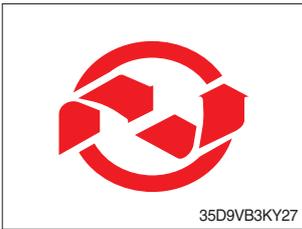


70D9V3KY36

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

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

### (1) Consumables management indicator lamp



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

### (2) Engine warm-up indicator lamp



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

### (3) Fuel warmer indicator lamp



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

### (4) Parking brake indicator lamp



- Light up when parking brake is ON.

### (5) Tilt lock indicator lamp (if installed)



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

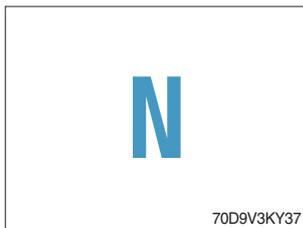
### (6) OPSS indicator lamp



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

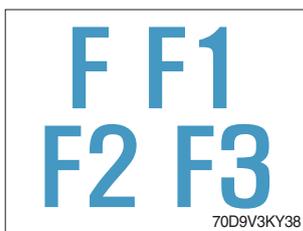
### (7) Driving indicator lamp

#### ① Neutral



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

#### ② Forward



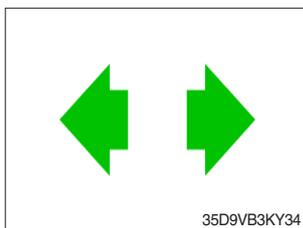
- This indicator lamp will be lit up if the forward gear is selected.

#### ③ Reverse



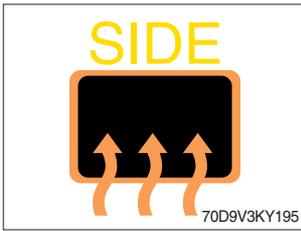
- This indicator lamp will be lit up if the reverse gear is selected.

### (8) Driving turn lamp



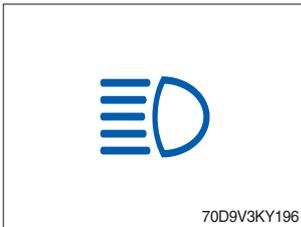
- This indicator lamp will flash if turns on the right or left turn signal.

**(9) Side mirror heated action indicator lamp**



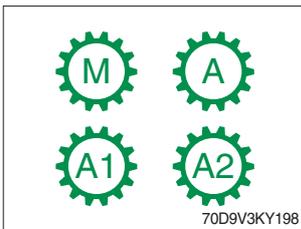
- This indicator is displayed when the heating switch is pressed.
- The heating operation is maintained for 10 minutes and canceled the operation when the switch is pressed again.

**(10) High beam indicator lamp**



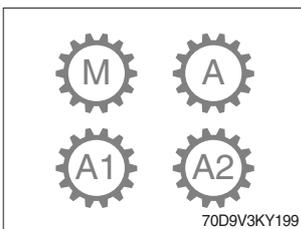
- This indicator is displayed when the vehicle's high beam is on.

**(11) 1st shift mode indicator lamp**



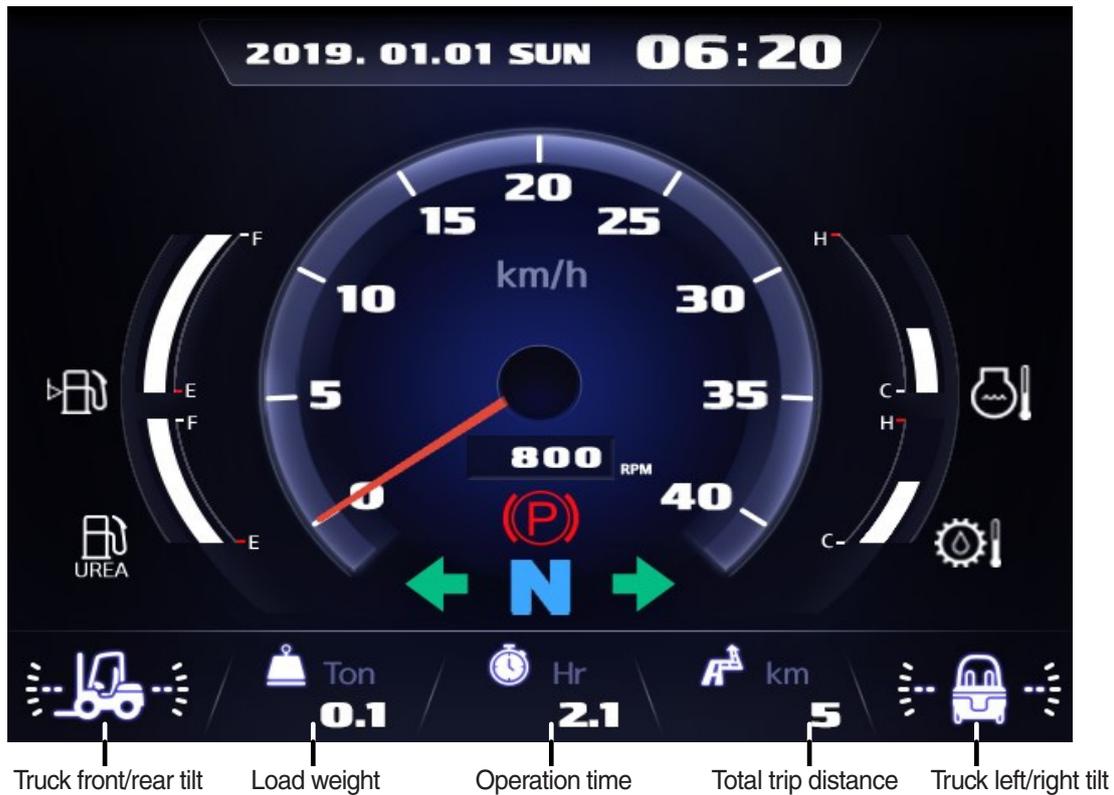
- This indicator shows the current vehicle's shift mode, A1 and A2 are indicated on vehicles with 2nd gear or higher.

**(12) 2nd shift mode indicator lamp**



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

## 5) INFORMATION DISPLAY



70D9V3KY40

### (1) Mast front/rear tilt



- Display the real time tilt of mast.

### (2) Truck front/rear tilt



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

### (3) Truck left/right tilt



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

#### (4) Load weight (option)



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

#### (5) Total trip distance



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

#### (6) Operation time



- Display the used time of the truck.

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

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

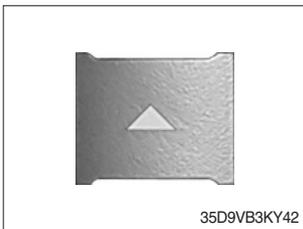
## 6) BUTTONS

### (1) Camera



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

### (2) UP/Left



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

### (3) Down/Right



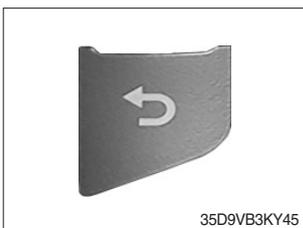
- This switch is used to move downward or rightward in menu or decrease the value.

### (4) Select



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

### (5) Cancel (ESC)



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

## 7) MAIN MENU

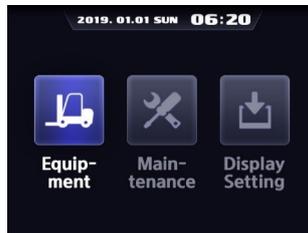
### (1) Structure

Menus consist of main menu and sub-menu.

Operation Screen



Main Menu Screen



Sub-Menu Screen



70D9V3KY42

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

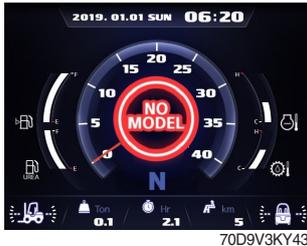
## (2) Equipment menu

### ① Model Select (a required setting)

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

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

#### 1. NO MODEL



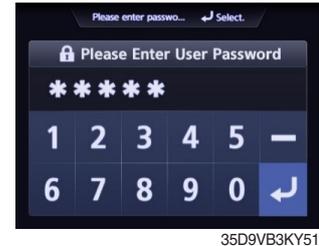
Select the your model.

#### 2. Equipment



Enter to Equipment.

#### 3. Password



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

#### 4. Model select



Choose Model Select and enter.

#### 5. Diesel or LPG



Please select the fuel type.

#### 6. Truck weight



Please select the truck weight level.

#### 7. Truck model



Please select the exact model name.

#### 8. Confirm



Confirm the model which you select.

#### 9. Completion



Model selection is completed.

#### 10. Check



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

## ② Tilt Setting

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

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

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

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

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

※ Mast maximum angle depends on the truck.

· Truck that has not applied the mast angle sensor

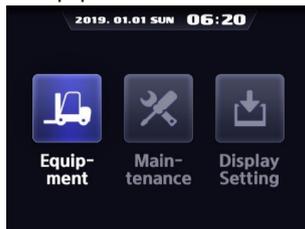


· Truck that has applied the mast angle sensor (option)



70D9V3KY49

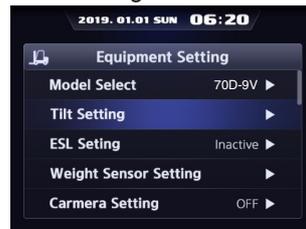
### 1. Equipment



35D9VB3KY47

Enter to Equipment.

### 2. Tilt setting



70D9V3KY50

Choose Tilt Setting and enter.

### 3. Instruction



70D9V3KY51

Follow the instruction showing in the screen.

### 4. Completion



70D9V3KY52

Setting has been completed.

### b. Check functions

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

#### b) Auto-leveling (if installed)

(a) Tilt mast forward or backward.

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

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

#### c) Forward or backward truck tilt warning (red)

· Stop :  $\pm 2.3^\circ$  (1.5 tons ~ 5.0 tons)

· Driving :  $\pm 10.2^\circ$  (1.5 tons ~ 5.0 tons)

d) Left or right truck tilt warning (red)

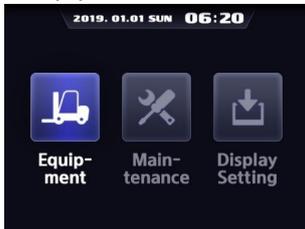
- Stop :  $\pm 3.4^\circ$  (1.5 tons ~ 5.0 tons)
- Driving

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

a. Setting

1. Equipment



Enter to Equipment.

2. ELS Setting



Choose ESL setting and enter.

3-1. Inactive



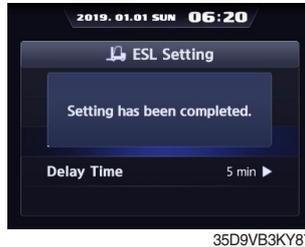
Choose Inactive.

4. Change setting



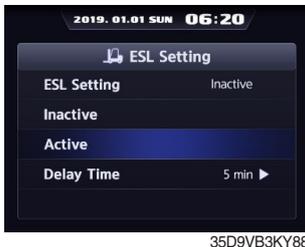
If you want to change setting, press enter button.

5. Completion



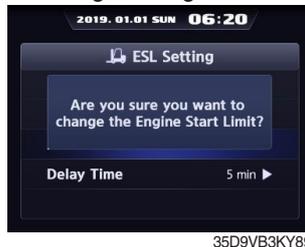
Setting has been completed.

3-2. Active



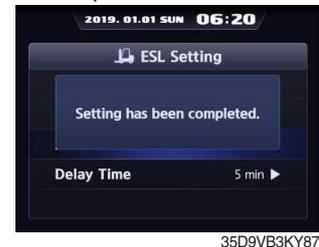
Choose Active.

4. Change setting



If you want to change setting, press enter button.

5. Completion



Setting has been completed.

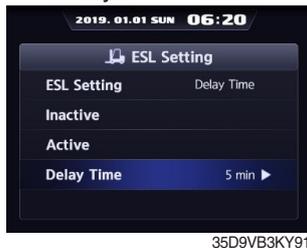
## b. Check functions

- a) The active mode can be set when engine is starting. (cf. inactive mode can change any time.)
  - 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 minutes of delay time and start switch OFF.
  - d) Check if truck can start within 5 minutes and start switch OFF.
  - e) Check if truck requests password after 5 minutes.
- ※ Start switch ON screen (When startup control mode is ON)



## c. Delay Time

### 3-3. 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.

#### ④ Weight Sensor Setting (option)

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

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

##### a. Setting Cylinder Cross-Section

※ Cylinder cross-section value

unit : cm<sup>2</sup>

Model	V-mast	TF-mast	TS-mast
70D-9V	113.49	132.73	141.76
80D-9V			

· Truck that has not applied the weight sensor

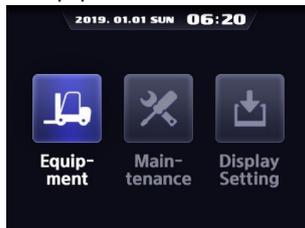


· Truck that has applied the weight sensor (option)



70D9V3KY53

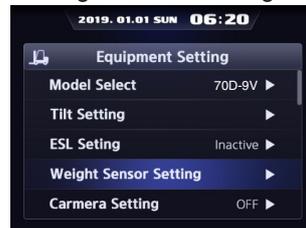
#### 1. Equipment



35D9VB3KY47

Enter to Equipment.

#### 2. Weight Sensor Setting



70D9V3KY56

Choose Weight Sensor Setting and enter.

#### 3-1. Cylinder Cross-Section



70D9V3KY57

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

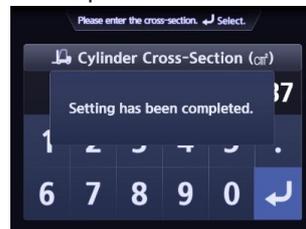
#### 4. Value



35D9VB3KY66

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

#### 5. Completion



35D9VB3KY67

Setting has been completed.

#### 6. Check

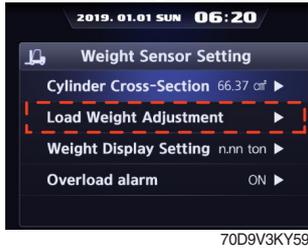


70D9V3KY58

Check the value whether it is right.

## b. Unloaded status adjustment

### 3-2. Load Weight Adjustment



Choose Load Weight Adjustment and enter.

### 4-1. Unloaded Status Adjustment



Choose Unloaded Status Adjustment and enter.

### 5. Instruction



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

### 6. Completion

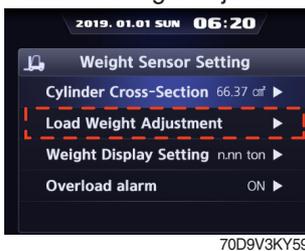


Setting has been completed.

## c. Loaded status adjustment

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

### 3-2. Load Weight Adjustment



Choose Load Weight Adjustment and enter.

### 4-2. Loaded Status Adjustment



Choose Load Weight Adjustment and enter.

### 5. Value



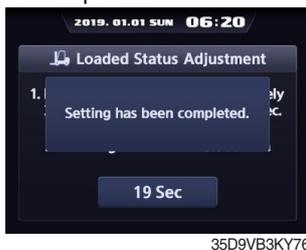
Enter load weight using up or down buttons.

### 5. Instruction



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

### 6. Completion



Setting has been completed.

#### d. Reset

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

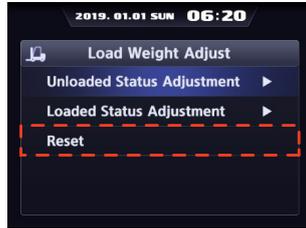
##### 3-2. Load Weight Adjustment



70D9V3KY59

Choose Load Weight Adjustment and enter.

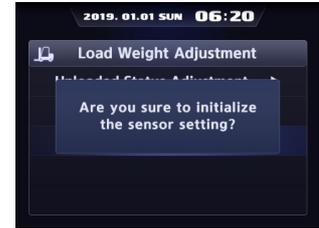
##### 4-3. Reset



70D9V3KY62

Enter to Reset.

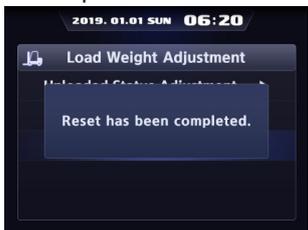
##### 5. Check



70D9V3KY63

Press the enter button.

##### 6. Completion



70D9V3KY64

Reset has been completed.

#### e. Weight Display Setting

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

##### 3-3. Weight Display Setting



70D9V3KY65

Choose weight sensor setting and enter.

##### 4. Unit



35D9VB3KY81

Choose unit what you want to use.

##### 5. Completion



35D9VB3KY80

Setting has been completed.

· 100 kg unit



70D9V3KY66

· 10 kg unit



70D9V3KY67

## f. Overload Alarm

### 3-4. Overload alarm



70D9V3KY68

Enter to Overload alarm.

### 4. Select



35D9VB3KY81

Select ON or OFF.

### 5. Completion



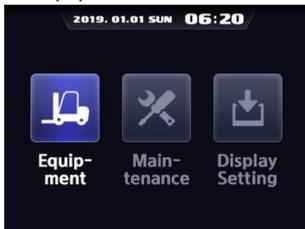
35D9VB3KY80

Setting has been completed.

## ⑤ Camera Setting (if installed)

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

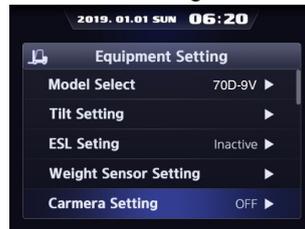
### 1. Equipment



35D9VB3KY47

Enter to Equipment.

### 2. Camera Setting



70D9V3KY69

Choose Camera Setting and enter.

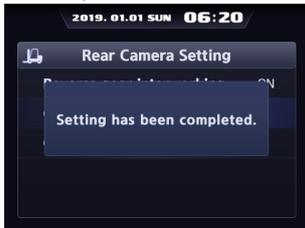
### 3. Reverse gear interworking



70D9V3KY70

Select ON or OFF.

### 4. Completion



70D9V3KY71

Setting has been completed.



35D9VB3KY98

## ⑥ FingerTips Setting (option)

### a. Lever Position Setting

#### 1. Equipment



Enter to Equipment.

#### 2. FingerTips Setting



Choose FingerTips Setting and enter.

#### 3-1. Lever Position Setting



Choose Lever Position Setting and Enter

#### 5. Setting



Set minimum and maximum value.

### b. Lever Dead Zone Setting

#### 3-2. Lever Dead Zone Setting



Choose Lever Dead Zone Setting and enter.

#### 4. Setting



Set lever dead zone range.

### c. Valve setting

#### 3-3. Valve Setting



Choose Valve Setting and enter.

#### 4. Lift Section Valve



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

#### 5. Setting.



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

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

### 1. Equipment



Enter to Equipment.

### 2. CSC Setting



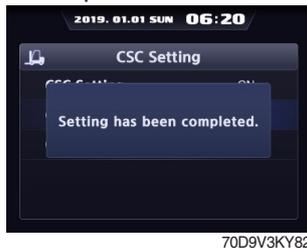
Choose CSC setting and enter.

### 3. Select



Select ON or OFF.

### 5. Completion



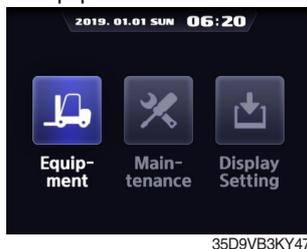
Setting has been completed.

## ⑧ Auto Shift Setting (if installed)

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

### a. Mode Select

#### 1. Equipment



Enter to Equipment.

#### 2. Auto Shift Setting



Choose Auto Shift setting and enter.

#### 3-1. Mode Select



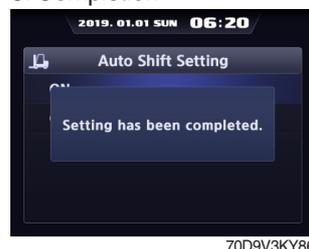
Choose Mode Select.

#### 4. Select



Select ON or OFF.

#### 5. Completion



Setting has been completed.

## b. Speed Setting

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

### 3-2. Speed Setting



Choose Speed Setting and enter.

### 4. Adjustment



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

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

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

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

### 1. Equipment



Enter to Equipment.

### 2. DCSR Setting



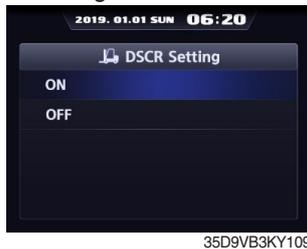
Choose DCSR setting and enter.

### 3. Mode Select



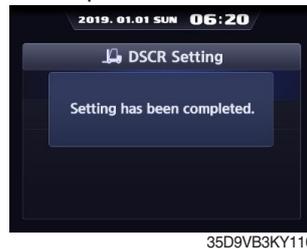
Select Mode Select.

### 4. Setting



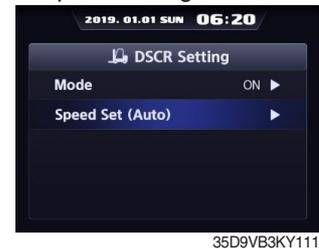
Select ON or OFF.

### 5. Completion



Setting has been completed.

### 6. Speed Setting



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

### 7. Drive Speed



Change speed.

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

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

### 1. Equipment



Enter to Equipment.

### 2. HAC Setting



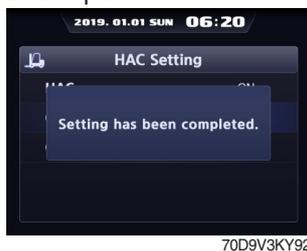
Choose DCSR setting and enter.

### 3. Select



Select ON or OFF.

### 5. Completion



Setting has been completed.

## ⑪ Vehicle Max Speed Limit

### 1. Equipment



Enter to Equipment.

### 2. Vehicle Max Speed Limit



Choose Vehicle Max Speed Limit and enter.

### 3. Mode



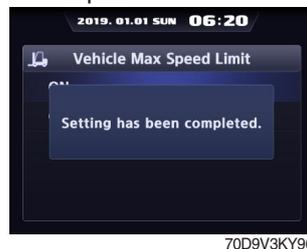
Enter to Mode.

### 4. Select



Select ON or OFF.

### 5. Completion



Setting has been completed.

· Limit speed : 10 km/h



The truck does not exceed the limit speed.

## ⑫ Zero Start Setting (if installed)

### 1. Equipment



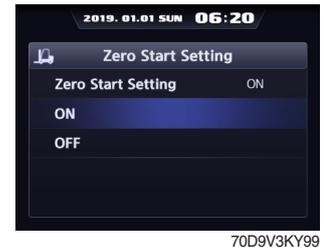
Enter to Equipment.

### 2. Zero Start Setting



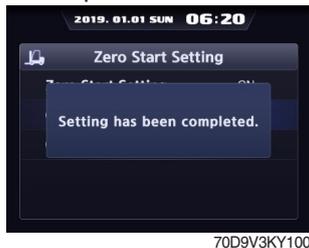
Choose Zero Start Setting and enter.

### 3. Select



Select ON or OFF.

### 4. Completion



Setting has been completed.

## ⑬ Clutch Protection Beep (if installed)

### 1. Equipment



Enter to Equipment.

### 2. Clutch Protection Beep



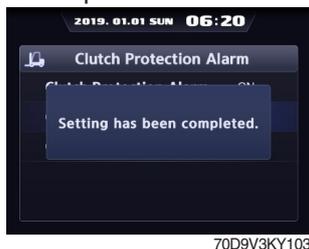
Choose Clutch Protection Beep and enter.

### 3. Select



Select ON or OFF.

### 4. Completion



Setting has been completed.

## ⑭ ZF TCU Calibration

Enable to calibrate the inching and clutch of the transmission.

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

### a. Inching Calibration

#### 1. Equipment



35D9V3KY47

Enter to Equipment.

#### 2. ZF TCU Calibration



70D9V3KY127

Choose ZF TCU Calibration and enter.

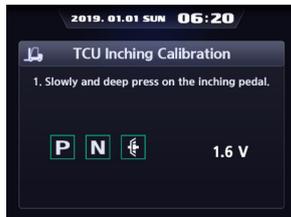
#### 3. Prepare for Calibration



70D9V3KY128

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

#### 4. Calibration 1



70D9V3KY129

Fully press the inching pedal.

#### 5. Calibration 2



70D9V3KY130

Take your foot off the inching pedal.

#### 6. Calibration 3



70D9V3KY131

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

### b. Clutch Calibration

#### 2-1. ZF TCU Calibration



70D9V3KY127

Choose ZF TCU Calibration and enter.

#### 3. Prepare for Calibration



70D9V3KY185A

Before starting calibration, must be satisfied with 5 conditions.

#### ※ Conditions

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

#### 4. Calibration 1



70D9V3KY186

Wait until the next button is ON.

#### 4. Calibration 1



70D9V3KY187

Enter the next button.

#### 5. Calibration 2

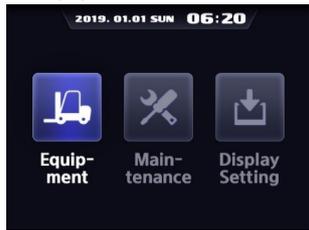


70D9V3KY188

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

## ⑮ Seat Belt Interlock (option)

### 1. Equipment



Enter to Equipment.

### 2. Seat Belt Interlock



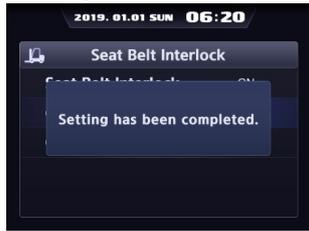
Choose Seat Belt Interlock and enter.

### 3. Select



Select ON or OFF.

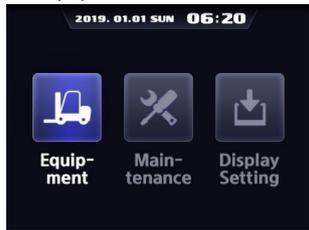
### 4. Completion



Setting has been completed.

## ⑯ Cluster-CI

### 1. Equipment



Enter to Equipment.

### 2. Version



Choose Version and enter.

### 3. Cluster-CI



Choose Cluster-CI and enter.

### 4. Check Version



## (2) Maintenance

### ① Failure History

#### 1. Maintenance



35D9VB3KY48

Enter to Maintenance.

#### 2. Failure History



70D9V3KY138

Choose Failure History and enter.

#### 3. Engine or Transmission



70D9V3KY139

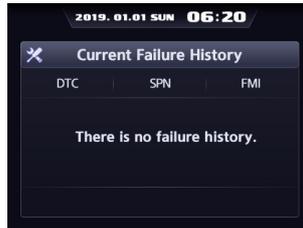
Choose what needs to check.

#### 4. History



70D9V3KY140

#### 5. Failure List



70D9V3KY141

### ② Consumables Management

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

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

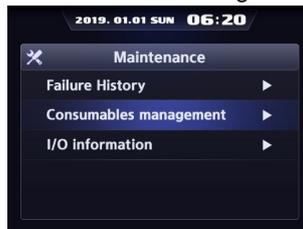
#### 1. Maintenance



35D9VB3KY48

Enter to Maintenance.

#### 2. Consumables Management



70D9V3KY142

Choose Consumables Management and enter.

#### 3. Select Replacement Item

The screenshot shows a 'Consumables management' screen with a table listing various items and their replacement status.

Item	Interval	Elapse	Alarm
Engine Oil & Filter	50	2	●
Transmission Oil & Filter	100	2	●
Differential Gear Oil	100	2	●
Hyd Air breather Ele...	500	2	●
Hyd Oil Return Filter	250	2	●
Fuel Filter	1000	2	●

70D9V3KY143

Select the replaced item.

#### 4-1. Replacement History



70D9V3KY144

Select Replacement History.

#### 5. Check.



70D9V3KY145

Check history.

#### 4-2. Replacement



Select Replacement.

#### 5. Confirm



Press enter button.

#### 4-3. Change



Select Change.

#### 5. Setting Cycle



Change properly the interval.

#### 6. Completion



Setting has been completed.

### ③ I/O Information

#### 1. Maintenance



Enter to Maintenance.

#### 2. I/O Information



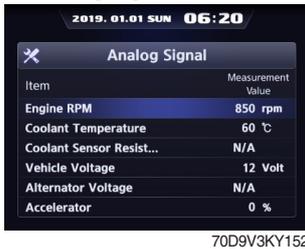
Choose I/O Information and enter.

#### 3-1. Analog signal



Enter to Analog Signal.

#### 4. Analog signal list



Check the analog signal list.

#### 3-2. Digital signal



Enter to Digital Signal

#### 4. Digital signal list



Check the digital signal list.

### (3) Display setting

#### ① LCD Brightness Adjustment

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

##### 1. Display Setting



Enter to Display Setting.

##### 2. LCD Brightness Adjustment



Choose LCD Brightness Adjustment and enter.

##### 3. LCD brightness



Select Manual or Automatic.

##### 4. LCD Brightness (Day/Night)



Set day and night brightness in the manual mode.

##### 5. LCD Brightness



Set LCD brightness in the manual mode.

#### ② User Setting

Enable to set time, unit, and language.

##### a. Time Setting

##### 1. Display Setting



Enter to Display Setting.

##### 2. User Setting



Choose User Setting and enter.

##### 3-1. Time Setting



Select Time Setting.

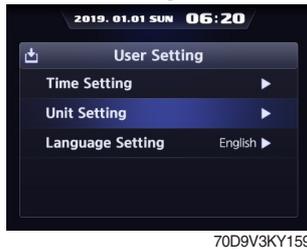
##### 4. Setting



Set time.

## b. Unit Setting

### 3-2. Unit Setting



70D9V3KY159

Select Unit Setting.

### 4. Unit Setting List



35D9VB3KY152

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

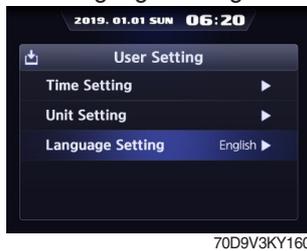
### 5. Setting



35D9VB3KY153

Set unit.

### 3-3. Language Setting



70D9V3KY160

Select Language Setting.

### 4. Setting



70D9V3KY161

Choose a language.

## ③ A/S Phone No.

### 1. Display Setting



35D9VB3KY49

Enter to Display Setting.

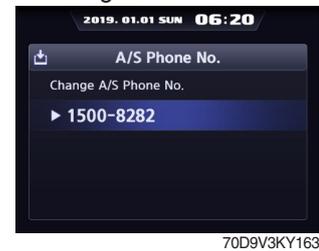
### 2. A/S Phone No.



70D9V3KY162

Choose A/S Phone No. and enter.

### 3. Change



70D9V3KY163

Select phone number if you want to change.

### 4. New A/S Phone No.



70D9V3KY164

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

### 5. Finish



70D9V3KY165

Contact will be displayed as the modified number.

#### ④ Password Change.

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

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

##### a. User Password Change

###### 1. Display Setting



35D9VB3KY49

Enter to Display Setting.

###### 2. Password Change



70D9V3KY166

Choose Password Change and enter.

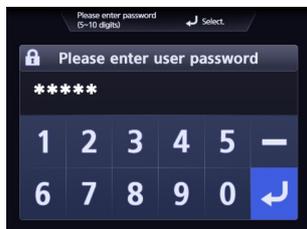
###### 3-1. User Password Change



70D9V3KY167

Select User Password Change.

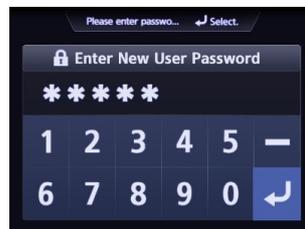
###### 4. Current User Password



70D9V3KY168

Enter the current user password.

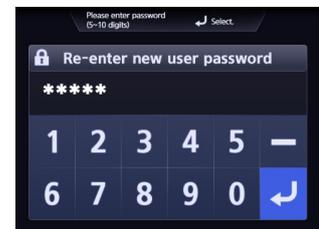
###### 5. New User Password



35D9VB3KY144

Enter a new user password.

###### 6. Re-enter



70D9V3KY169

Enter a new user password again.

##### b. ESL Password Change

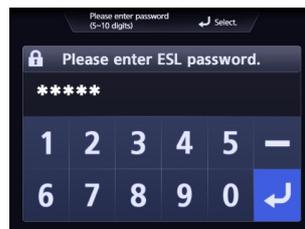
###### 3-2. ESL Password Change



35D9VB3KY49

Select ESL Password Change.

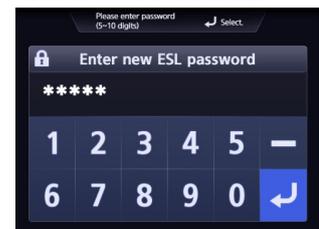
###### 4. Current User Password



70D9V3KY166

Enter the current user password.

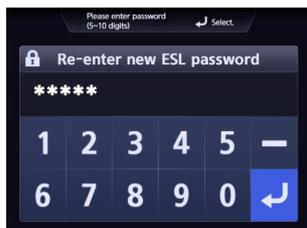
###### 5. New User Password



70D9V3KY167

Enter a new user password.

###### 6. Re-enter



70D9V3KY168

Enter a new user password again.

## ⑤ Consumables Management

### 1. Display Setting



Enter to Display Setting.

### 2. Conusmables Management



Choose Consumables Management and enter.

### 3. List



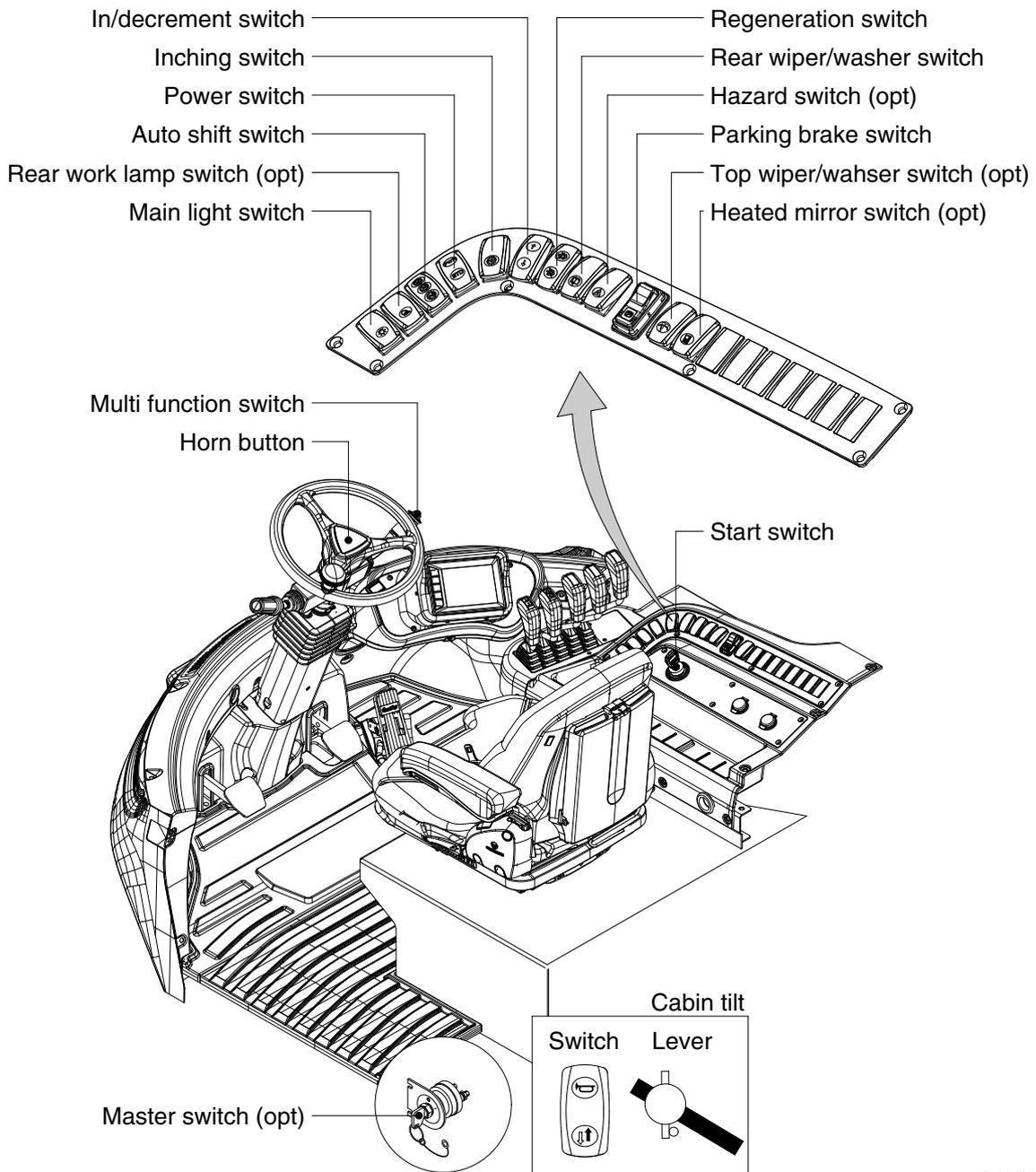
## 8) CAUSES AND CORRECTION OF CLUSTER WARNING LAMP

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.

No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
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.
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, 1 gear, 2 gear, and 3 gear indicator lamp	-
23	Reverse gear		Reverse gear, 1 gear, 2 gear, and 3 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	Communication error warning (TCU)		Communication error warning lamp	Communication between cluster-CI and TCU has been failed. Check communication line.
26	DEF low warning		DEF low warning lamp	DEF level is low. Please fill the DEF.
27	Brake fail warning		Brake fail warning lamp	Stop the engine and check for its cause.
28	SCR defect warning		SCR defect warning lamp	Check the SCR system.

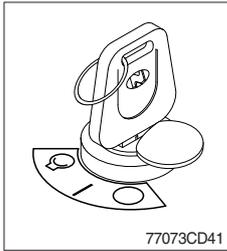
No.	Warning lamp types	Symbol	Warning and indicator lamp	Causes and correction
29	DCU warning		DCU warning lamp	To check DCU error code.
30	Fingertip warning		Fingertip warning lamp	Check the fingertip.
31	Transimission warning		Transimission warning lamp	Check the transimission.
32	Side mirror heated action idicator		Side mirror heated action idicator lamp	The heated mirror switch is ON.
33	High beam indicator		High beam indicator lamp	The position of the dimmer switch is DOWN.
34	Shift mode indicator		Shift mode indicator lamp	This lamp shows the current shift mode.

## 5. SWITCHES



70D9V3KY03A

## 1) START SWITCH



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

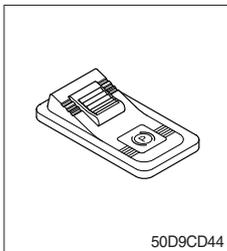
- ○ (OFF) : Position to stop the engine. Insert or remove the ignition key from this position.
- | (ON) : The operation of the electrical device. It is located right next to the OFF position clockwise.
- ◯ (START) : Engine ignition position. It is located clockwise from the ON position.

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

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

※ If the directional control lever is not in the neutral position, the engine will not ignite.

## 2) PARKING BRAKE SWITCH

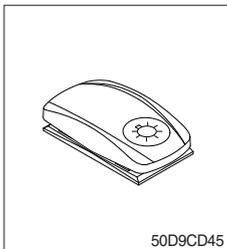


(1) This switch is used to parking brake lock or release.

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

※ When operating the gear selector lever, be sure to release the parking brake. If the truck is operated with the parking brake engaged, the brake will overheat and may cause the brake system to go out of order.

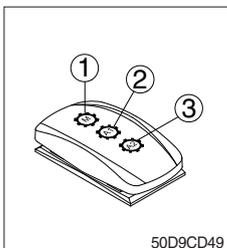
## 3) MAIN LIGHT SWITCH



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

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

## 4) AUTO SHIFT SWITCH



(1) Manual mode (①)

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

(2) Automatic 1st mode (②)

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

(3) Automatic 2nd mode (③)

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

## 5) POWER SWITCH



(1) This switch offers two selectable operating mode.

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

### (2) Function

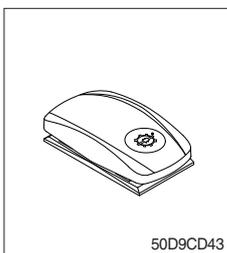
#### ① STD MODE

This mode provides maximum fuel efficiency for general loading.

#### ② PWR MODE

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

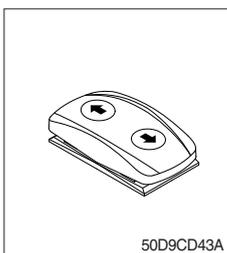
## 6) INCHING SWITCH



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

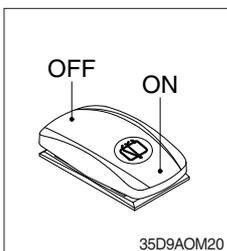
(2) Also, the inching lamp on the cluster is illuminated.

## 7) IN/DECREMENT SWITCH



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

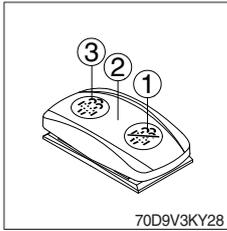
## 8) REAR WIPER AND WASHER SWITCH



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

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

## 9) REGENERATION SWITCH



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

**▲ The regeneration should only be applied if the truck is in a fire proof area.**

### (2) Inhibit position (①)

① This 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 this position is only activated when high temperatures may causes a hazardous condition.

### (3) Auto regeneration position (②)

This position will initiate automatic DPF regeneration when needed.

### (4) Parked regeneration position (③)

① Stop and park the machine.

**▲ The parking brake switch must be ON.**

② Put the gear in neutral position and wait until coolant temperature reaches 65°C.

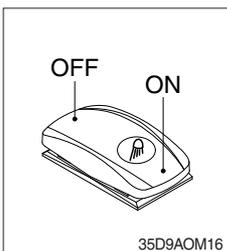
③ Push the regeneration switch ON button 3 seconds to initiate the parked regeneration of DPF. The engine speed may increase up to ④ 2000 rpm and DPF regeneration begins and it will take approximately 20~40 minutes.

The DPF regeneration and exhaust high temperature warning

⑤ lamp will light ON during the regeneration function is operating.

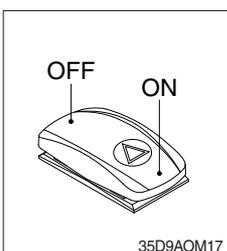
The DPF regeneration and(or) exhaust high temperature warning lamp will light OFF when the regeneration function is done.

## 10) REAR WORK LAMP SWITCH (OPTION)



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

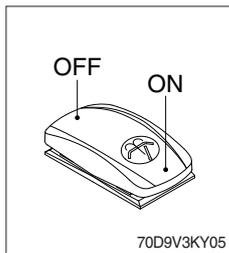
## 11) HAZARD SWITCH (OPTION)



(1) Use for parking, or loading truck.

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

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



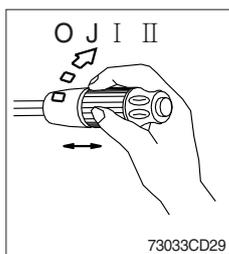
- (1) This switch is used to operate the wiper and washer on the top of the cab.
- (2) The washer liquid is sprayed and the wiper is operated only while pressing this switch.

## 13) HORN BUTTON



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

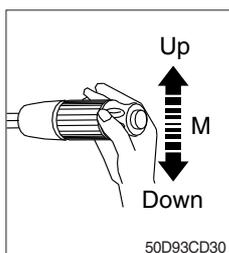
## 14) MULTI FUNCTION SWITCH



### (1) Front wiper and washer switch

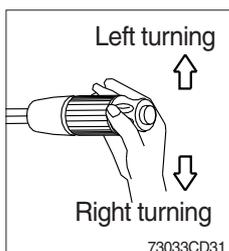
- ① When the switch is in J position, the wiper moves intermittently.
- ② When placed in I or II position, the wiper moves continuously.
- ③ If you push the grip of the lever, washer liquid will be sprayed and the wiper will be activated 2-3 times.

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



### (2) Dimmer switch

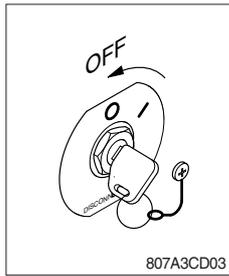
- ① This switch is used to turn the head light direction.
- ② **Switch positions**
  - Up : To flash for passing
  - Middle : Head light low beam ON
  - Down : Head light high beam ON
- ③ If you release the switch when it's in up position, the switch will return to middle.



### (3) Turning switch

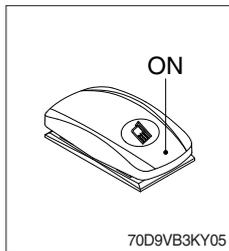
- ① This switch is used to warn or signal the turning direction of the truck to other trucks or equipment.
- ② Push the lever up for turning left, pull the lever down for turning right.

### 15) MASTER SWITCH (OPTION)



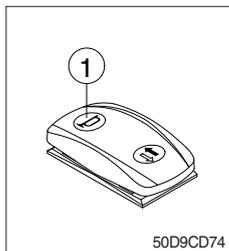
- (1) This switch is used to shut off the entire electrical system.  
When the machine is not operated for a long time, turn OFF the master switch for the safety purpose.
  - (2) I : The battery remains connected to the electrical system.  
O : The battery is disconnected to the electrical system.
- ※ **Never turn the master switch to O (OFF) with the engine running. Engine and electrical system damage could result.**

### 16) HEATED MIRROR SWITCH (OPTION)



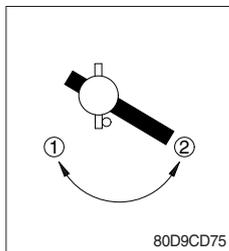
- (1) This switch is used to supply heating to side mirrors. Also, the heated mirror lamp on the cluster is illuminated.
  - (2) You want to release this function, one more press the switch.
- ※ **After operating for 10 minutes, this function is released automatically. If you want to use this function more, press the switch.**

### 17) CABIN TILT SWITCH



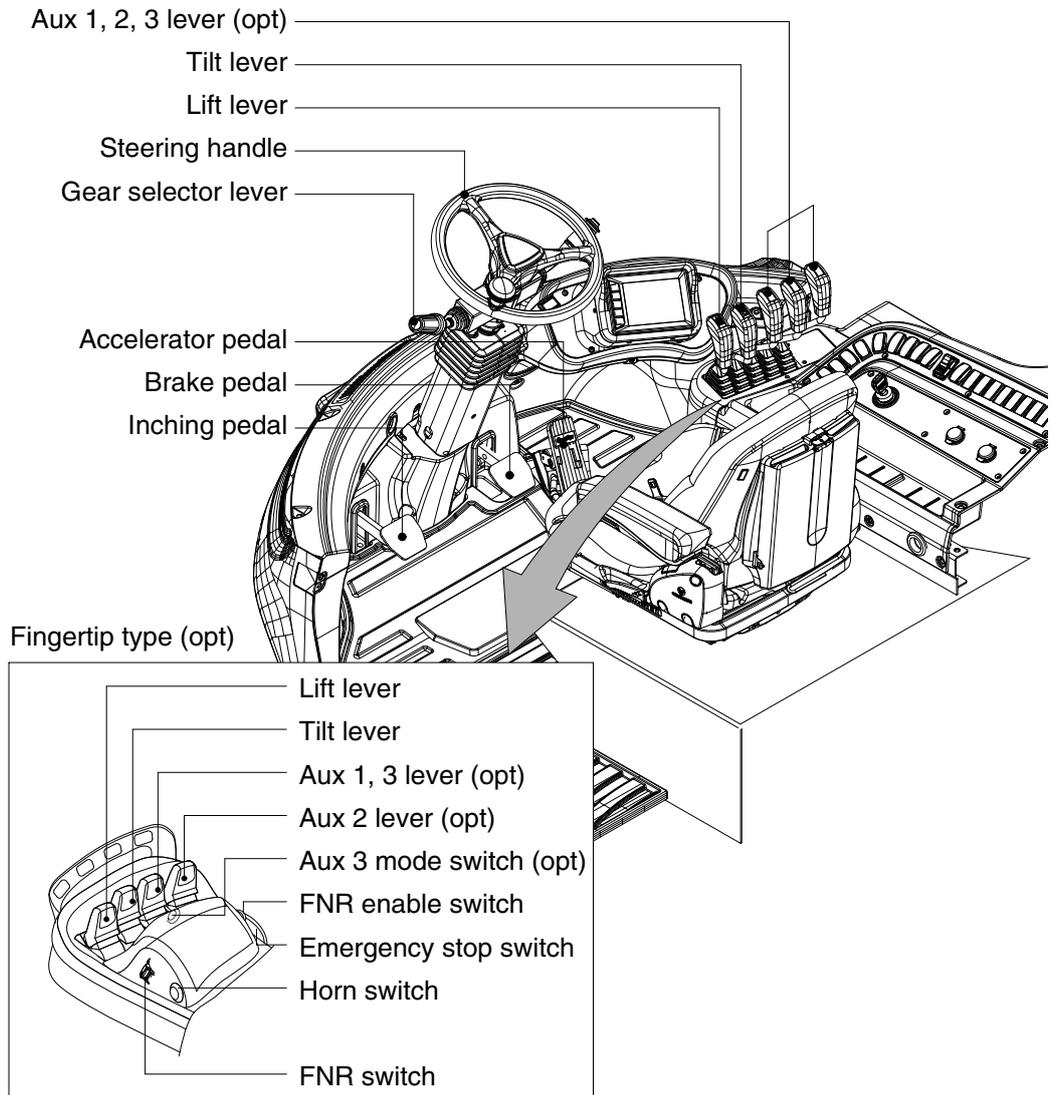
- (1) Horn (🔊)  
By pressing position ①, the horn sounds and by releasing, the horn stops.  
▲ **Sound the horn to warn near by personnel, before tilting the cabin.**
- (2) Tilting of the cabin (↑, ↓)  
Press the cabin tilt switch in order to tilt the cabin to right side or return to original location.  
※ **Refer to page 7-16 for the tilting method of the cabin.**

### 18) HAND PUMP LEVER



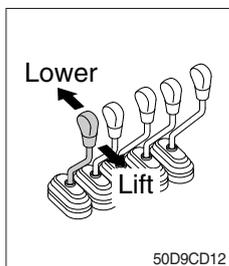
- (1) This lever is used when tilting the cabin.
- (2) Turn the hand pump lever to clockwise direction (①), the cabin shall be tilted to right side by the cabin tilt switch.
- (3) Turn the hand pump lever to counterclockwise direction (②), the cabin shall be returned to original location by the cabin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

## 6. CONTROL DEVICES



70D9V3KY06

### 1) LIFT LEVER



50D9CD12

#### (1) LIFT

PULL the lever BACK to LIFT the forks.

#### (2) LOWER

PUSH the lever FORWARD to LOWER the load.

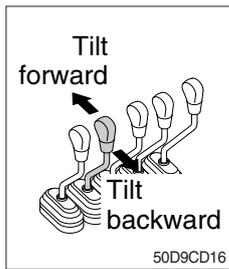
#### (3) HOLDING

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

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

Lowering speed is controlled by the lift lever only.

## 2) TILT LEVER



### (1) TILT FORWARD

PUSH the lever FORWARD to tilt mast FORWARD.

### (2) TILT BACKWARD

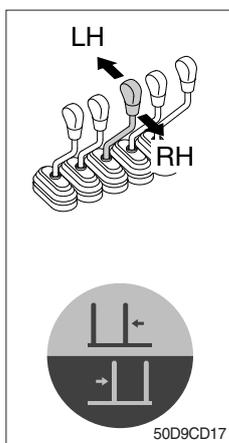
PULL the lever BACK to tilt mast BACKWARD.

### (3) HOLDING

When the lever is released, tilting action stops.

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

## 3) LEVER FOR SIDE SHIFT



### (1) LH MOVEMENT

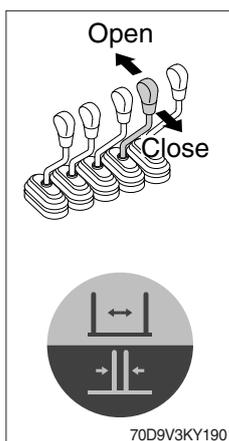
Push the lever forward to move the side shift to the left hand.

### (2) RH MOVEMENT

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

## 4) LEVER FOR SIDE SHIFT WITH FORK POSITIONER

### (1) FORK POSITIONER (SYNCHRONIZER TYPE)



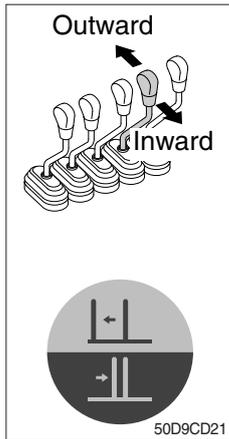
#### ① OPEN THE FORKS

Push the lever forward to open both forks simultaneously.

#### ② CLOSE THE FORKS

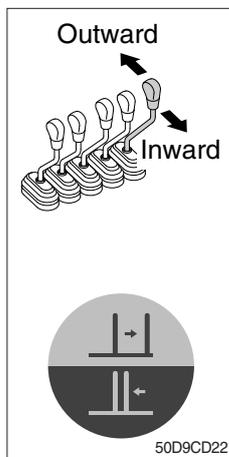
Pull the lever backward to close both forks simultaneously.

## (2) FORK POSITIONER (INDEPENDENT TYPE)



### ① LH FORK MOVEMENT

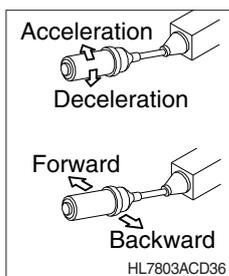
- Push the lever forward to move the LH fork outward.
- Pull the lever backward to move the LH fork inward.



### ② RH FORK MOVEMENT

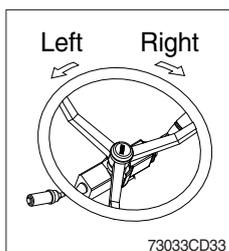
- Push the lever forward to move the RH fork outward.
- Pull the lever backward to move the RH fork inward.

## 5) GEAR SELECTOR LEVER



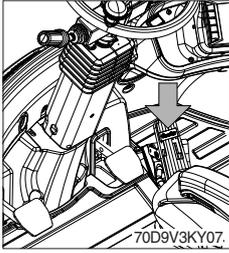
- (1) This lever is used for gear selection, forward 3 stages and reverse 3 stages.
- (2) If you push the gear selector lever, the truck moves forward, but pulling the gear selector lever, the truck moves backward.
- (3) If you turn the gear selector lever forward, the truck increases the speed, but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

## 6) STEERING HANDLE



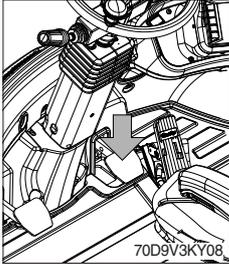
- (1) A steering cylinder in the center of the steering axle will operate the steering function.
- (2) Turning the steering wheel left, the truck moves to the left side and turning it right, the truck moves to the right side.

## 7) ACCELERATOR PEDAL



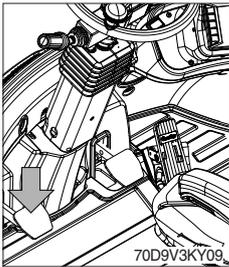
- (1) This pedal controls the engine speed. The engine speed will increase in proportion to the degree of force applied to this pedal.
- (2) Unless this pedal is pressed, the engine will run at low idling.

## 8) BRAKE PEDAL



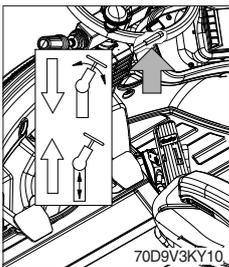
- (1) If the pedal is pushed, braking force is generated and bring the truck to a stop.
- ※ **Do not operate the truck with stepping on the brake pedal unnecessarily, or bring premature wear of brake disc.**

## 9) INCHING PEDAL



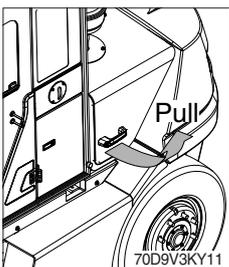
- (1) Inching pedal is used for fine control of forward and reverse movement when lifting up or putting down loads.
- ※ **Do not put your foot on the inching pedal or brake pedal unless using it.**

## 10) STEERING COLUMN ADJUST LEVER



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

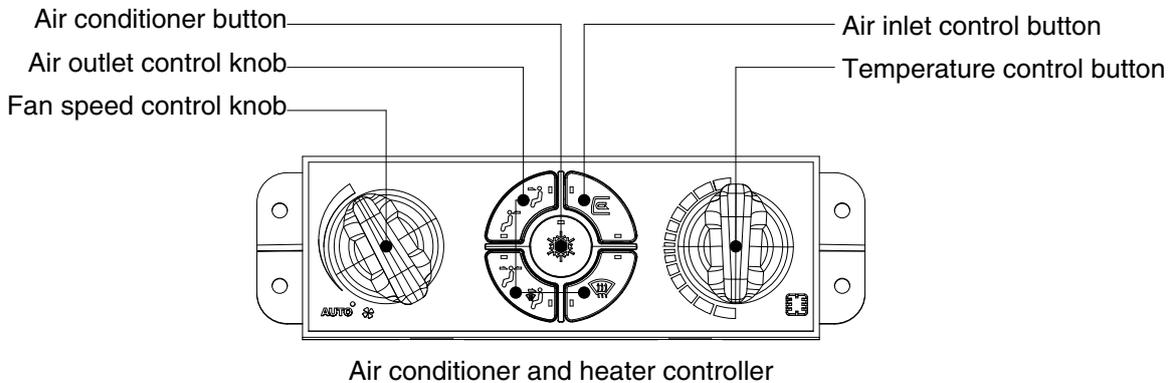
## 11) BODY WING COVER



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

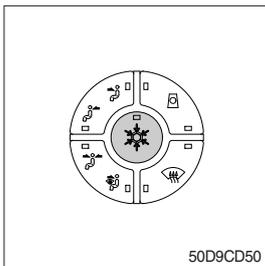
## 7. AIR CONDITIONER AND HEATER

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



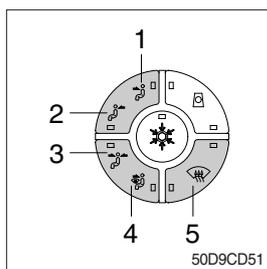
70D9V3KY12

### 1) AIR CONDITIONER BUTTON



- (1) When you push this button, air conditioner system is operated.
  - (2) Determines whether to perform a cooling function of air conditioner.
    - ① Pilot lamp ON : Air conditioner operation
    - ② Pilot lamp OFF : Fan only
- ※ The AUTO pilot lamp ON when this button is pushed.

### 2) AIR OUTLET CONTROL BUTTON

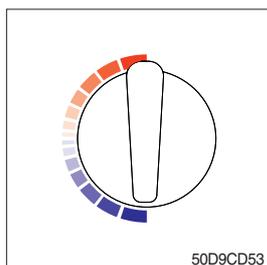


There are five kinds of air flow.

- ① Face
- ② Rear
- ③ Face and rear
- ④ Face and defrost
- ⑤ Defrost

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

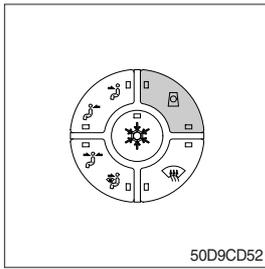
### 3) TEMPERATURE CONTROL KNOB



This knob regulates the temperature of air.

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

#### 4) AIR INLET CONTROL BUTTON



This button regulates the inlet air.

① Pilot lamp ON : Fresh air intake.

② Pilot lamp OFF : The air circulates in the cab.

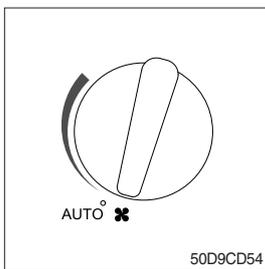
※ The pilot lamp is turned ON when the button is pushed.

※ Check out the fresh air filter periodically to keep a good efficiency.

※ Change air occasionally when using recirculation for a long time.

※ Check out the recirculation filter periodically to keep a good efficiency.

#### 5) FAN SPEED CONTROL KNOB



① Fan speed is controlled automatically by set temperature.

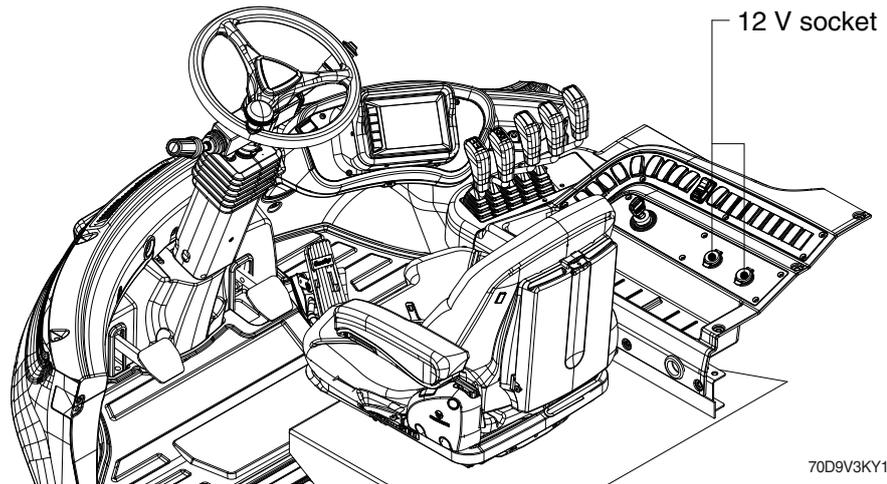
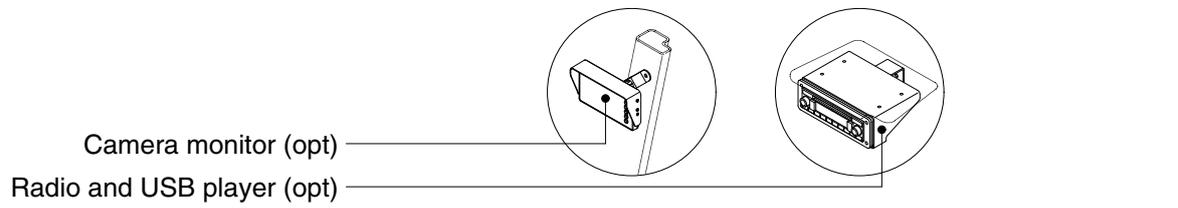
※ The AUTO pilot lamp ON when the air conditioner button is pushed.

② This knob controls fan speed manually.

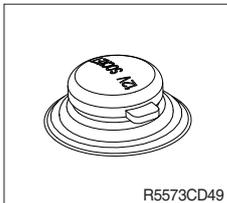
※ The AUTO pilot lamp OFF when this knob is operated.

③ This knob makes the system ON.

## 8. OTHERS



### 1) 12V SOCKET



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

## 2) MONITOR (OPTION)

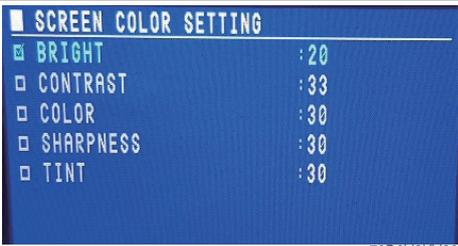
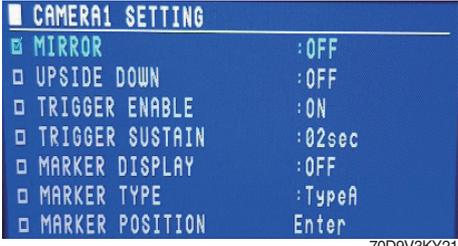
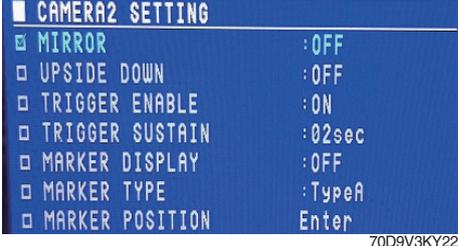
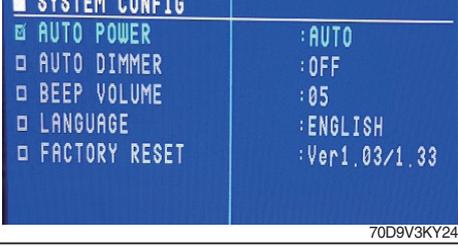
It is possible to adjust the angle to the up, down, left, or right.



70D9V3KY14

No.	Symbol	Name	Description
1		Power	- Alarm off or off release - Display on or off - Menu save and exit
2		Select	- Parking line on or off - Select the menu - Adjust the menu
3		Menu	- Enter and change the menu - Adjust the parking line (press the button for 2 seconds.)
4		Up	- Return the previous display - Maximum volume or alarm off release (press the button for long time) - Move or adjust upward
5		Down	- Move the next display - Mute volume (press the button for long time) - Move or adjust downward

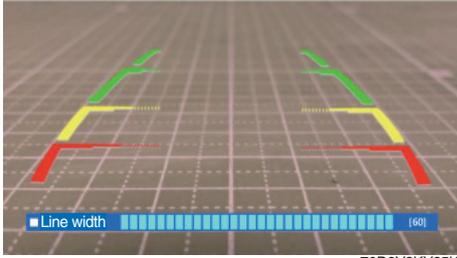
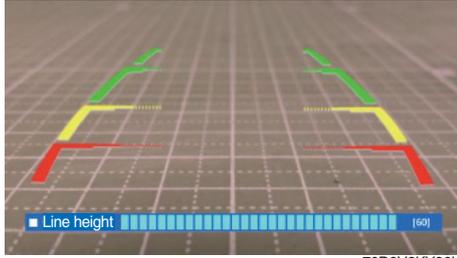
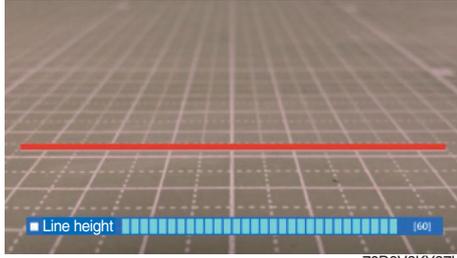
## (1) Menu function

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

**(2) Parking line adjusting**

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

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

No.	Type	Display	
1	A		
2	B		

### 3) RADIO AND USB PLAYER (WITH BLUETOOTH, OPTION)



9403CD100

#### FRONT PANEL PRESENTATION

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

## RADIO AND USB PLAYER (WITHOUT BLUETOOTH, OPTION)



9403CD101

### FRONT PANEL PRESENTATION

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

## ■ GENERAL

### (1) Power and volume button



#### ① Power ON / OFF button

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

#### ② Volume UP/DOWN control knob

Turn VOL knob (1) right to increase the volume level.

Turn VOL knob (1) left to decrease the volume.

After 5 seconds the display will return to the previous display mode.

#### ③ Initial volume level set up

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

Then turn button (1) right or left to set the volume level as the I-VOL level.

#### ④ Clock ON/OFF control

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

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

#### ⑤ Clock adjustment

With CLOCK ON selected, press VOL knob again after CLOCK ON display, the hour will blink, turn VOL knob right or left to adjust hour.

Simply press VOL again, the minute will blink, turn VOL knob to adjust minute. Then press VOL again to confirm the clock once finished.

## (2) Menu Selection



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

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

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

### ② Bass control

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

### ③ Treble control

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

### ④ Balance control

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

### ⑤ Fader control

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

### ⑥ EQ control

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

EQ OFF → CLASSIC → POP → ROCK → JAZZ

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

### ⑦ Loud control

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

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

### ⑧ Beep control

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

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

### (3) Mute control

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

### (4) Mode selection

- ① Repeat press MODE button (3) to switch between FM1, FM2, AM, USB, AUX, BT MUSIC.
- ※ If there is no USB, AUX, Bluetooth Phone connected, it would not display USB, AUX, BT when you press button (3).

## ■ RADIO

### (1) Mode button



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

### (2) Manual tuning button



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

### (3) Auto tuning button



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



### (4) Station preset button



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

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

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



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

Press BSM button (12) for longer than 2 seconds to activate the Best Station Memory feature which will automatically scan and enter each station into memory.

※ **If you have already set the preset memories to your favorite stations, activating the BSM tuning feature will erase those stations and enter into the new ones. This BSM feature is most useful when travelling in a new area where you are not familiar with the local stations.**

## ■ USB PLAYER

### (1) USB playback



- ① The unit was equipped with a front USB jack and also a rear USB Jack.

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

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

### (2) Track Up / Down button



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



### (3) MP3 directory / File searching



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

### (4) Directory Up / Down button



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

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

#### (5) Track Scan Play (SCAN) button



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

#### (6) Track Repeat Play (RPT) button



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

#### (7) Track Random Play (RDM) button



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

#### (8) ID3 v2 (DISP)



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

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

\* USB Information and Notice

- Playback FILE SYSTEM and condition allowance.
    - FAT, FAT12, FAT16 and FAT32 in the file system.
    - V1.1, V2.2 and V2.3 in the TAG (ID3) version.
  - Display up to 32 characters in the LCD display.
  - No support any of MULTI-CARD Reader.
  - No high speed playback but only playing with normal full speed.
- ※ DRM files in the USB may cause malfunction to playback in the radio unit.
- ※ In temperatures below -10°C (14°F), the audio unit with USB hook up may be affected and not play well.

## ■AUX OPERATION

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

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

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

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

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

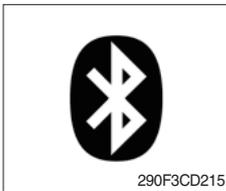
※ **If the sound of the media player is too loud and/or distorted, decrease the volume of the player.**

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

## ■ BLUETOOTH (if equipped)

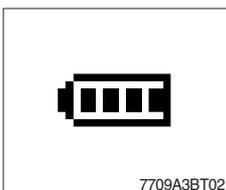
### (1) Using a bluetooth wireless connection

- ① Your audio unit supports bluetooth wireless technology. You can set up a wireless link with bluetooth cellular phone.
  - ② Continue to pair the cellular phone with the audio unit. Within a few moments the two should be able to connect.
- ※ Since this audio unit is on standby to connect with your cellular phone via bluetooth wireless technology, using this audio unit without running the engine can result in battery drainage. This audio units phone call reception is on standby when ignition switch is set to ACC OFF or
- ※ ON.
- The line-of-sight distance between this audio unit and your cellular phone must be 10 meters or
- ※ less for sending and receiving voice and data via bluetooth wireless technology. However the transmission distance may become shorter than the estimated distance depending on the environment where it is being used.
- Digital Noise & Echo suppression system provides the best sound clarity with little or no
- ※ distortion (Echo & side tone will happen depending on cellular phone or service network).
- To ensure the quality of calling, you should select a proper bluetooth VR level. This audio unit is
- ※ already equipped with the best bluetooth VR level.



#### a. Bluetooth icon

It will blink while establishing the bluetooth pairing.  
It will light up after a bluetooth device connected.



#### b. Battery icon

It indicates the battery status of the connected bluetooth device.



#### c. Single strength icon

It indicates the signal strength of the connected bluetooth device.

## (2) Pairing in hands free modes



- ① Press and hold CALL button (4) for 2 seconds until you hear beep sound, then PAIR STR will appear on the display.
- ② For the next procedure, go to cellular phone pairing mode.
- ③ If it is in pairing status with audio unit and cellular phone, PAIRING will show on the display.
- ④ If you want to exit pairing mode, press CALL END button (5) briefly while pairing, then it will show PAIR CLR on the display.
- ⑤ Bluetooth Icon and PAIR OK appear on the display when pairing is successful.

## (3) Cellular phone pairing mode

- ① Browse your cellular phone menu and find the connectivity or bluetooth connection section.
  - ② Select search for a new handsfree device function and allow the phone to find the mobile.
  - ③ HYUNDAI should appear on your cellular phone screen.
  - ④ Press connect menu among the handsfree option on your cellular phone.
  - ⑤ The cellular phone should prompt for a pin code. Insert the pin code 1234.
  - ⑥ The cellular phone should confirm that it has established a new paired connection.
  - ⑦ Close the menu. The pairing is now completed. It appears PAIR FAIL on the display for 3 seconds.
- ※ Each cellular phone type has distinct phone menu so you may need to refer to your manufactures instruction for the correct procedure on how to connect a new bluetooth device.
  - ※ Please retry the pairing instruction if HYUNDAI does not appear on the cellular phone screen.
  - ※ Please select authorized, if there is authorized menu in the menu of bluetooth connection in your cellular phone.
  - ※ Once the bluetooth pairing is completed between your cellular phone and this audio unit, both units will be automatically recognized on its paring like when you turn on the key in your car even though the audio unit is turned off.
  - ※ This audio unit can store up to 6 phones pairings. If the memory is full, the first stored paired phone will be deleted.
  - ※ The connecting priority will be given to the last connected cellular phone.
  - ※ If you want to change the connecting priority, try to connect this audio unit from the cellular phone you want.

#### (4) Bluetooth connection and disconnection

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



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



- ③ To connect bluetooth link  
Press CALL button (4) briefly, it blinks bluetooth Icon on the display while bluetooth is being connected. If the connection is completed, bluetooth Icon displays on the display.

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

※ In case of failure of bluetooth pairing :

- Delete item in paired list on your phone.
- Reset both phone by power off/on and the audio unit by ACC off/on.

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

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

#### (5) Using the audio unit as a handsfree device

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



- ② To accept call  
Press CALL button (4), ANSWER CALL followed by TALKING will show in the display.

- ③ To end call  
To end call, press CALL END button (5), REJECT appears on the display.

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

### (6) Audio transfer between the audio unit and phone

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



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

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

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

### (7) Last call number dialing



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

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

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

### (8) To make a call by cellular phone

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

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

### **(9) Using the audio unit as bluetooth music**

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

- ① To play music, search the menu on your cellular phone as below :  
i.e : Menu→ File manager→ Music→ Option→ Play via bluetooth.  
It appears BT MP3 on the display.
  - ② During BT MP3 playing, you could select the previous or next track by pressing SEEK up or TRACK down button on audio unit or operate via your cellular phone.
  - ③ To stop music, press button (5) briefly and it will automatically switch into the previous mode.
  - ④ To resume music playing, press the play button on your cellular phone.
- ※ **This function may be different depending on cellular phone. Please follow the cellular phone menu. Some types of phones need to pair once more for bluetooth MP3 connection.**
  - ※ **This function will be caused to disconnect A2DP, AVRCP depends on cellular phone.**
  - ※ **Information about songs (e.g.: the elapsed playing time, song title, song index, etc.) cannot be displayed on this audio unit.**

## ■ RESET AND PRECAUTIONS

### (1) Reset function

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

- ① press and hold   simultaneously for about 5 seconds. (without Bluetooth)
- ② Press and hold   simultaneously for about 5 seconds. (with Bluetooth)

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

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

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

### (2) Precautions

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

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

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

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

#### ● AREA Selection :

- To select an area, press and hold related buttons at FM1 band for about 3 seconds.
- USA Area: Press and hold mode + 1DIS buttons for 3 seconds
- EUROPE Area: Press and hold mode + 2 buttons for 3 seconds
- ASIA Area: Press and hold mode + 3RPT buttons for 3 seconds
- LATIN Area: Press and hold mode + 4RDM buttons for 3 seconds.

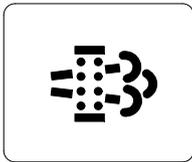
- ④ USB version : USB 1.1
- ⑤ Bluetooth version : V2.1
- ⑥ Bluetooth supported profile :
  - A2DP : Advanced Audio Distribution Profile
  - AVRCP : Audio/Video Remote Control Profile
  - HFP : Hands-Free Profile

## 9. REGENERATION SYSTEM

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).

- ※ 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.
- ▲ 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 30 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 3-10 for details.
- ※ The machine must be in a fireproof area during the entire regeneration process.

### (2) DPF regeneration inhibit warning lamp

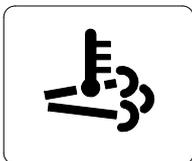


2609A3CD20

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

- ※ Refer to page 3-10 for details.

### (3) Exhaust high temperature warning lamp

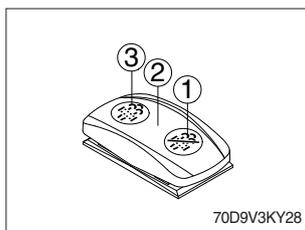


2609A3CD21

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

- ※ Refer to page 3-10 for details.

#### (4) Regeneration switch



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

※ Refer to page 3-45 for details.

※ Recommend the regeneration inhibit function (③ position) as below situations.

- High-temperature exhaust is generated during regeneration, so switch should be pressed in areas where fire is dangerous.
- Low-speed/low-load operation and short-term operation will reduce regeneration performance. In this case, use the inhibitor switch. When the DPF forced regeneration warning lamp blinks or turns on, it is recommended to regenerate when stop.

① Inhibit position

② Auto regeneration position

③ Parked regeneration position

#### (5) DPF cleaning

Every 3000 hours.

※ Refer to page 7-28 for details.

#### (5) SCR system precautions

- The emission reduction system has a built-in catalyst, so do not cause external shocks such as kicking.
- Do not arbitrarily change the length or orientation of emission reduction devices and exhaust pipes, which may adversely affect the exhaust gas purification function.
- The exhaust purifier is controlled by a very complex control unit, so arbitrary structural changes can cause failure.
- The emission reduction device is a device that generates high heat, so please perform maintenance after sufficient time and after the surface of the emission reduction device cools sufficiently. It may cause burns.
- Engines equipped with an urea solution system inject only the specified urea solution. Injecting defective urea or non-recommended liquid may cause damage to components such as emission reduction devices. Foreign substances included in the untested additive (urea) may cause blockage and damage of the SCR catalyst. There may be a situation in which expensive emission reduction devices need to be replaced.
- If urea is stained in your eyes or skin, wipe it with clean water immediately.
- If you swallow urea, rinse your mouth immediately with clean water and drink plenty of water. See your doctor.
- Change clothes with urea immediately.
- If you have an allergic reaction, seek immediate medical attention.
- Do not allow children to touch urea.
- When handling urea in an enclosed space, ensure good ventilation; when the urea tank is opened, a pungent odor of gas can be released.