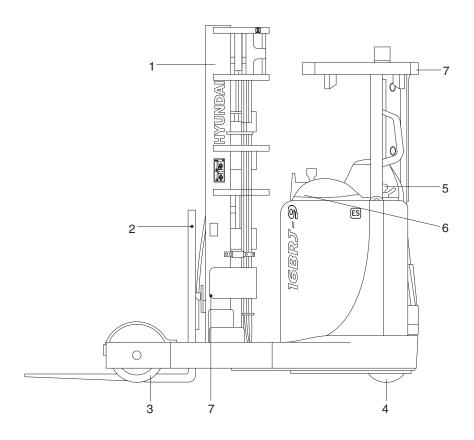
# 3. KNOW YOUR TRUCK

# 1. GENERAL LOCATIONS

## 1) OUTLINE



14BRJ9OM54

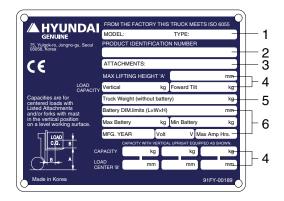
TRUCK TYPE: Electric, 48 Volt.

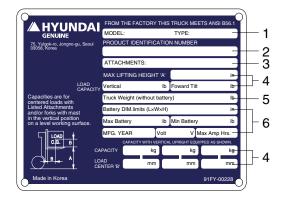
- 1 Mast
- 2 Carriage and backrest
- 3 Load tire and brake
- 4 Drive unit and tire

- 5 Steering wheel
- 6 Accelerator
- 7 Overhead guard

## 2. DATA/SAFETY PLATES AND DECALS

## 1) TRUCK DATA AND CAPACITY PLATE





### (1) Truck model number or registered name

### (2) 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.

### (3) 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.

### (4) 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.

### (5) 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.

## (6) Battery weight and system voltage

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

## 2) OPERATING SAFETY WARNING DECAL





#### **FOR SAFETY**

- $\hfill \Box$  BEFORE PUTTING THIS TRUCK IN OPERATION, TEST BRAKES, STEERING CONTROLS, HORN AND OTHER DEVICES FOR SAFETY AND EASY OF OPERATION.
- ☐ ONLY TRAINED AND QUALIFIED PERSONS SHOULD OPERATE THIS TRUCK.
- $\hfill \Box$  OPERATE TRUCK OR AUXIUARY DEVICES ONLY FROM OPERATOR'S SEAT.
- $\hfill \square$  USE DRIVERS OVERHEAD GUARD AND LOAD BACKREST EXTENSION UNLESS CONDITIONS PREVENT THEIR USE.
- ☐ BEFORE KEY SWITCH ON, PLACE SHIFT LEVER IN NEUTRAL POSITION.
- ☐ SPREAD FORKS FAR APART AND PLACE THEM ON CENTER COMPLETELY UNDER LOADED. DO NOT HANDLE UNSTABLE OF LOOSELY STACKED LOADS.
- $\hfill \square$  USE EXTREME CARE WITH LONG, HIGH OR WIDE LOADS AND DO NOT OVERLOAD TRUCK. SEE LOAD CHART
- ☐ TRAVEL WITH LOAD OR LIFTING MECHANISM AT MINIMUM GROUND CLEARANCE AND TILTED BACK. EXCEPT ON RAMPS TRAVEL WITH THE LOAD TRAILING WHEN THE LOAD INTERFERES WITH VISIBILITY.
- ☐ OPERATE ON RAMPS WITH LOAD UPGRADE. TRAVEL SLOWLY WITH CAUTION AND DO NOT TURN ON INCLINES.
- $\hfill \square$  AVOID SUDDEN STARTS, STOPS. DIRECTION REVERSALS, UNSAFE SPEED AND REVERSE BRAKING. REDUCE SPEED FOR TURNS OR UNEVEN OR SLIPPERY SURFACE.
- ☐ NEVER LIFT OR LOWER LOADS WHILE TRUCK IS IN MOTION.
- □ DO NOT ALLOW ANYONE TO STAND OR PASS UNDER LOAD OR LIFTING MECHANISM KEEP ALL BODY PARTS OUT OF UPRIGHT AND WITHIN CONFINES OF TRUCK.
- ☐ DO NOT CARRY PASSENGERS. DO NOT ELEVATE PERSONAL WITHOUT SECURED SAFETY PLATFORM
- $\hfill \square$  LIFT WITH MAST VERTICAL OR TILTED SUGHTLY BACK. NEVER FORWARD. LIFT LOADS SMOOTHLY AND SLOWLY-AVOID SUDDEN JERKS.
- ☐ WHEN LEAVING TRUCK, TURN OFF POWER, LOWER LIFTING MECHANISM, PLACE SHIFT IN NEUTRAL. KEY OR CONNECTOR PLUG REMOVED. ALSO CHECK WHEELS IF TRUCK IS ON AN INCUNE OR TO BE WORKED ON.

91FH-01660

22BH9FW05

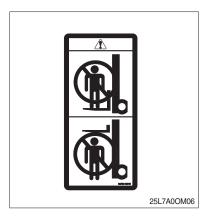


91FP-00810



### ▲ Mast warning decal

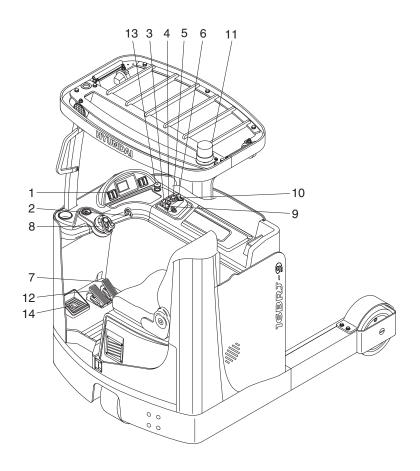
This safety decal is placed on the mast to warn of the danger of injury from movement between rails, chains, sheaves, fork carriage, and other parts of the mast assembly. Do not climb on or reach into the mast. Personal injury will result if any part of your body is put between moving parts of the mast.



## ▲ Keep away from forks decal

This safety decal is placed on the mast to warn of the danger of injury from forks when they are in the raised position. Do not ride on or stand under forks or attachments. The forks can fall and cause injury or death. Always make sure that the forks are in the fully lowered position when they are not handling a load.

## 3. INSTRUMENTS AND CONTROLS



- 1 Monitor panel
- 2 Start switch
- 3 Lift lever
- 4 Reach lever
- 5 Tilt lever
- 6 Side shift lever (Option)
- 7 Accelerator

- 8 Steering wheel
- 9 Directional control switch

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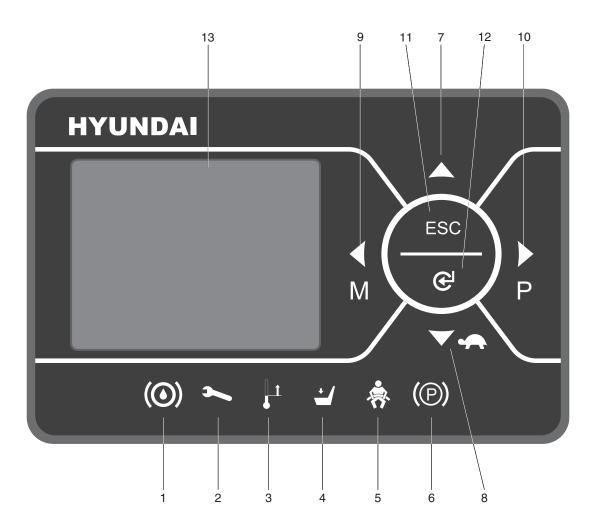
- 10 Horn switch
- 11 Beacon lamp (Option)
- 12 Brake pedal
- 13 Emergency switch

<sup>\*</sup> Familiarize yourself with the controls and follow safe operating procedures.

## 4. INSTRUMENT PANEL

### 1) STRUCTURE

The instrument panel (display) has six built-in red LED, which provide the operator with an easy information about the status of some truck devices.



22BH9OM65

- 1 Oil level warning lamp
- 2 Wrench warning lamp
- 3 Thermometer warning lamp
- 4 Seat warning lamp
- 5 Seat belt warning lamp
- 6 Parking brake warning lamp
- 7 Up button

- 8 Down/turtle button
- 9 Left/menu button
- 10 Right/performance button
- 11 ESC button
- 12 Enter button
- 13 LCD function

### 2) WARNING LAMP

### (1) Brake oil level warning lamp



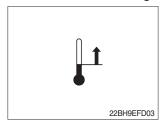
This LED lights when measured level of brake oil stored in reservoir tank is below the minimum acceptable mark.

## (2) Wrench warning lamp



This LED lights when an electric device (controller, motor, cable, etc.) is in abnormal condition.

### (3) Thermometer warning lamp



This LED lights when the controller or motor temperature is high.

## (4) Seat warning lamp



This LED lights when the operator is not on the seat.

### (5) Seat belt warning lamp



- (1) This LED blinks in following 2 cases.
  - ① When operator starts the truck, LED blinks for 5 seconds, which means initial diagnosis is on going, and buttons on display will work properely just after the diagnosis is completed.
  - ② LED blinks when the seat belt is not correctly fastened.

### (6) Parking brake warning lamp



(1) This LED lights when the parking brake is activated.

## 3) BUTTON

These buttons are used to select or change the menu and input value of the LCD function and display menu.

### (1) Up button



Press to select upward move.

### (2) DOWN/TURTLE button



Press to select downward move. TURTLE MODE ON/OFF

### (3) LEFT/MENU button



Press to select leftward move. Go into the menu.

## (4) RIGHT/PERFORMANCE button



Press to select rightward move. POWER MODE H/N/E

### (5) Cancel (ESC) button



Press to select cancel.

Keep pressing this button shows PASSWORD entry field.

## (6) ENTER button



Press to select Enter.

## 4) LCD FUNCTION



22BH9EFD13

- 1 Current time
- 2 Turtle mode
- 3 Truck speed pointer
- 4 Speed level
- 5 Truck speed

- 6 Hour meter
- 7 Wheel position and running direction
- 8 Power mode
- 9 BDI (Battery Discharge Indicator)
- 10 Load weight (option)

### (1) Current time

The number shows the current time according to the setting, which can be changed by display setting at page 3-11.

## (2) Turtle mode

The turtle symbol is normally off. When this symbol appears, the turtle mode is activated regardless of the power mode of the truck to reduce the maximum speed to the set-point. This mode can be activated by pressing the button.

### (3) Truck speed pointer

The speed of the truck is indicated with a pointer.

### (4) Speed level

It indicates the speed level by 2 km.

### (5) Truck speed

The truck speed is shown in number. The unit can be km/h or mph according to the display setting (see 3-11 page).

### (6) Hour meter

The number shows the hours worked. The letter present beside the hour meter number shows which hour meter is displayed.

- hK: the Key Hour shows the truck Key ON time;
- hT: the Traction Hour shows the Gate ON (driven) time of the traction motor.
- hP: the Pump Hour shows the Gate ON (driven) time of the pump motor.

### (7) Wheel position and running direction

The arrow point is up when the truck is forward running and points down when the truck is reverse running. The arrow points the direction of the steering angle.

### (8) Power mode

The letter H, N, or E, shows the power mode which is being used in the controller. The mode can be scrolled by pressing the button sequentially. When a mode is selected, the related information will be sent via CAN-BUS to traction and pump controllers that will manage this data.

H (High) – corresponds to the highest performance

N (Normal) - corresponds to normal performance

E (Economic) – corresponds to economic performance

### (9) BDI (battery's state of charge)

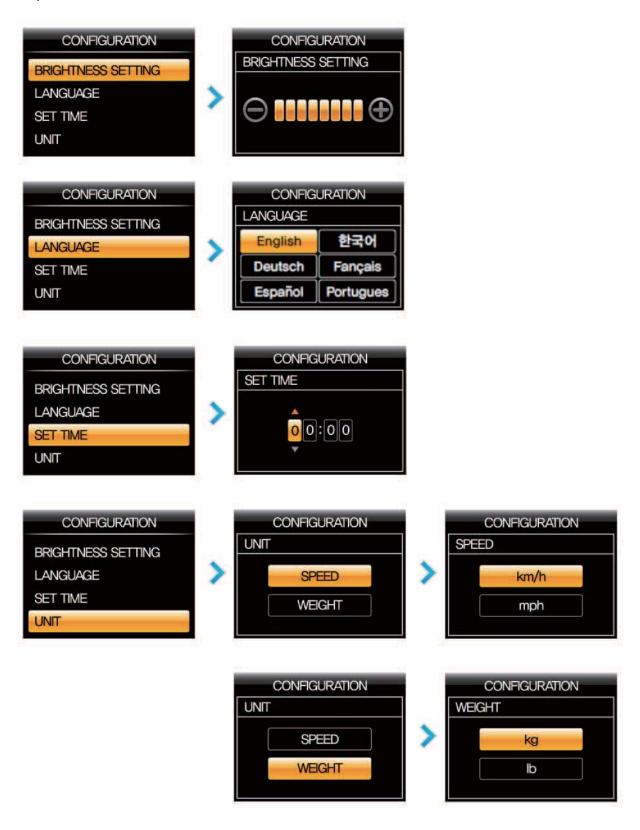
The battery's state of charge is shown by ten bars. Each bar represents the 10% of the battery charge. As the battery becomes discharged, the bars turn off progressively, one after another, in proportion to the value of the residual battery charge. When the residual battery charge is 20% or under, the bars displayed become red.

#### (10) Load weight (option)

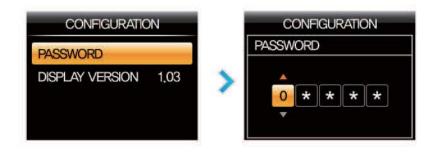
The indicator shows the weight the machine carrying at load.

- Indicator range : 0~6375 kg

### 5) HOW TO SET THE DISPLAY MENU



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22BH9EFD15

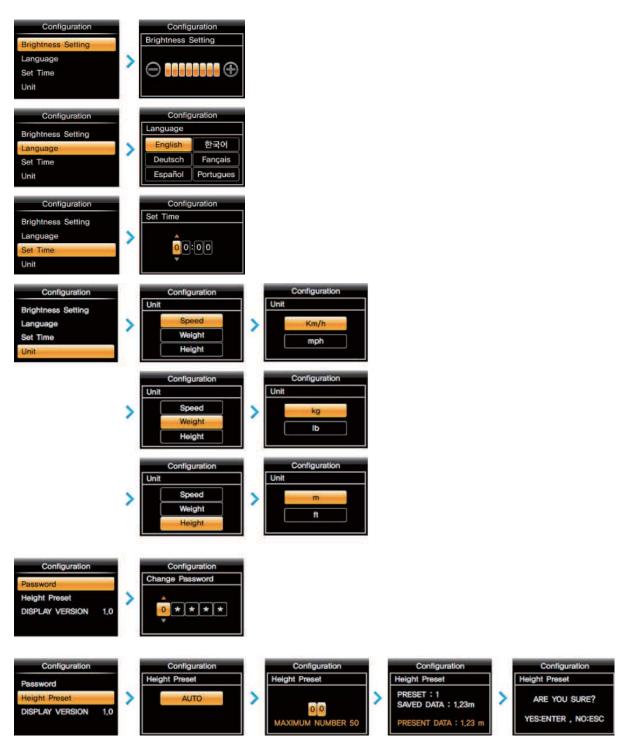
## 6) LCD FUNCTION (for height indicator, OPTION)

## (1) Main



14BRJ9EFD01

## (2) User menu



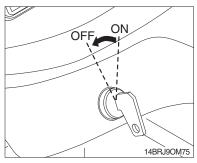
14BRJ9EFD02/03

## (3) Button

No.	Button	Function
1	1 H	Number 1 input button     Go into the HEIGHT PRESELECTOR menu
2	2	Number 2 input button     Upward move button in menu
3	3	1. Number 3 input button
4	4	Number 4 input button     Leftward move button in menu
5	5	1. Number 5 input button
6	6	Number 6 input button     Rightward move button in menu
7	7 M	Number 7 input button     Go into the menu
8	8	Number 8 input button     Downward move button in menu
9	9 P	Number 9 input button     Go into the POWER mode
10	ESC	Go into the ENGINEER/SERVICE password input menu     Return to previous/parent menu and cancel button
11	0	Number 0 input button     Go into the TURTLE mode
12	œ	MENU/PARAMETER select button in menu

## 5. OPERATING SWITCHES AND LEVERS

### 1) KEY SWITCH



- (1) Power is supplied to the control circuit through this switch, which is placed on OFF→ ON clockwise.
  - ① OFF: The key can be removed or inserted and power is turned off.
  - ② ON : Both control circuits for hydraulics and running can be activated.

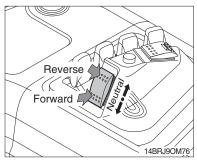
### \* Automatic centering

Automatic centering (AUTC) turns the steered wheel straight ahead to keep the steer aligned meanwhile traveling.

When autocentering is ON, the AUTC at key-on is always performed.

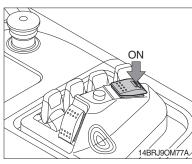
The AUTC at key-on is used to initialize the encoder counting. When it is not performed, the truck travels slow speed only, until the driver moves the steering wheel and an edge is detected on the straight ahead sensor getting possible the initialization of the encoder counting.

## 2) DIRECTIONAL CONTROL switch



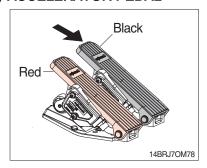
- (1) This switch serves to make forward/backward directional changes (auto-return type switch).
- (2) In press the switch in the running direction, the running control circuits is turned off.
- (3) The electrical brake will be applied by shifting the switch to the opposite position of running direction.

### 3) HORN SWITCH



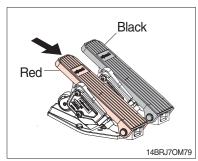
- (1) The horn sounds when this switch is pressed.
- (2) The horn switch is reset automatically, if it is released.

## 4) ACCELERATOR PEDAL



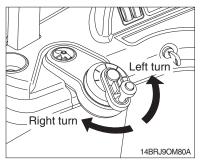
- (1) This pedal is used to vary running speed, which depends upon how far the pedal is depressed.
- (2) In running, the electrical brake will be smoothly applied by shifting the direction lever to the position opposite to the direction of vehicle advanced, and if the pedal is further depressed, the vehicle will run to the opposite direction after stopping once.

### 5) BRAKE PEDAL



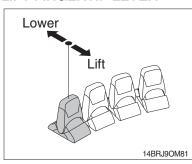
- (1) When this pedal is depressed, the vehicle runs, while the vehicle stops when the pedal released.
- ▲ Special care should be required for the operation of the brake at loading.
- ♠ This vehicle has no parking brake system. But once the pedal released, service brake is always applied to the machine.

### 6) STEERING WHEEL



- (1) The steering wheel of the vehicle is provided with the knob to allow steering with one hand.
- (2) Perform the loading operation with the right hand and operate the steering wheel with the left hand.
- A Particular care should be taken for the rapid operation of the steering wheel.

#### 7) LIFT FINGERTIP LEVER



### (1) LIFT

PULL the lever BACK to LIFT the load.

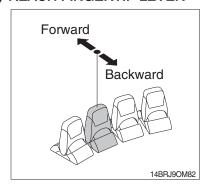
#### (2) LOWER

PUSH the lever FORWARD to LOWER the load.

#### (3) HOLDING

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

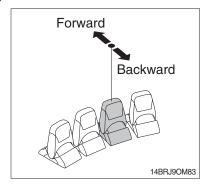
## 8) REACH FINGERTIP LEVER



- (1) REACH FORWARD (Reach out)
  PUSH the lever FORWARD to move mast FORWARD.
- (2) REACH BACK (Reach in)
  PULL the lever BACK to move mast BACKWARD.
- (3) HOLDING

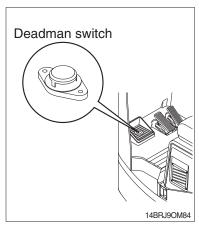
  When the lever is released, moving action stops.

### 9) TILT FINGERTIP LEVER



- (1) TILT FORWARD (Fork down)
  PUSH the lever FORWARD to tilt mast FORWARD.
- (2) TILT BACK (Fork up)
  PULL the lever BACK to tilt mast BACKWARD.
- (3) HOLDING
  When the lever is released, tilting action stops.

### 10) DEADMAN SWITCH



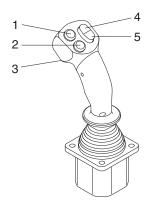
- (1) This switch is closed when an operator is left foot on the deadman pedal.
- ▲ Before starting the truck seat deadman must be closed, otherwise the truck cannot be started.

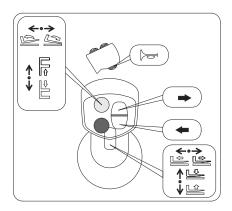
### 11) JOYSTICK

The joystick allows on-handed operation for the following functions :

- · Driving direction for forward and backward.
- · Lifting and lowering for the fork carriage
- · Tilting to forward and backward for fork carriage.
- · Left and right movement for side shift.
- · Reach in and reach out operation.
- · Horn sounding.

### (1) Description



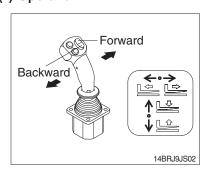


14BRJ9JS01

- 1 Tilt & side shift button
- 2 Autotilt level button
- 3 Horn button

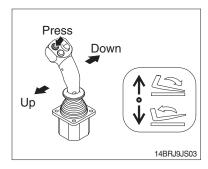
- 4 Forward selection button
- 5 Backward selection button

### (2) Operation



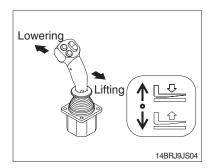
### ① Driving

- Press forward selection button / backward selection button.
- When put the accelerator, the vehicle runs, while the vehicle stops when the pedal released.



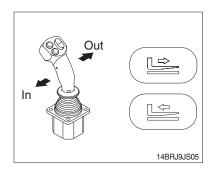
### 2 Tilting

- Press tilt button.
- Move the joystick in the direction of the arrow while pressing the tilt button.



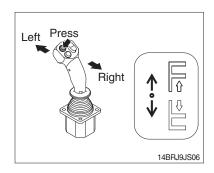
## 3 Raising and lowering

- Move the joystick in the direction of the arrow.



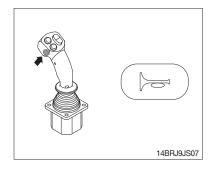
#### Reach in and reach out

- Move the joystic in the direction of the arrow.



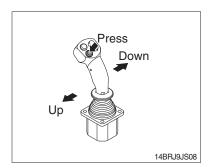
### **⑤** Side shift movement

- Press tilt & side shift button.
- Move the joystick in the direction of the arrow while pressing the side shift button.



## **6** Horn sounding

- The horn sounds when the following switch is pressed.



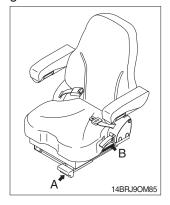
## ② Autotilt level (option)

- Press autotilt level button.
- Move the joystick in the direction of the arrow while pressing the autotilt level button.

## 6. SEAT ADJUSTMENT

### 1) SEAT ADJUSTMENT

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



### (1) Forward/Backward adjustment (A)

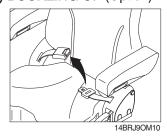
- ① Pull lever A to adjust seat forward or back ward.
- ② The seat can be moved forward and backward over 12mm in 10 steps.

## (2) Reclining adjustment (B)

Pull lever B to adjustment seat back rest.

- Always check the condition of the seat belt and mounting hardware before operating the machine.
- A Replace the seat belt at least once every three years, regardless of appearance.

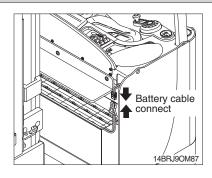
## 2) BUCKLING UP (Option)



- (1) Buckling up. Be sure that you put on the seat belt. Connect and adjust the seat belt strap to a snug, comfortable position.
- Always wear your seat belt when operating a lift truck.

  Failure to wear seat belt will result in injury or death in an event of an accident.

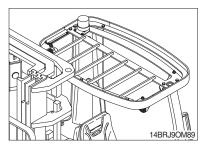
## 7. BATTERY CONNECTOR



Be sure to connect the connector for the battery and body.

## 8. SUPPORT AND SAFETY PARTS

### 1) OVER HEAD GUARD



The head guard is of rugged construction that serves to ensure the safety of the operator.