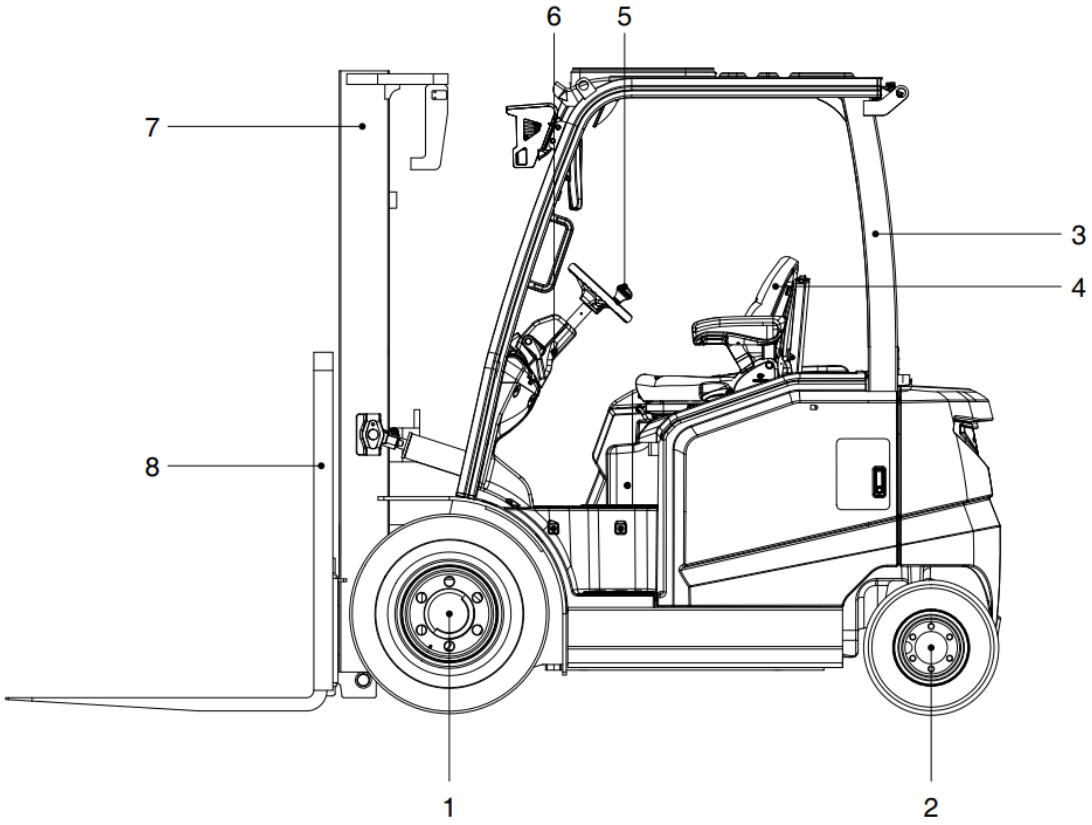
CHAPTER 3 KNOW YOUR TRUCK

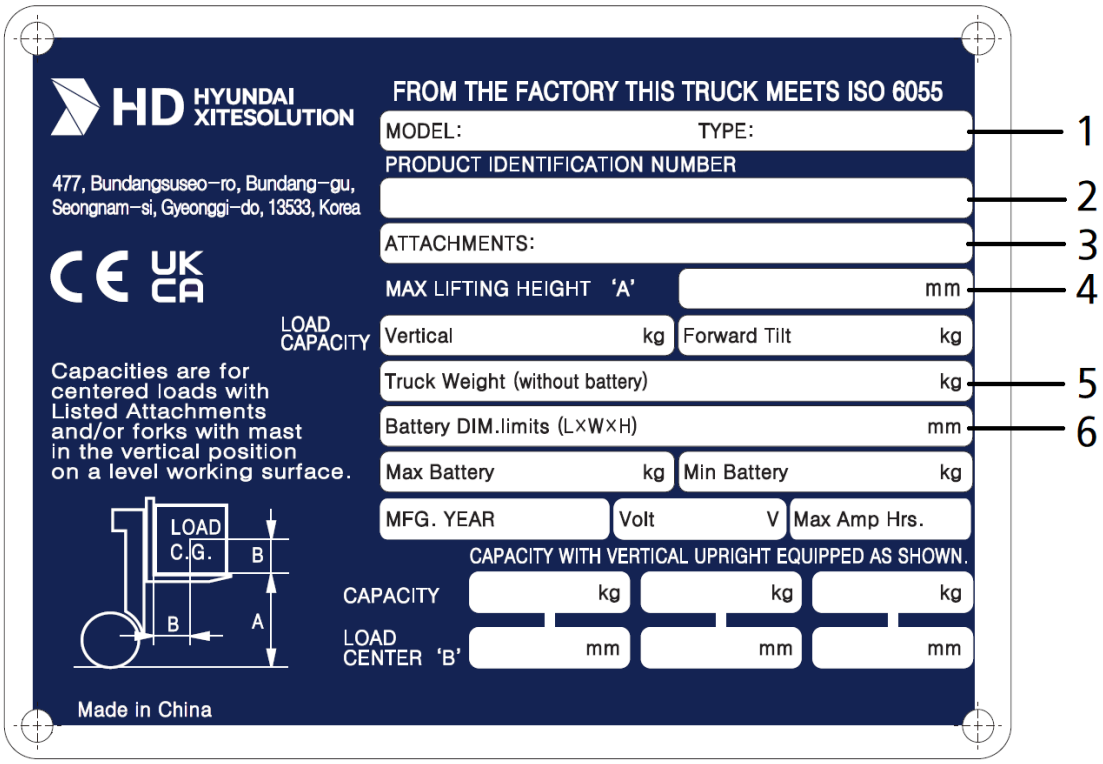
1. GENERAL LOCATIONS



1	Driving axle, tire and wheel	4	Operator's seat	7	Mast
2	Steering axle, tire and wheel	5	Steering wheel	8	Carriage and backrest
3	Overhead guard	6	Direction lever		

2. NAME PLATE

NAME PLATE OF LIFT TRUCK



1. Truck model name or number
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 HD HYUNDAI dealer. The serial number is also stamped on the top of the right fender.
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

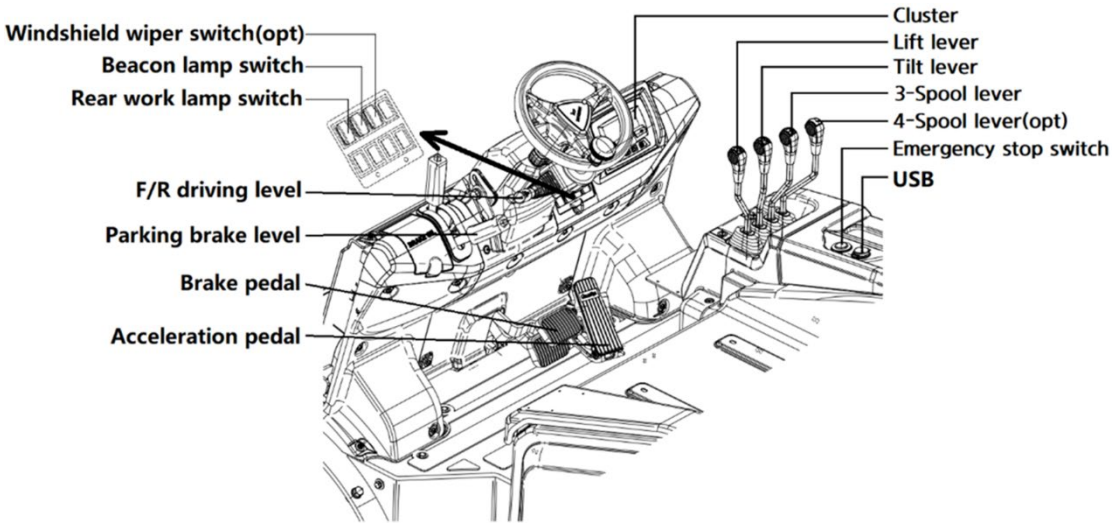
   Shows the maximum load capacity of this truck with relation to load centers and fork heights (See diagram on plate). Personal injury and damage to the truck can occur if these capacities are exceeded. Do not exceed the maximum capacity specified.
5. Truck weight

   The approximate weight of the truck without a load on the forks and battery. 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 only after obtaining written approval from HD HYUNDAI. This is an OSHA requirement. Contact your authorized HD HYUNDAI dealer for a new nameplate showing the revised capacity.**

3. CAB DEVICES

LOCATIONS AND NAMES



4. CLUSTER

1. STRUCTURE

There are 16 LED indicators (red, orange and green) on the cluster. LCD will indicate the operation and abnormal status of truck to the driver in order to use and maintenance.

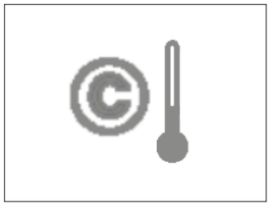
1	Battery Charging warning	10	Seat warning lamp	19	Battery level
2	Brake Oil warning lamp	11	Brake lamp	20	Function menu button
3	Seat-Belt warning lamp	12	Overload warning	21	H N E Mode switch button
4	Time	13	Weighing	22	Turtle speed mode button
5	H/N/E working mode	14	Vehicle speed	23	Confirm button
6	Controller high-temperature warning lamp	15	F N R Indicate	24	Lithium Battery heating indicator
7	Fault warning	16	Hour-meter	25	Left turn indicator light
8	Motor high-temperature warning lamp	17	Fault code	26	Right turn indicator light
9	Parking brake	18	Turtle speed		

2. WARNING LAMP

1) Motor high-temperature warning lamp

Lights up when temperature of motor is more than the limit.

2) Controller high-temperature warning lamp



Lights up when temperature of controller is more than the limit.

3) Seat warning lamp

Lights up when operator leaves the seat.
(During driving, the vehicle stops after the operator leaves the seat for 2 seconds)

4) Seat belt warning lamp

Lights up when operator does not wear the seat belt.
(The vehicle can't move)

5) Overload warning lamp (OPT)

Light up when the cargo exceeds 20% of the rated load.

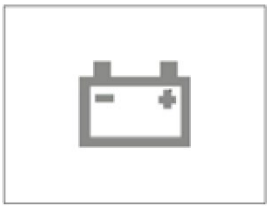
6) Alarm warning lamp

Lights up for error warnings.

7) Brake oil warning lamp

Lights up when brake oil level is low.

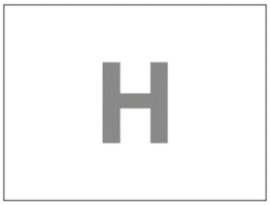
8) Battery charging warning lamp



Lights up when battery charging voltage is low.

3. INDICATOR LAMP

1) H power mode indicator lamp



Lights up when Power Mod is High.

2) N power mode indicator lamp

Lights up when Power Mod is Normal.

3) E power mode indicator lamp

Lights up when Power Mod is Eco.

4) Forward driving indicator lamp

Lights up when truck drives forward.

5) Parking brake indicator lamp

Lights up when parking brake is applied.

6) Reverse driving indicator lamp

Lights up when truck drives reverse.

7) Brake pedal indicator light

Light up when the brake pedal is pressed.

4. BUTTON

1) Confirm button

① On the main work interface, this key is the mute key.

② On the menu interface, this key is the confirmation key.

2) Menu button

① On the main work interface, this key is a menu key

② On the menu interface, this key is the menu return key

3) Up/power mode button

① Press when moving to menus on the left or the top.

② Press when switching between power modes (H/N/E).

4) Move down/speed mode button

① Press when moving to menus on the right or the bottom.

② Press when switching between speed modes (turtle).

5. Matters needing attention in power mode and turtle speed mode

The instrument has three power modes: H/N/E

The instrument has two walking modes: normal speed/turtle speed

Category	Mode			
Driving speed	H	N	E	Turtle
	100%	80%	60%	33%
Lifting speed	H	N	E	
	100%	80%	70%	

Operating instructions:

1) When it is currently in H mode, press ▲ key that H mode changes to E mode (driving speed and speed all enter E mode); Press ▲ key again to change E mode into N mode (driving speed and speed all enter N mode); Press ▲ key again to change the N mode into H mode (driving speed and speed all enter H mode).
2) The three power modes of H/N/E can only be switched when the vehicle speed is 0km/h and five seconds after releasing the brake pedal; Press ▲ while the vehicle is running, and the power mode will not be switched, When the vehicle stops at a speed of 0km/h and five seconds after releasing the brake pedal, the power mode will be automatically switched.
3) (For example: In H mode, when the vehicle presses ▲ key during driving, the vehicle still runs in H mode, When the vehicle stops and travels at a speed of 0km/h and five seconds after releasing the brake pedal, the H mode on the instrument will automatically change to the E mode at this time, the vehicle enters the E mode)
4) Press ▼ key on the instrument will display the turtle icon at this time the vehicle speed will enter the turtle speed mode; Press ▼ key again and the turtle icon on the instrument disappears. The driving speed of the vehicle will enter the normal mode. Driving speed is based on the H/N/E mode speed displayed by the current instrument. Turtle speed mode can only be switched when the vehicle stops and five seconds after releasing the brake pedal.

6. Instrument startup interface

After the combination instrument of DZB916-XDZG forklift is powered on, the buzzer emits a "drip" self-inspection. The LCD screen displays the boot screen of modern heavy industry LOGO.

The combination instrument panel of DZB916-XDZG forklift truck is composed of a 4.3 inches color LCD screen+4 multi-function keys.

The color LCD screen is used to display the fault code and switch status information of the vehicle speed, electric SOC, load weight, gantry tilt angle, rear wheel steering angle, hour meter, RTC clock, traveling motor controller, pump motor controller, BMS, etc. The instrument has three display languages, Chinese, English and Korean, and multi-level menu operation.

7. Main work interface

The power-on interface shown in Figure 1 displays for 3 seconds, and the LCD displays the main working interface.

When the instrument is powered on for the first time to display the main working interface, the alarm indicators on the main working interface, such as brake failure, maintenance indication, high motor temperature, high electric control system temperature, seat indication, seat belt indication, hand brake, low battery power alarm, slow speed indication, current F/N/R gear, H/N/E working mode indication, overload alarm, etc., are all lit for self-inspection.

The self-inspection ends in 2 seconds, and the speedometer, electricity meter, alarm and status indication are displayed according to the real-time status signal.

Speedometer

The speedometer shows the current speed of the forklift in km/h.

The vehicle speed signal is sampled by the controller.

The controller sends it to the instrument for display via CAN bus.

Percentage of electricity (SOC)

The electricity meter (SOC) displays the current percentage of remaining battery power.

The power is sampled by BMS controller.

The controller sends it to the instrument for display via CAN bus.

Wheel steering angle

The rear wheel steering angle signal comes from the controller. The display range is -90 degrees to 0 degrees to 90 degrees. The rear wheel angle function can be turned on or off by entering the [Rear wheel angle function] interface in the [Function setting] menu

8. Instrument menu

1) System status interface

After enter menu interface, select “system status” and press enter button.

2) Running parameters interface

After enter menu interface, select “Running parameters” and press enter button.

When using lithium battery, 6, 7, 8, 9 will show data.

3) Display settings interface

After enter menu interface, select “display settings” and press enter button.

In the display setting interface, the brightness of the LCD screen, time and language can be set. There are three languages, Chinese, English and Korean.

4) Weight calibration interface

The load weight signal comes from the sensor, and directly connected to cluster. In order to improve the weighing accuracy, the weighing sensor will be calibrated in the process of truck debugging.

Calibration of weight sensor

- Enter fork weight
- Enter load weight
- Confirm parameter

After enter menu interface, select “Weight calibration” and press enter button to start calibrating of weight sensor.

5) Function settings

After enter menu interface, select “function setting” and press enter button.

OPS setting

After enter function setting interface, select “OPS setting” and press enter button.

This number means duration of alarm.

※ **Alarm when: Parking system is not working and operator is not on the seat whatever power on or off.**

Gantry Tilt Angle

This function is not currently implemented.

Weighing display (OPT)

After enter function setting interface, select “Weighing display” and press enter button.

Wheels Steering Angle

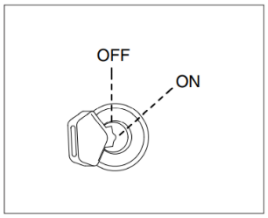
This function is not currently implemented.

Hourly meter management

After enter function setting interface, select “Hourly meter management” and press enter button. It will be used after truck debugging in factory only. Then hourly meter works normally.

5. SWITCHES AND LEVERS

1. START SWITCH

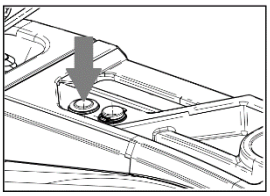


The switch supplies power to control circuit, and operates in sequence of OFF → ON clockwise.

OFF: Power off

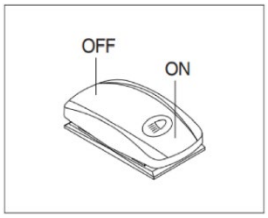
ON: Power ON and truck got ready for operation

2. EMERGENCY STOP SWITCH



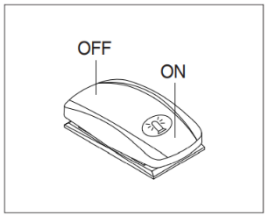
Press down the emergency stop switch which will interrupt electric circuits, and all of functions are disabled. When the truck is not for extended period of time, store the truck with the switch pressed. Press the emergency switch when charging the battery. When operating the truck after charging, release the switch, and then press Start switch 5 seconds later.

3. REAR WORK LAMP SWITCH



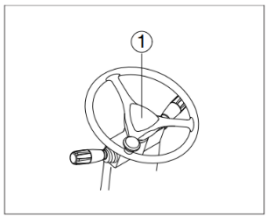
Press the switch to turn the rear work lamp on.

4. BEACON LAMP SWITCH



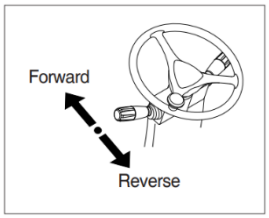
Press the switch to turn the beacon lamp on.

5. HORN SWITCH



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

6. FORWARD AND REVERSE DRIVING LEVER

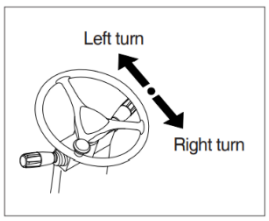


1) The lever switches driving direction to forward or reverse. Push the lever forward to driving the truck in forward direction.

2) When the lever is on neutral position, control switch is turned off.

3) Pull the lever backward to driving the truck in reverse direction.

7. LEFT- AND RIGHT-TURN LEVER

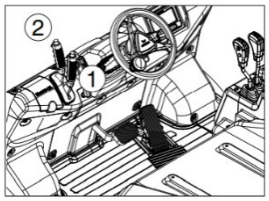


1) Pressing the switch blinks flash lamp to indicate turning direction; left or right.

2) Pull the lever backward to turn right.

3) Push the lever forward to turn left.

8. PARKING BRAKE LEVER

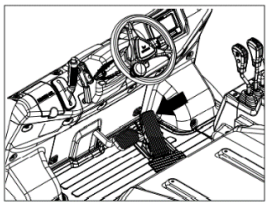


1) Parking brake applied (front wheel fixed)

2) Parking brake released

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

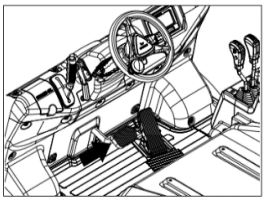
9. ACCELERATION PEDAL



1) This pedal controls the engine speed.

2) When turning the lever in the opposite direction while driving, electric brake applies. When pressing further the pedal, the truck stops, and then drives in the opposite direction.

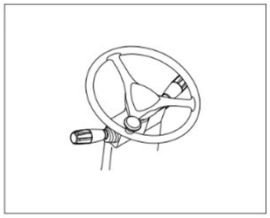
10. BRAKE PEDAL



Pressing the pedal stops the truck, and brake lamp on the rear side lights up.

⚠ **Pay special attention to operating the brake when moving cargo.**

11. STEERING WHEEL



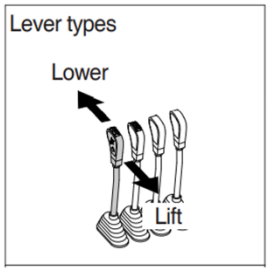
1) A knob is mounted on the wheel for handling the steering wheel with a hand.

2) It is allowed to perform unloading work with the right hand, and handle the steering wheel with the left hand.

3) It is possible to enhance driving convenience by adjust the steering column.

⚠ **Rapid handling of the steering wheel may cause risky situation.**

12. LIFT LEVER



1) Lift

Pulling the lever backward ascends the folks.

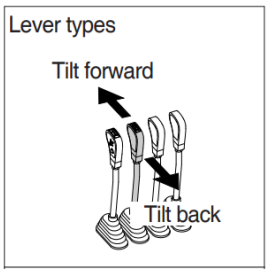
2) Lower

Pushing the lever forward descends the folks.

3) Hold

Releasing the lever (fingertip) when forks are lifted (or lowered) to desired position holds the forks at the position.

13. TILT LEVER



1) Tilt forward

Pushing the lever (fingertip) forward tilts the mast forward.

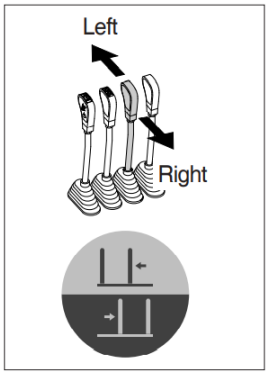
2) Tilt back

Pulling the lever (fingertip) backward tilts the mast backward.

3) Hold

Releasing the lever (fingertip) stops movement of the mast.

14. LEVER FOR SIDE SHIFT



1) LH movement

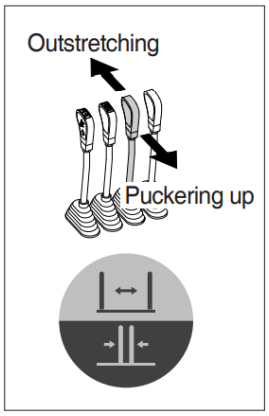
Push the lever forward to move the carriage left.

2) RH movement

Pull the lever backward to move the carriage right.

15. LEVER FOR SIDE SHIFT WITH FORK POSITIONER

1) Fork positioner (synchronizer type)



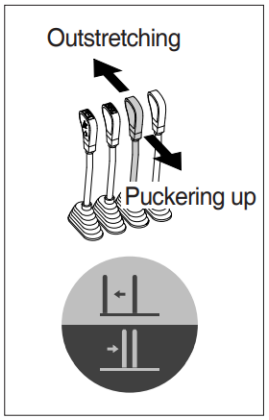
① Outstretching the forks

Push the lever forward to outstretch both forks simultaneously outward.

② Puckering up the forks

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

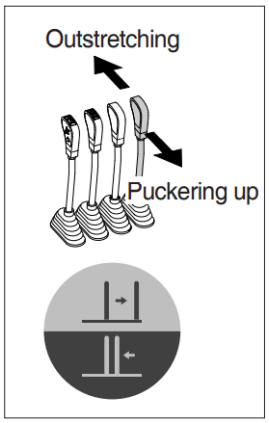
2) Fork positioner (independent type)



① LH fork movement

Push the lever forward to move the LH fork outward.

Pull the lever backward to move the LH fork inward.

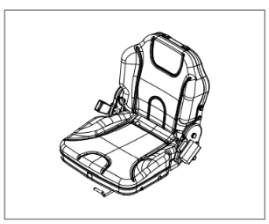


② RH fork movement

Push the lever forward to move the RH fork outward.

Pull the lever backward to move the RH fork inward.

16. SEAT SWITCH



The switch is automatically turned on when operator sits on seat.

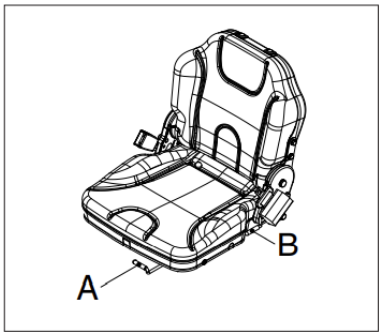
⚠ **The truck starts only when the seat switch is turned on.**

6. OPERATOR'S SEAT ADJUSTMENT

It is allowed to adjust operator's seat adequate for body of operator to reduce fatigue during driving, and enhance work efficiency.

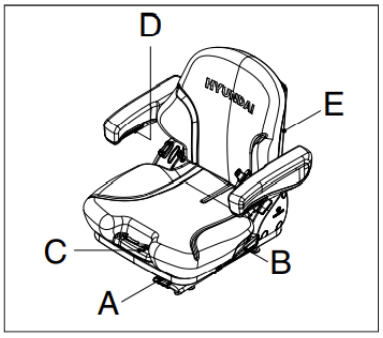
1. OPERATOR'S SEAT

1) Front/rear adjustment (A)
   - ☐ Pull Lever A to adjust the seat back and forth.
   - ☐ It is allowed to adjust forth up to 72 mm, and back up to 84 mm (stroke: 156 mm).
2) Backrest adjustment (B)
   Pull Lever B to adjust the angle of backrest.



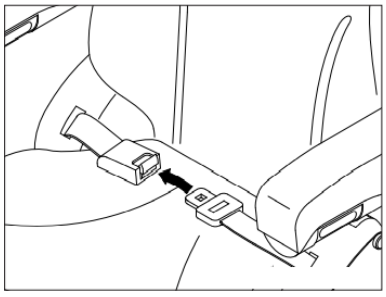
2. OPERATOR'S SEAT (GRAMMER, OPT)

1) Front/rear adjustment (A)
   - ☐ Pull Lever A to adjust the seat back and forth.
   - ☐ It is allowed to adjust forth up to 120 mm, and back up to 90 mm (stroke: 210 mm).
2) Backrest adjustment (B)
   Pull Lever B to adjust the angle of backrest.
3) Weight adjustment (C)
   Turn Screw C with socket wrenches without sitting on the seat to adjust weight.
4) Armrest adjustment (D)
   Rotate Adjustment Knob D to adjust the angle.
5) Heater switch (E, opt)
   Heater is turned on and off with the switch.



3. SEAT BELT

Never forget wearing the seat belt before starting the truck. Adjust tension of the seat belt before wearing it.



- ⚠ **Always wear the seat belt before driving the truck to prevent safety accident.**
- ⚠ **Failing in wearing the seat belt may cause personal injury in accident.**
- ⚠ **Check the seat belt for any abnormal conditions before starting the truck.**
- ⚠ **Replace the seat belt every three years even if there are no apparent defects on the belt.**

7. BATTERY COVER

Hold the handle on the top of the battery cover to lift the cover for inspecting and servicing the battery.

※ **Fix the steering column forward before opening the battery cover.**

※ **Pull the handle of the latch or press the button on the handle of the battery cover to open the cover. Opening and closing the battery cover is made with gas spring. Lifted cover is kept at the position.**