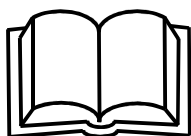
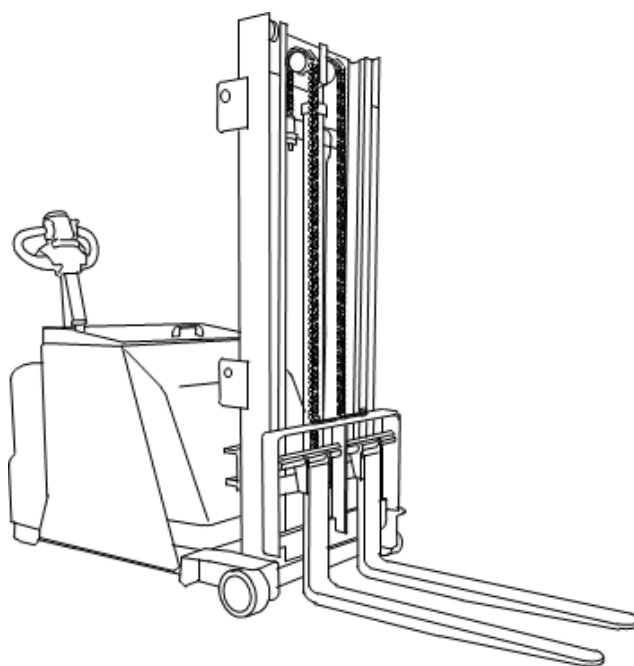


**Walkie Counterbalanced Forklift**

**FX15WT**



# **Instruction Manual**



Before operation, inspection and maintenance of this forklift, be sure to read this instruction manual to understand the contents thoroughly. Keep this instruction manual in place where you can quickly access it.

**Nakanishi Metal Works Co., Ltd.**

Thank you for purchasing “Walkie Counterbalanced Forklift”. This instruction manual describes proper handling method and daily inspection/maintenance method for the counterbalanced forklift. Before using this forklift, please read this instruction manual to understand the instructions given in the manual thoroughly. Keep this instruction manual in place where you can access it anytime. If you have uncertainty during use of the forklift, or if a trouble occurs with this forklift, this instruction manual serves as a help. We hope you use this forklift safely for a long period.

Nakanishi Metal Works Co., Ltd.

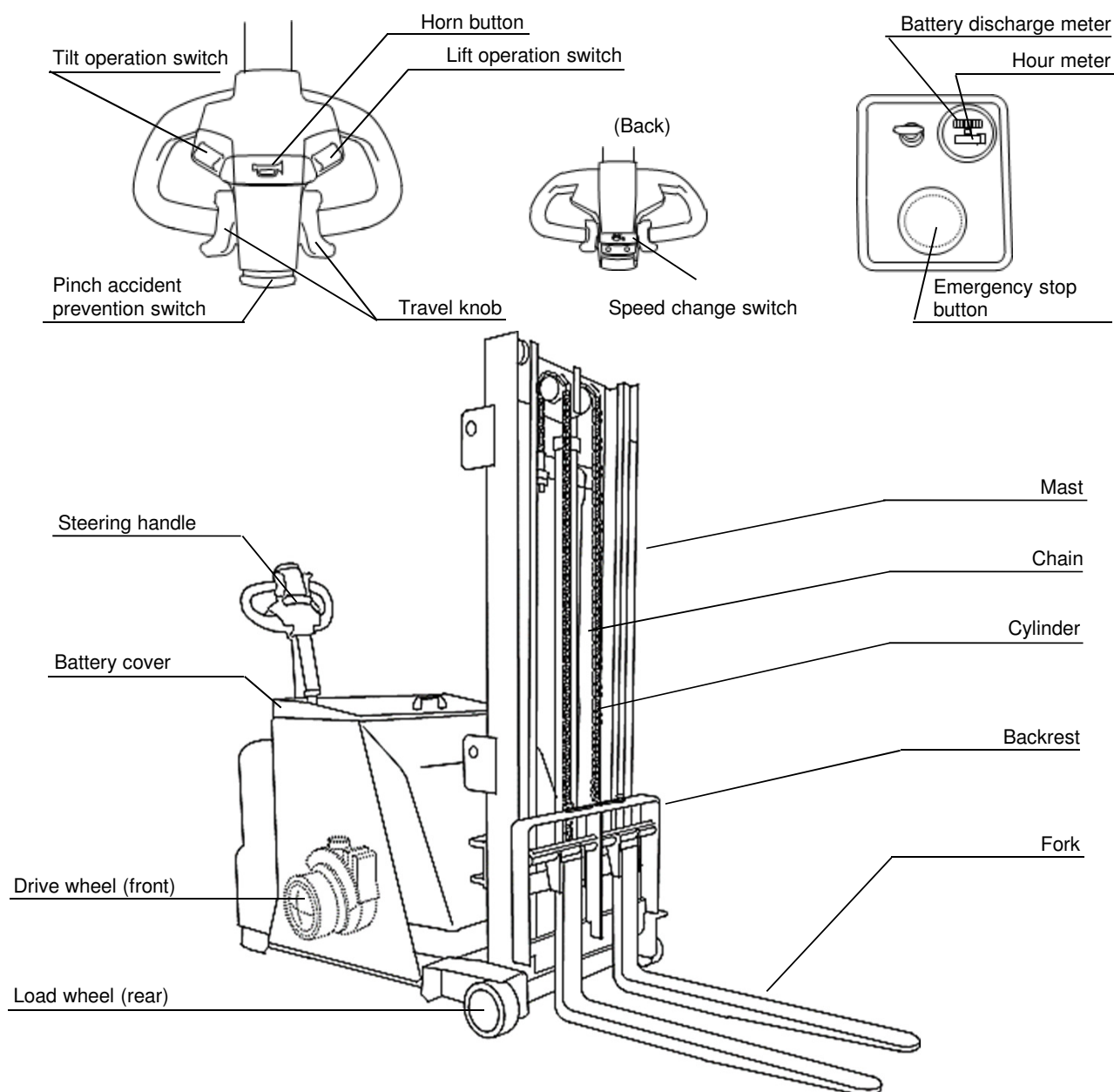
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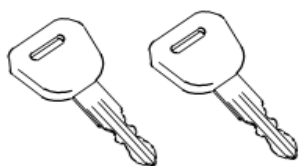
# 1. Part Names and Specifications

## (1) Part names

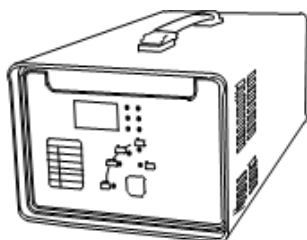


## (2) Accessories

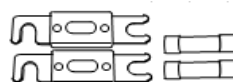
[1] Switch key: 2 pieces



[2] Battery charger



[3] Fuse



**(3) Specifications**

Model	Unit	FX15WT	Remarks
Maximum load	kg	1,500	
Load center	mm	500	
Lifting height	mm	35 - 2,500	
Backward tilt angle	°	5	
Lifting speed	Laden	mm/s	60
	Unladen	mm/s	140
Driving speed	Under load	km/h	3.2
	No load	km/h	3.8
Minimum turning radius	mm	1,380	When handle is upright
Overall length	mm	2,430	When handle is upright
Overall width	mm	890	
Overall height	Minimum upper stroke end	mm	1,825
	Maximum lower stroke end	mm	3,055
Wheelbase	mm	1,120	
Fork length	mm	920	
Fork overall width	mm	630 - 400	
Single fork width	mm	100	
Weight	kg	1,800	Including battery
Drive wheel	mm	φ 245 x 100, 1 piece	Made of urethane
Load wheel	mm	φ 150 x 80, 2 pieces	Made of urethane
Battery voltage	V	24	
Battery capacity	Ah	201	5HR
Battery charger	---	Automatic battery charger	
Drive motor	W	1,700	
Drive control	---	AC motor control	
Hydraulic motor	W	2,200	
Hydraulic control	---	Knob-type chopper control	

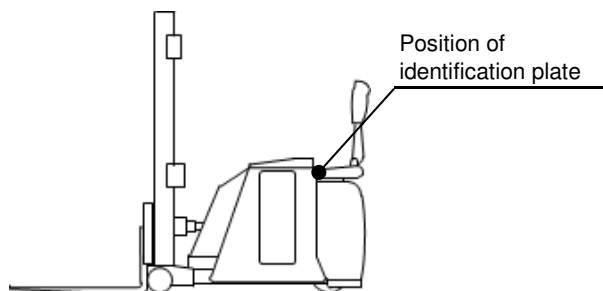
## 2. Basic instructions

The following are basic instructions that you should learn about use of this forklift, and those prescribed in laws and ordinances to ensure safe use of the forklift.

For safety instructions that are not included in this section, refer to “2. Safety Precautions”.

### Identification plate

Manufacturer, model and serial No. of this forklift are indicated at the following position of the vehicle body. When you issue a repair order, be sure to inform us of the model and serial No. of your machine.



KOLEH	
Vehicle Model	
Maximum Load	KG
Vehicle Weight	KG
Serial Number	
NKC CONVEYORS., LTD.	

### Purpose of use

This forklift is intended for the following purpose. This forklift is prohibited from use for other than the intended purpose (load sling, worker elevation, etc.).

Purpose of use of this forklift:

This forklift is intended for load lifting/lowering and transfer operations using the fork, etc. on a rigid, flat floor in a building.

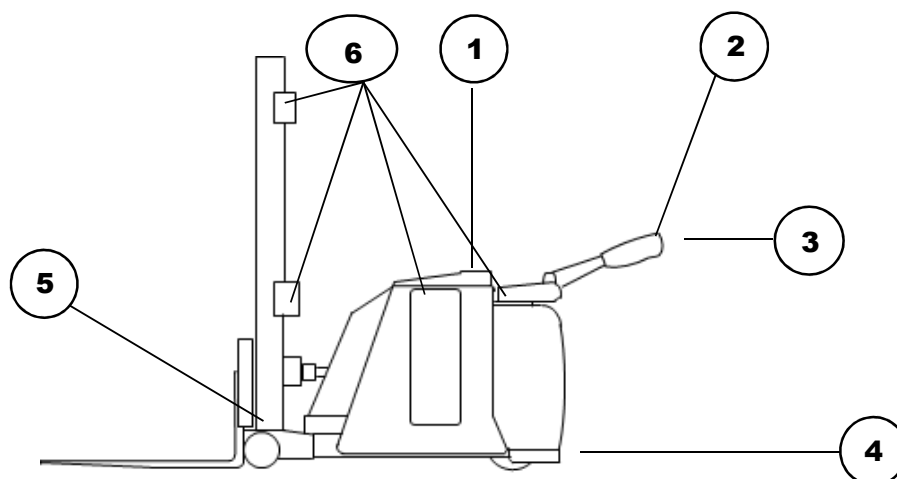
### Operating conditions

The operating environment of this forklift should be in the following range: Using this forklift in other than the following temperature/humidity range may result in machine performance deterioration. Using this forklift in any condition out of the specified operating environment conditions may result in unexpected safety risk.

- Temperature/Humidity      Allowable temperature: 5°C to 50°C, Allowable humidity: 20% to 80%  
(Use this forklift in the range of 0°C to 50°C, even if the above temperature range is not available.)
- Ambient conditions      No flammable gas, No flammable liquid
- Indoor/Outdoor      Indoor
- Floor condition      Rigid, hard and flat floor

### Safety/protection devices

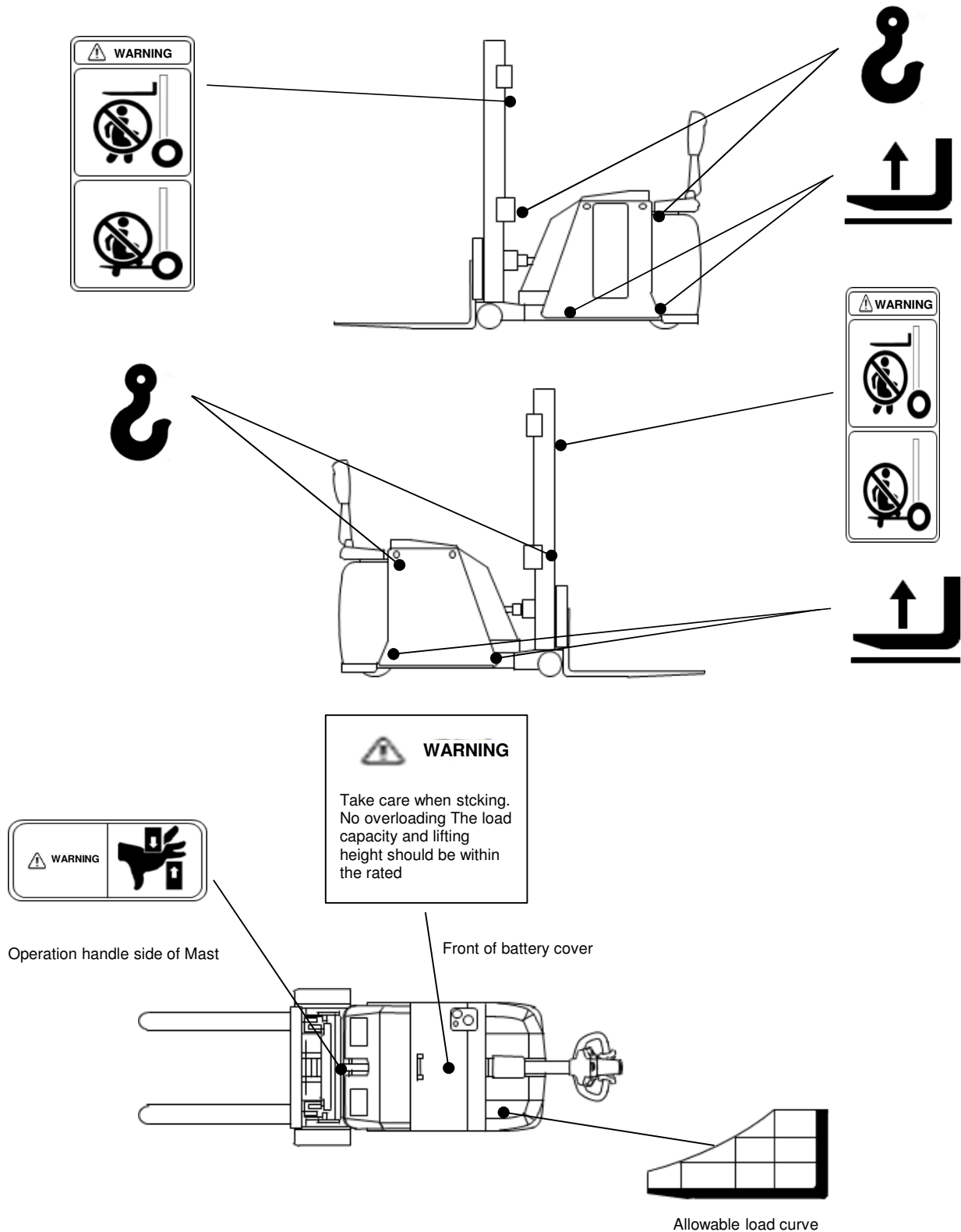
This forklift is equipped with the following safety devices and additional protection devices. During operation of the forklift, these devices must not be removed.



No. in the drawing	Safety/protection device	Appearance	
1	Emergency stop button		Pressing the emergency stop button turns OFF the power supply. When you reset the emergency stop button, be sure to ensure safety in advance.
2	Alarm (Horn)		Pressing this button turns on the horn.
3	Pinch accident prevention switch		When an operator is almost pinched between the handle and a wall, this switch is pressed with the body, so that the forklift moves backward to prevent the body from being pinched. (Even if this switch is pressed while the forklift is moved backward, it does not move forward.)
4	Guard		The guard prevents the operator's feet from entering the bottom of the vehicle, so that the feet will not be caught by the vehicle body or front wheel.
5	Excessive flow shutoff valve		When the hydraulic flow rate becomes abnormally large, the shutoff valve is activated to limit the flow rate to prevent abrupt fall of the fork.
6	Sling eyehole		When slinging the vehicle body, sling hooks can be attached to the eyeholes. Using the eyeholes enables sling work to be securely conducted.

### Warning label

The following warning labels are attached to the FX15WT body. Use the forklift carefully by following the instructions given on the warning labels. If any of the warning labels is difficult to read due to stain or damage, replace it with a new one so that the warning labels are kept readable.





## 3. Safety Precautions

### Instructions classified as **DANGER**, **WARNING** and **CAUTION**

In this instruction manual, situations that may result in accidents from improper handling of the forklift are classified into the following three categories:



**DANGER** Improper handling of the forklift may result in imminently hazardous conditions involving death or serious injury.

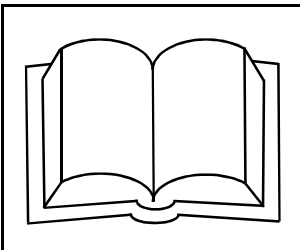


**WARNING** Improper handling of the forklift may result in hazardous conditions involving death or serious injury. Also, slight injury and property damage may occur at considerably high possibility.



**CAUTION** Improper handling of the forklift may result in hazardous conditions involving injury, and serious injury at less possibility. Also, it may result in property damage.

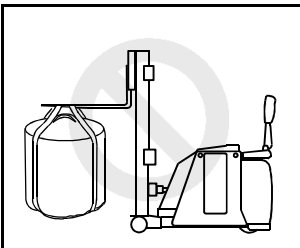
#### ■ Before use



#### **WARNING**

**Be sure to read this instruction manual before use.**

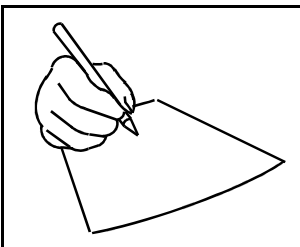
Before use, read this instruction manual to understand the contents thoroughly. Failure to read and understand the contents of the instruction manual causes improper handling of the forklift, which may result in accidents involving serious injury and burns.



#### **WARNING**

**Do not use the forklift for other than the principal purpose.**

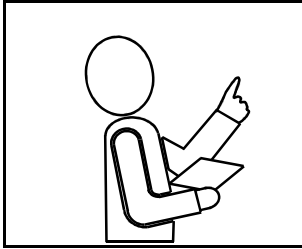
Do not use this forklift for other than the principal purpose. Using the forklift for any purpose other than the intended purpose may result in unexpected hazardous conditions, causing a serious accident.



#### **WARNING**

**Make a work plan, and observe the plan thoroughly.**

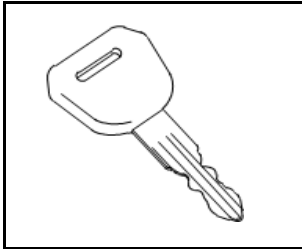
Before start of work, make a work plan, and notify it to people around the forklift operating area. If the forklift is operated without preparation of a work plan or without notification of the work plan to surrounding people, the forklift may collide with surrounding people, who may suffer injury.



**! WARNING**

**Appoint a work leader.**

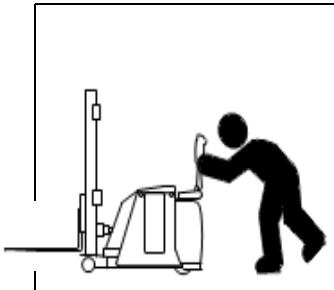
During work with the forklift, appoint a work leader. The work leader should give directions for work according to a work plan. If a work leader is not appointed, risk of accident may increase, because of insufficient association with surrounding work.



**! WARNING**

**Remove the key when the forklift is left unused.**

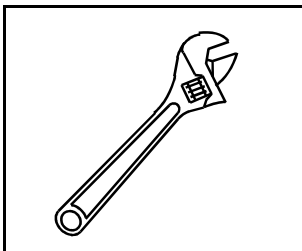
When the forklift is left unused, remove the key from the key switch, and keep it. If the key is left in the switch, an unauthorized person or a person who has not been familiarized with operation of this forklift may operate the forklift, resulting in an accident.



**! WARNING**

**Do not use a forklift in a fault condition.**

If the forklift is used in a fault or abnormal condition, it may result in collision, cargo fall or forklift overturn accidents because the forklift cannot be normally operated due to the fault. If a fault or abnormality is found with the forklift, repair it immediately.

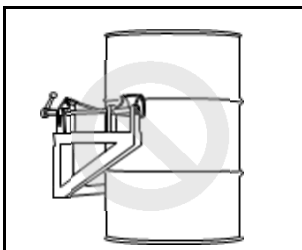


**! DANGER**

**Do not attempt to modify the forklift.**

Modification of the forklift may deteriorate performance and safety of the forklift.

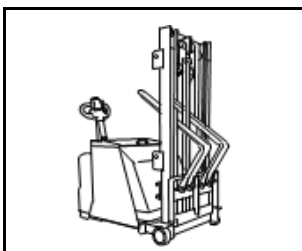
If modification is required, please consult the manufacturer.



**! DANGER**

**Do not attach any part other than the genuine accessories.**

Do not attach any part to the forklift other than the accessories allowed by the forklift manufacturer. Failure to observe this instruction may lower stability and strength required for safety.

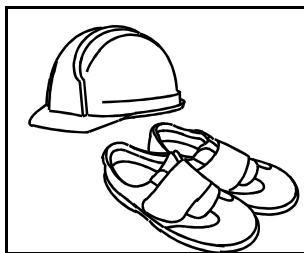


**! WARNING**

**When restoring the fork from the traveling position, handle it carefully.**

When lowering the fork from the traveling position to the operating position, hold the fork, and lower it carefully. If you handle the fork roughly, your hand may get pinched with the fork, resulting in injury such as bone fracture and bruise.

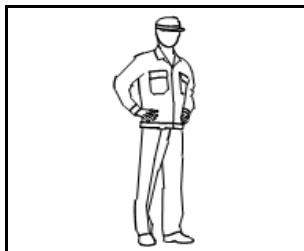
## ■ Instructions for operator



### **WARNING**

#### **Wear protective cap and safety shoes.**

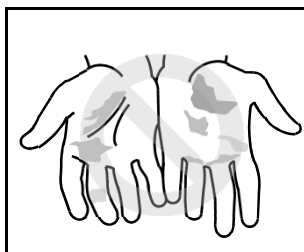
Be sure to wear protective cap and safety shoes. Otherwise, if a cargo fall, it may collide with or pinch your feet. If the forklift overturns, you may suffer serious injury.



### **CAUTION**

#### **Wear clothes appropriate for forklift work.**

Wear clothes appropriate for work with the forklift. If you wear untidy clothes during work, a part of the clothes may get caught with the vehicle body or may hinder operation of the forklift. This causes operation error or operation delay, resulting in collision and cargo fall accidents.



### **WARNING**

#### **Do not operate the forklift with dirty hands.**

If you operate the forklift with wet hands or hands stained with oil, the hands slip, which may result in collision and cargo fall accidents.



### **WARNING**

#### **Do not operation the forklift under influence of a medicine that induces drowsiness.**

Do not operate the forklift under influence of a medicine that induces drowsiness. If you operate the forklift under influence of such a medicine, operation error or operation delay may occur, resulting in a collision accident, etc.



### **WARNING**

#### **Do not operate the forklift in overwork condition.**

Overwork may induce inattention during operation of the forklift, causing operation error or operation delay, which may result in a collision accident, etc.

### 3. Safety Precautions

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#### **WARNING**

**Do not operate the forklift while using a cellphone or smartphone.**

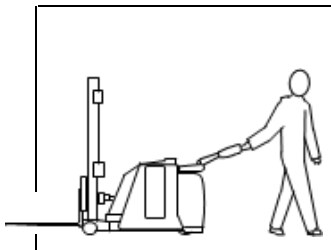
Do not operate the forklift while using a cellphone or smartphone. Such an action induces inattention, and causes operation error or operation delay, which may result in collision and cargo fall accidents.



#### **WARNING**

**Do not operate the forklift under influence of alcohol.**

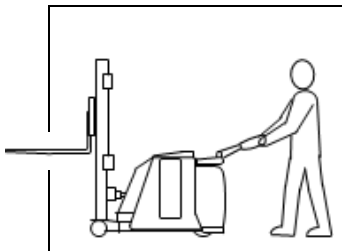
Operating the forklift under influence of alcohol may result in collision, cargo fall and overturn accidents.



#### **WARNING**

**Before operation, be familiarized with this forklift.**

Before operation of the forklift, practice it thoroughly, so as to be familiarized with this forklift. If you operate the forklift before getting familiarized with it, operation error or operation delay may occur, resulting in a collision accident, etc.



#### **WARNING**

**Do not operate the forklift at any position other than the normal operating position.**

If you operate the forklift at any position other than the position that enables all operations immediately (normal operating position), operation error or operation delay may occur, resulting in a collision accident, etc.

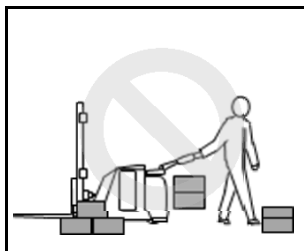
## ■ Place to operate the forklift



### **WARNING**

**Do not operate the forklift in a place where it may collide with a person.**

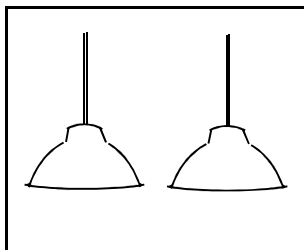
Do not operate the forklift in a place (work site) where it may collide with a person. If it is inevitable to operate the forklift in such a place, allocate a guide to ensure safety.



### **CAUTION**

**Operate the forklift in a well-ordered place.**

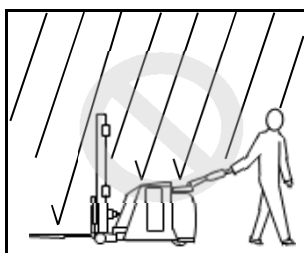
Operate the forklift in a place where cargos, materials and equipment are arranged in well-ordered conditions. If the forklift is operated in a disordered place, it may collide with scattered articles. Also, the operator may pay attention to scattered articles, which induce operation delay, resulting in collision and cargo fall accidents.



### **WARNING**

**Secure sufficient brightness required for work.**

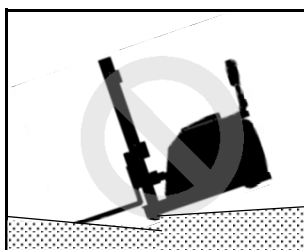
Operating the forklift in a dark place may result in a collision accident. Be sure to operate the forklift in a place with brightness required for operation. If brightness is insufficient, attach the front and rear lamps, and turn on the lamps during work.



### **CAUTION**

**Do not operate the forklift in the rain.**

This forklift has been designed for indoor use. Do not operate the forklift in the rain. Otherwise, rain may enter the vehicle body, causing a trouble of the electric circuit. If a trouble with the electric circuit, it causes operation failure and malfunction of the forklift, resulting in a collision accident.



### **WARNING**

**Be careful about floor strength.**

Use caution about strength of the floor on which the forklift operates. If the floor strength is insufficient, the forklift may break the floor and overturn. If the forklift overturns, the forklift and dropped cargo may collide with a person, resulting in serious injury.

### 3. Safety Precautions

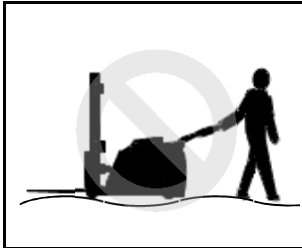
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#### **WARNING**

**Run the forklift slowly and carefully when operating it on a slippery floor.**

When operating the forklift on a floor that is slippery due to dew, etc., reduce the operating speed to a safe speed. If the forklift slips on the floor, it may collide with a person, resulting in serious injury.

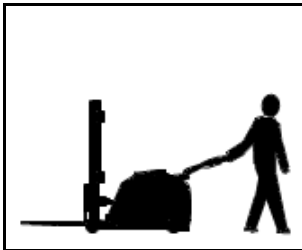


#### **CAUTION**

**Use the forklift on a flat floor.**

If the forklift is used on an uneven floor, it becomes unstable, and may overturn. If the forklift overturns, it may break surrounding objects or collide with a person, resulting in injury.

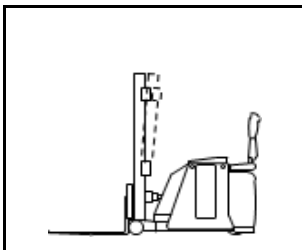
## ■ Traveling



#### **CAUTION**

**Run the forklift with the handle placed forward.**

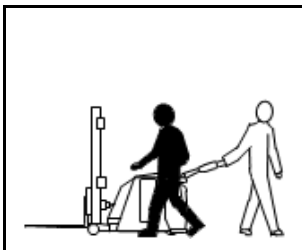
If you run the forklift with the fork placed forward, the handle may become unstable, resulting in a collision accident. Run the forklift with the handle placed forward, except for a case where you insert the fork into a pallet or push a pallet by inserting the fork.



#### **CAUTION**

**During transfer, tilt the mast backward.**

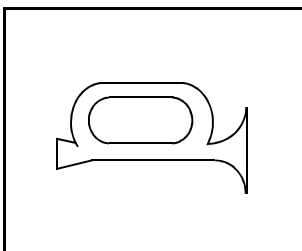
Tilt the mast backward so as to stabilize the cargo during transfer. If the mast is not tilted backward, the cargo becomes unstable and may fall, resulting in a collision accident.



#### **WARNING**

**At startup, pay attention to surrounding people.**

When you start running the forklift, pay attention to surrounding people and vehicles. If you start running the forklift without attention to surroundings, it may result in collision with surrounding people and vehicles.



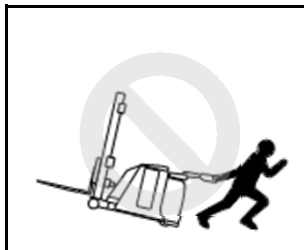
#### **WARNING**

**Issue a start sign as required.**

If surrounding people does not notice the forklift, or when the forklift is difficult to see, issue a start sign with the horn, etc. before start. If you start running the forklift without a start sign, the forklift may collide with a person.

### 3. Safety Precautions

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#### **WARNING**

**Do not start or accelerate the forklift rapidly.**

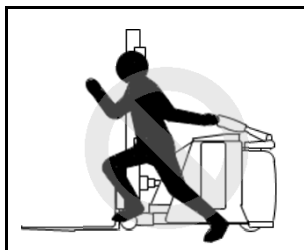
If the forklift is rapidly started or accelerated, it may become out of control, resulting in collision, and the cargo may fall and hit a person.



#### **CAUTION**

**Do not stop the forklift rapidly.**

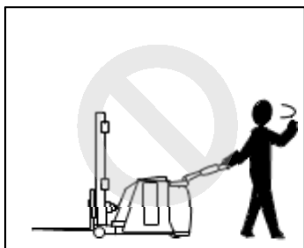
If the forklift is rapidly stopped, the cargo may fall and hit a person. Also, rapidly stopping the forklift may cause collision with surrounding people and vehicles.



#### **WARNING**

**Do not turn the forklift rapidly.**

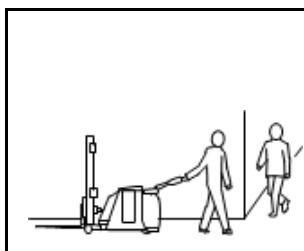
If the forklift is rapidly turned, it may become out of control, resulting in collision, and the cargo may fall and hit a person.



#### **WARNING**

**Do not look aside during operation.**

If you run the forklift while looking aside, it may cause operation delay, resulting in collision with surrounding people and objects.



#### **WARNING**

**Run the forklift slowly while traveling in a place where it is difficult to see.**

When you run the forklift in a place where it is difficult to see, a person or vehicle may abruptly come into sight, resulting in a collision accident. During travel in a difficult-to-see place, run the forklift slowly.



#### **WARNING**

**Be careful not to get pinched with the handle.**

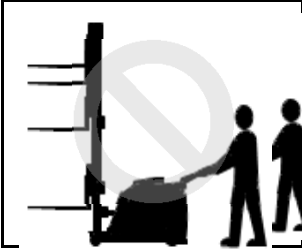
Be careful not to get pinched between the handle and a wall, rack, etc. during operation. If an operator gets pinched between the handle and a wall, rack, etc., it may result in a serious accident.



**! WARNING**

**Do not transfer cargo at an elevated position.**

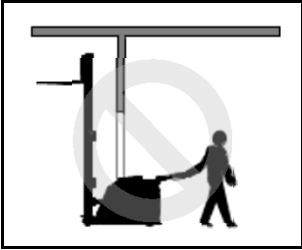
If cargo is transferred at an elevated position, the forklift becomes unstable and may overturn. If the forklift overturns, the forklift or dropped cargo may collide with a person, resulting in serious injury.



**! CAUTION**

**During travel, do not raise the fork.**

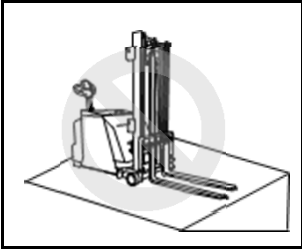
If the fork is raised during travel, the forklift becomes unstable and may overturn, and the cargo may fall.



**! WARNING**

**Be careful about height of entrance/exit.**

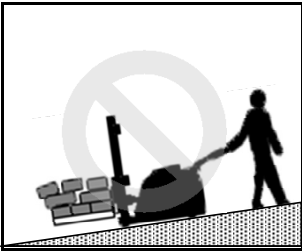
Be careful about height of an entrance/exit so that the mast does not collide with the entrance/exit. If the mast is extended during travel, the risk of collision with entrance/exit or beams will be enhanced. If the mast of the forklift collides with an entrance/exit, etc., the forklift may overturn and the cargo may fall. The forklift and dropped cargo may collide with a person, resulting in serious injury.



**! WARNING**

**Do not change the traveling direction on a slope.**

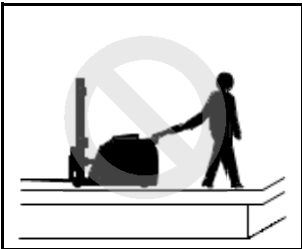
If the traveling direction is changed on a slope, the forklift becomes unstable and may overturn. If the forklift overturns, the forklift or dropped cargo may collide with a person, resulting in serious injury.



**! CAUTION**

**Do not place the fork downward during travel on a slope.**

If the fork is placed downward during travel on a slope, the cargo may fall. The dropped cargo may collide with a person, resulting in injury.



**! WARNING**

**During travel on a platform, do not run the forklift near the edge.**

If the forklift runs near the edge of a platform, the forklift may fall. During travel on a platform, keep a margin from the edge of the platform.



### 3. Safety Precautions

---



#### **CAUTION**

##### **Do not ride the forklift.**

This forklift is not equipped with a riding device. If you ride the forklift, you may fall and suffer injury.



#### **CAUTION**

##### **Do not press cargo during transfer.**

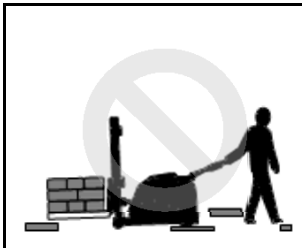
If the forklift runs with the cargo being pressed, the person who presses the cargo may collide with the forklift and a surrounding object, resulting in injury.



#### **WARNING**

##### **Do not stack cargo to a height that blocks operator's view.**

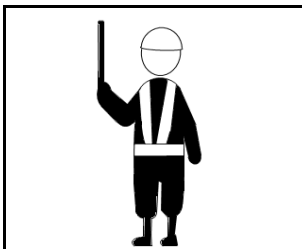
If the forklift runs to the back (toward the fork) with cargo being stacked to a height that blocks operator's view, the operator cannot see the area at the front of the cargo and fails to avoid collision with a person or object, resulting in a collision accident.



#### **CAUTION**

##### **Do not override objects scattered on the floor.**

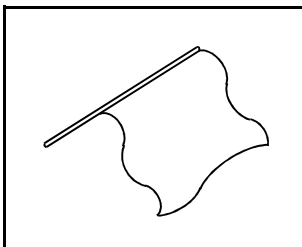
If the forklift overrides objects scattered on the floor, the forklift is inclined, causing the cargo to fall. Do not override scattered objects.



#### **WARNING**

##### **Allocate a guide as required.**

If it is inevitable to run the forklift in a place where it may collide with a surrounding person or fall, allocate a guide to ensure safety.



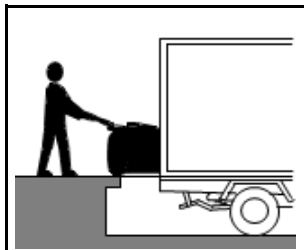
#### **CAUTION**

##### **Hold discussion about a guide sign.**

When a guide is allocated, a guide sign should be discussed in advance. If work starts without discussion about a guide sign, the worker may confuse the sign, causing collision and fall accidents.

### 3. Safety Precautions

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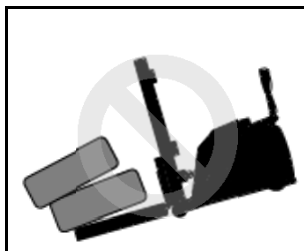


#### **WARNING**

**Before loading the forklift into a truck, make sure that the truck is securely parked.**

During loading into a truck or container, if the truck or container unexpectedly starts, the forklift may fall. Before loading the forklift into a truck or container, make sure that the truck is securely parked (with parking blocks, etc.).

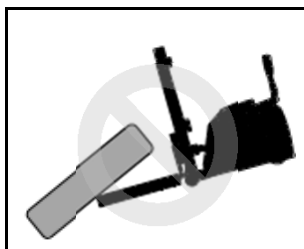
### ■ Loading/unloading cargo



#### **WARNING**

**Do not overload the forklift.**

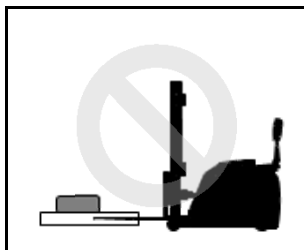
If the forklift is overloaded beyond the maximum allowable load weight, the forklift overturns. If the forklift overturns, the forklift and dropped cargo may collide with a person, resulting in serious injury.



#### **WARNING**

**The maximum allowable load weight will be reduced when the load size is large.**

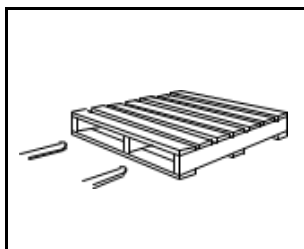
If the center of gravity of load exceeds 500 mm from the root of the fork, the maximum allowable load weight of this forklift will be reduced. Overloading the forklift beyond the maximum allowable load weight causes the forklift to overturn. If the forklift overturns, the forklift and dropped cargo may collide with a person, resulting in serious injury.



#### **CAUTION**

**Do not put cargo at the tip of the fork.**

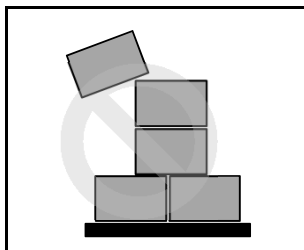
If a pallet is not inserted to the root of the fork, the forklift becomes unstable and may overturn. Also, the pallet may fall from the fork.



#### **CAUTION**

**Adjust the fork width according to the pallet being used.**

If the fork width is not adjusted according to the pallet being used, the pallet becomes unstable, causing the cargo to fall.



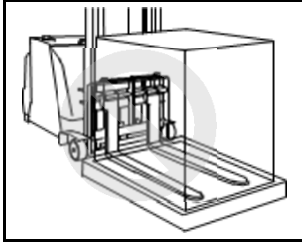
#### **CAUTION**

**Do not stack cargo in a condition that it may collapse.**

Stack cargo on a pallet so that it will not collapse. If the cargo collapses, the dropped cargo may collide with a person, resulting in injury.

### 3. Safety Precautions

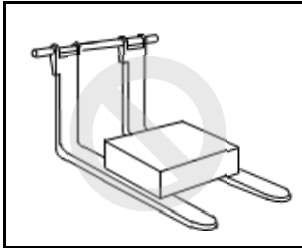
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#### CAUTION

##### **Do not stack cargo higher than the backrest.**

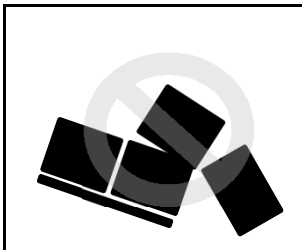
If cargo is stacked higher than the backrest, the cargo over the backrest height falls and may collide with a person, resulting in injury.



#### CAUTION

##### **Do not put cargo directly on the fork.**

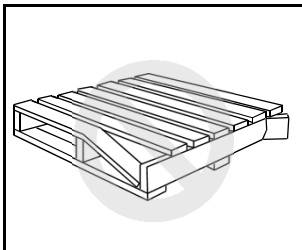
The surface of fork is slippery. If cargo is directly put on the fork, the cargo will slip and fall, and it may collide with a person, resulting in injury. Be sure to use a pallet to stack cargo.



#### CAUTION

##### **Do not stack cargo under uneven load condition.**

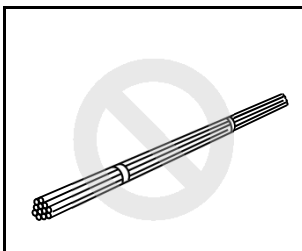
If cargo is stacked under uneven load condition, the pallet may be inclined when it is raised, causing the cargo to fall. If the cargo falls, it may collide with a person, resulting in injury.



#### CAUTION

##### **Do not use a damaged pallet.**

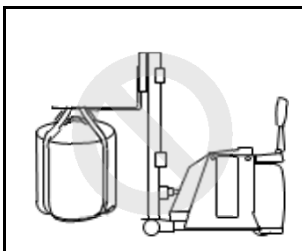
If a damaged pallet is used, the pallet and cargo falls, and may collide with a person, resulting in injury.



#### WARNING

##### **Stacking a long object makes the forklift unstable.**

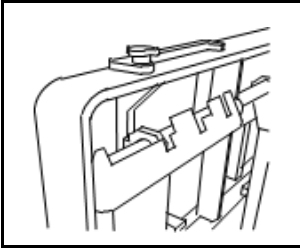
If a long object is stacked, the forklift becomes unstable and may overturn. Also, the cargo may fall. If such a case, the forklift and dropped cargo may collide with a person, resulting in serious injury.



#### WARNING

##### **Do not use the forklift for sling work.**

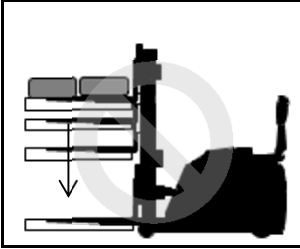
Do not sling a cargo with the fork. If a cargo is slung with the fork, it may collide with a person when the cargo swings, resulting in injury to the person. Also, if the cargo swings, the forklift becomes unstable and may overturn. The forklift may collide with a person, resulting in serious injury.



#### CAUTION

**Use caution when handling the fork width lock bracket.**

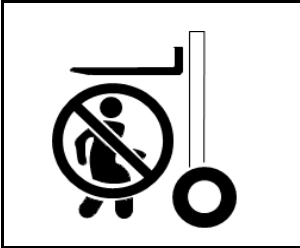
When adjusting the fork width, handle the fork width lock bracket carefully so that your hand will not be pinched with the bracket.



#### CAUTION

**Do not lower the fork rapidly.**

If the fork is rapidly lowered, the cargo falls and may collide with a person, resulting in injury.



#### WARNING

**Do not enter the area under the fork.**

If you enter the area under the fork, you may hit by a dropped cargo or lowered fork, resulting in serious injury.



#### CAUTION

**Do not step on the fork or pallet**

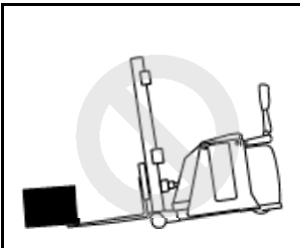
If you step on the fork or pallet, you may overturn if the forklift or fork unexpectedly moves, resulting in injury.



#### WARNING

**Do not use the forklift for work at an elevated position.**

Do not raise the fork with a person riding the fork or pallet. The person may fall and suffer serious injury.

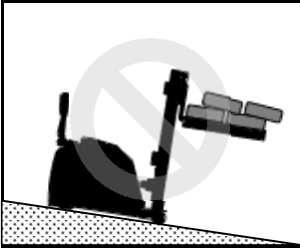


#### CAUTION

**Do not pry a cargo with the fork.**

If a cargo is pried with the fork, the forklift and cargo move unexpectedly, and may collide with a person, resulting in injury.

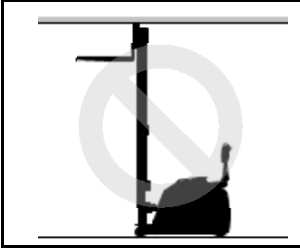
### 3. Safety Precautions



#### **WARNING**

##### **Do not conduct loading/unloading work on a slope.**

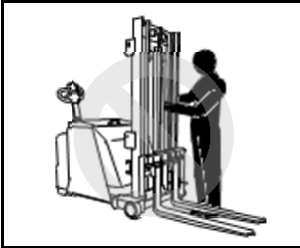
If you conduct loading/unloading work with the forklift placed on a slope, the cargo may fall, and the forklift becomes unstable and may overturn. In such a case, the cargo and forklift may collide with a person, resulting in serious injury.



#### **CAUTION**

##### **Be careful to prevent collision of the mast with a ceiling.**

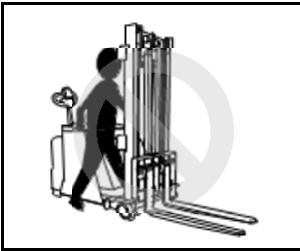
As the fork is raised, the mast is also raised. When raising the fork, be careful to prevent collision of the mast with a ceiling. If the mast collides with a ceiling, the cargo falls and may collide with a person, resulting in injury.



#### **WARNING**

##### **Do not put a hand in the clearance of the mast.**

If you put a hand in the clearance of the mast, the hand may be caught by the mast when it moves, resulting in serious injury, or may be caught by the chain, resulting in injury.

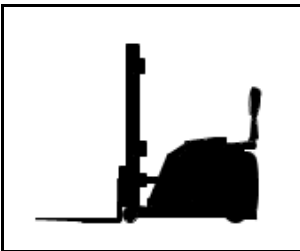


#### **WARNING**

##### **Do not put a part of your body between the mast and the vehicle body.**

Do not put a part of your body (hand, arm, foot, etc.) between the mast and the vehicle body. When the mast or vehicle body unexpectedly moves, the part of your body may be pinched between the mast and the vehicle body, resulting in serious injury.

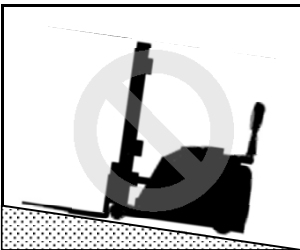
### ■ At end of work



#### **CAUTION**

##### **Restore the fork to the lower stroke end.**

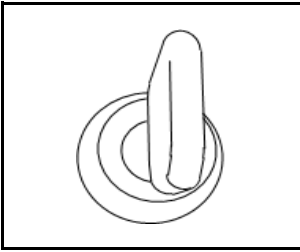
Restore the fork to the lower stroke end. If the fork is left at an elevated position, it may accidentally collide with a person, resulting in injury. Also, it causes collision with other vehicles.



#### **WARNING**

##### **Do not park the forklift on a slope.**

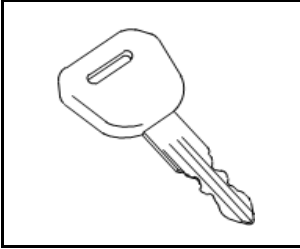
If the forklift is parked on a slope, it may unexpectedly move, and collide with a building and surrounding object, resulting in damage to these objects. Also, it may collision with a person.



**! WARNING**

**Turn OFF the key switch.**

If the key switch is not turned OFF, a person may accidentally touch the operating part without noticing that the forklift is ready to start. In this case, the forklift unexpectedly starts running, resulting in a collision accident, etc.

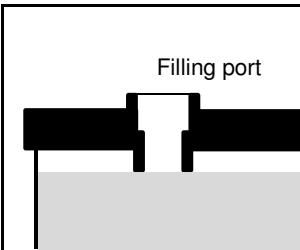


**! WARNING**

**Remove the key, and keep it.**

If an operator leaves the forklift with the key being inserted, a person unauthorized for the forklift operation or a person that has not been familiarized with this forklift may operate it. In this case, operation delay or operation error may occur, resulting in a collision accident. Remove the key, and keep it.

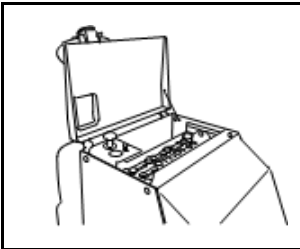
## ■ Battery charging



**! WARNING**

**Check the battery electrolyte level.**

Shortage of the battery electrolyte causes battery performance deterioration, and reduction in battery service life. If the battery is charged with the battery electrolyte running short, it may cause explosion and fire.



**! WARNING**

**Be sure to open the battery cover.**

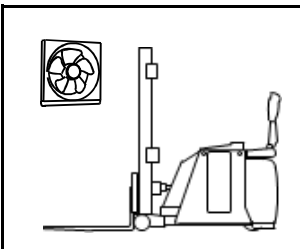
When the battery is charged, the battery cover must be opened. If the battery is charged with the battery cover closed, hydrogen gas generated from the battery is retained during charging, which may cause explosion and fire.



**! WARNING**

**Flammable – Keep out.**

The battery generates hydrogen gas during charging. Do not use fire around the forklift while the battery is charged. Also, do not work with sparks around the forklift. Otherwise, hydrogen gas may catch a spark, resulting in explosion and fire.



**! WARNING**

**Charge the battery in a well-ventilated place.**

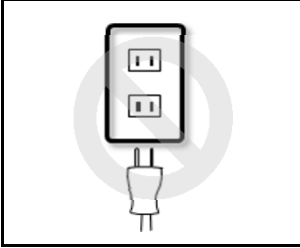
Battery charging should be conducted in a well-ventilated place. If the battery is charged in a place with poor ventilation, hydrogen gas generated from the battery is retained during charging, which may cause explosion and fire.



**! WARNING**

**Battery electrolyte is hazardous.**

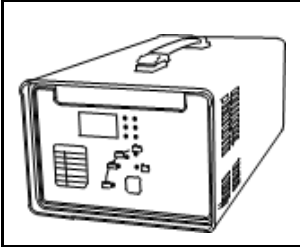
Battery electrolyte contains dilute sulfuric acid. When checking the battery electrolyte level and replenishing the battery electrolyte, wear rubber gloves and protective goggles. If the battery electrolyte touches the eye, skin, clothes, etc., immediately wash it off with a large amount of water. Particularly, if the battery electrolyte touches the eye, it may cause loss of eyesight. Immediately wash the eye with a large amount of water, and take doctor's diagnosis. Never attempt to lick or drink it. Such an action may result in death.



**! WARNING**

**Do not disconnect the cable from the outlet during battery charging.**

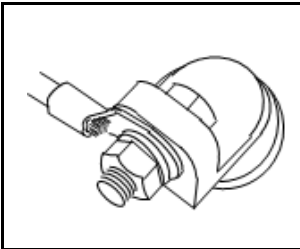
If you disconnect the cable from the outlet during battery charging, hydrogen gas generated during charging may catch a spark, resulting in explosion.



**! CAUTION**

**Do not use a battery charger other than that included in the forklift.**

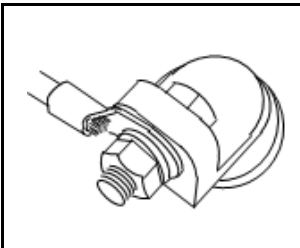
If you use a battery charger incompatible with the battery for the forklift, the battery charger may overheat, emit smoke and catch fire. If you touch the battery charger in such conditions, you may get burns.



**! CAUTION**

**Be careful not to confuse the + and - terminals.**

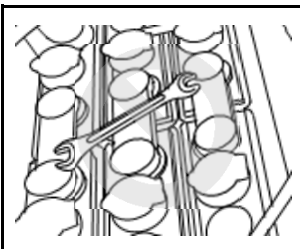
When connecting the cable to the battery terminals, be careful not to connect the positive and negative terminals in reverse. Incorrect connection of the cable results in damage to the electric circuit. Also, the battery may generate heat, and you may get burns.



**! CAUTION**

**Connect the cable securely.**

Loose connection of the cable to the battery terminals, or using the battery with corrosion of the battery terminals causes the battery to emit sparks and generate heat, and you may get burns.



**! CAUTION**

**Do not put a tool on the battery.**

If you put a tool on the battery, the tool may touch the terminals, causing the terminals to be short-circuited, which may result in explosion of the battery.

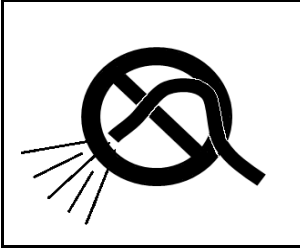
#### ■ Cleaning, check and inspection



##### CAUTION

##### **Do not wash the forklift with high-pressure washing machine.**

If the forklift is washed with a high-pressure washing machine, water and mist enter the vehicle body, which may result in a trouble of the control circuit. A trouble of the control circuit causes operation failure and erroneous operation, which may result in a collision accident etc.



##### CAUTION

##### **Do not wash the forklift with water.**

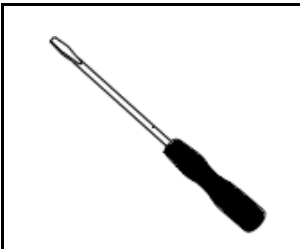
When cleaning the forklift, wipe it with rags, etc. Washing the forklift with water causes water intrusion into the vehicle body, which may result in a trouble of the control circuit. A trouble of the control circuit causes operation failure and erroneous operation, which may result in a collision accident etc.



##### WARNING

##### **Be sure to conduct preoperational inspection.**

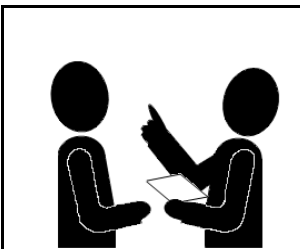
Conduct preoperational inspection before using the forklift every day. If the inspection is omitted, a failure of the forklift can be ignored during use, resulting in an accident.



##### WARNING

##### **Conduct voluntary inspection once a month.**

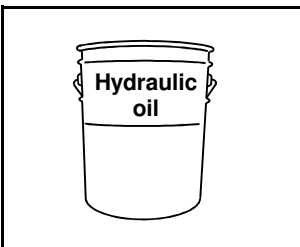
Conduct voluntary inspection of the forklift at one month or shorter intervals. If the inspection is omitted, a failure of the forklift can be ignored, resulting in an accident involving injury to the operator and surrounding persons.



##### WARNING

##### **Appoint a work leader for repair work.**

If repair work is conducted without a work leader, incorrect work procedure, etc. may cause fall of parts and equipment. Also, incorrect connection of the electric circuit may cause the worker to suffer injury or burns.



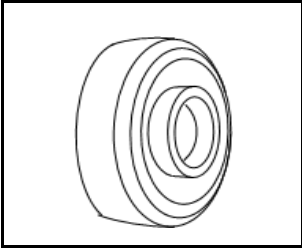
##### CAUTION

##### **Replace or replenish consumables.**

If the forklift is kept running without application of consumables (grease, etc.) or without replenishment/replacement of hydraulic oil, the forklift may malfunction, resulting in an accident. Replenish or replace consumables at specified intervals.



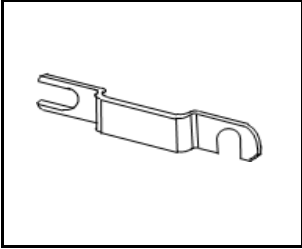
### 3. Safety Precautions



#### **WARNING**

##### **Be sure to conduct periodic parts replacement.**

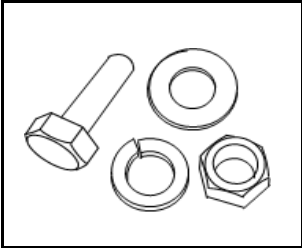
If the forklift is kept running without replacement of the periodic replacement parts, wear or deterioration of the parts may result in strength deterioration and malfunction of the forklift, causing an accident. Be sure to replace the periodic replacement parts at specified intervals.



#### **CAUTION**

##### **Use the specified genuine fuse.**

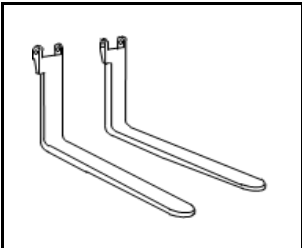
Using a fuse other than the genuine fuse results in overcurrent, causing burnout of parts, fire and electric shock. Be sure to use the specified genuine fuse.



#### **WARNING**

##### **Use genuine parts.**

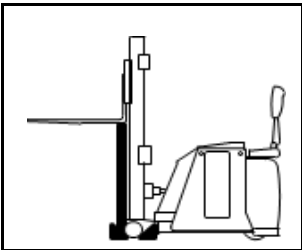
If the genuine parts are not used, the parts and equipment may fall because of insufficient strength, and in the worst case, the forklift may overturn. In such a case, you may suffer injury.



#### **CAUTION**

##### **Before handling a large component and equipment, check the weight.**

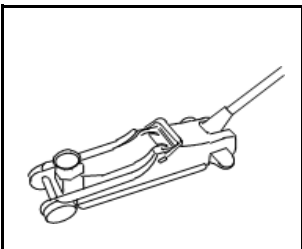
When removing a large component or equipment, check its weight in advance. If the weight check is omitted, the worker may drop the component or equipment because it cannot be held by hand when the weight is larger than expected. During sling work, if a component or equipment is too heavy to sling, it may fall and collide with a person, resulting in injury. Also, the large component or equipment may collide with the forklift and floor, resulting in damage to these objects.



#### **WARNING**

##### **Before start of work, take fall preventive measures.**

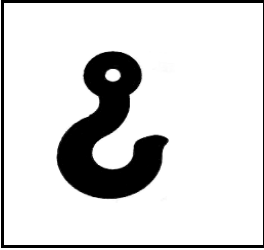
Before handling the fork or other equipment that may fall, take fall preventive measures by using a safety column, safety block, etc. If the equipment falls, it may collide with a person, resulting in serious injury.



#### **WARNING**

##### **When jacking up the forklift, observe the safety instructions.**

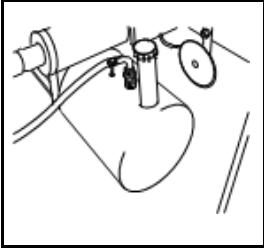
When jacking up the forklift, observe the basic safety instructions. (Use a jack on a level, rigid base, use a jack with sufficient jacking capacity, etc.)



#### **WARNING**

**When slinging the forklift, hook it by a specified sling part.**

To sling the forklift, be sure to hook it by the specified sling part. For sling work, use appropriate sling gear. If the forklift falls, it may collide with a person, resulting in serious injury.



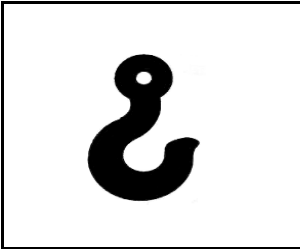
#### **CAUTION**

**The hydraulic tank becomes hot.**

The hydraulic oil tank becomes hot during operation of the forklift or immediately after startup.

If you touch the hydraulic oil tank, you may get burns.

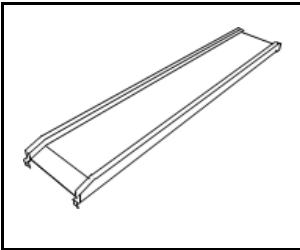
## ■ Transportation



#### **WARNING**

**When slinging the forklift, hook it by the specified sling part.**

To sling the forklift during loading/unloading work, hook the forklift by the specified sling part. If the forklift is hooked by any point other than the specified sling part, the forklift may be inclined or the sling gear may come off. In such a case, the forklift may fall and collide with a person, resulting in serious injury.

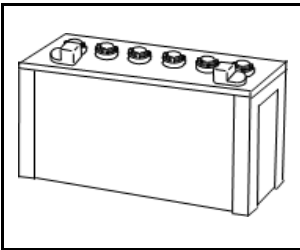


#### **CAUTION**

**Ensure sufficient margin of ramp.**

To move the forklift via a ramp during loading/unloading work, use through caution about gradient of the work site, and length, width and strength of the ramp. If there is no margin in these items, the forklift may fall and collide with a person, resulting in injury.

## ■ Disposal



#### **WARNING**

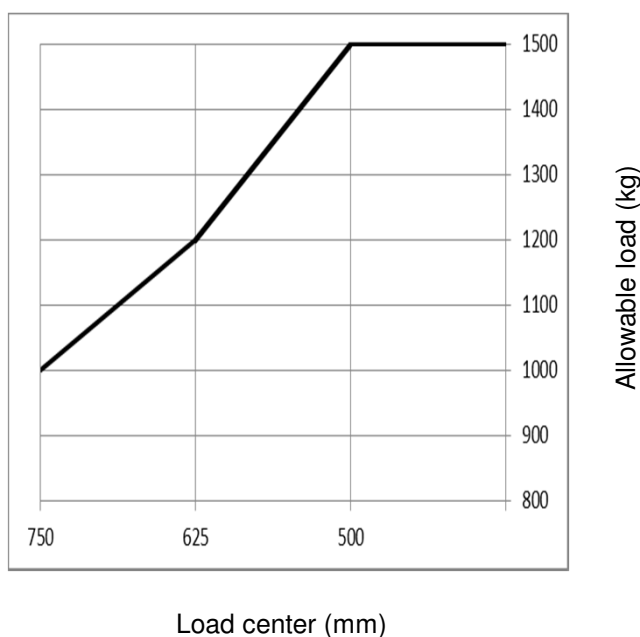
**For disposal of the battery, order the battery distributor.**

To dispose of the battery, order the distributor of the battery. If the battery is left without disposal, a person may touch the battery electrolyte and get burns, because the battery electrolyte contains dilute sulfuric acid.

## 4. Handling Procedure

### Load capacity

Forklift keeps balance with the same principle as a balancing toy. Therefore, when the cargo is placed farther from the root of the fork, the forklift becomes more unstable. Accordingly, when the center of gravity of cargo exceeds a certain distance (load center) from the root of the fork, the maximum allowable load weight of the forklift will be reduced. For the maximum allowable load weight by the distance of center of gravity of cargo, refer to the graph below.



#### WARNING

- Do not load the forklift with a cargo exceeding the maximum allowable load weight.  
If the forklift is loaded with a cargo exceeding the maximum allowable load weight, the forklift will overturn. If the forklift overturns, the forklift and dropped cargo may collide with a person, resulting in serious injury.
- Do not load the forklift with a cargo exceeding the allowable load.  
If the center of gravity of the cargo is at 500 mm or farther distance from the root of the fork, the maximum allowable load weight of the forklift will be reduced. If the forklift is loaded with a cargo exceeding the allowable load, the forklift will overturn. If the forklift overturns, the forklift and dropped cargo may collide with a person, resulting in serious injury.

### On receipt of this forklift

The forklift has passed inspection before shipment. However, on receipt of the forklift, please check the following points and conduct the following procedure.

#### ■ Check if all accessories are included in the product package.

The following accessories are shipped together with the forklift.

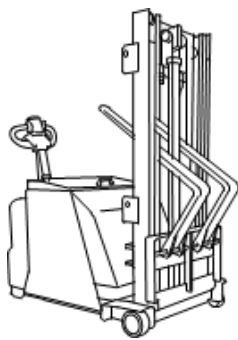
- Switch key: 2 pieces
- Instruction manual
- Battery charger
- Link fuse 180 A: 2 pieces, Ceramic fuse 10 A: 2 pieces

#### ■ Check for damage to the forklift in transportation.

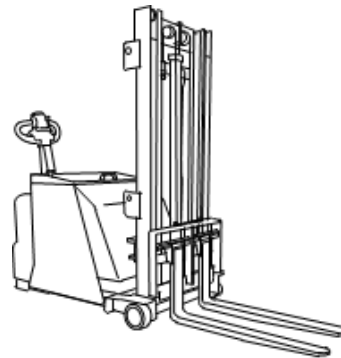
Check for damage to the forklift in transportation. Also, check for oil leak and looseness of bolts and nuts.

#### ■ Restore the fork to the normal form.

The fork has been folded for the purpose of transportation. Before use, restore the fork to the normal form.

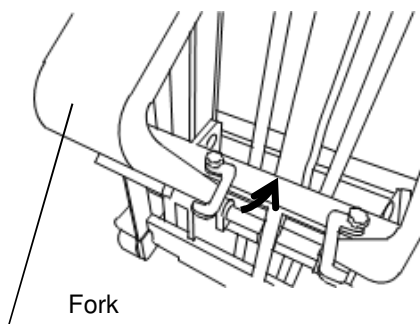


Shipment form



Normal form

How to restore the fork to normal form



- [1] Hold the fork.
- [2] Loosen the knob.
- [3] While holding the fork, turn the bracket.
- [4] Lower the fork slowly to the normal position.
- [5] Tighten the knob, and fasten the bracket.



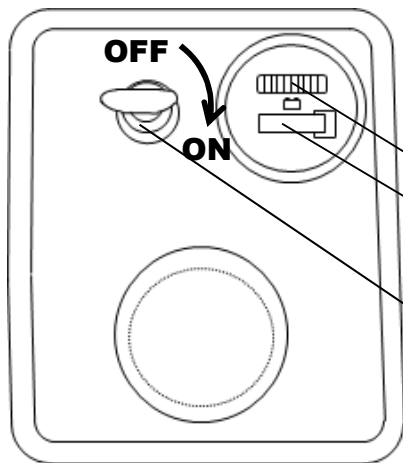
#### WARNING

When lowering the fork from the traveling position to the operating position, hold the fork, and lower it carefully. If you handle the fork roughly, your hand may get pinched with the fork, resulting in injury such as bone fracture and bruise.

#### ■ Charge the battery.

Battery charge procedure is described on p. 38.

### Startup



#### Turn ON the key switch.

Turn the key switch clockwise.  
The battery charge indicator lamp lights, and the switch is turned ON.

Battery discharge meter

Hour meter

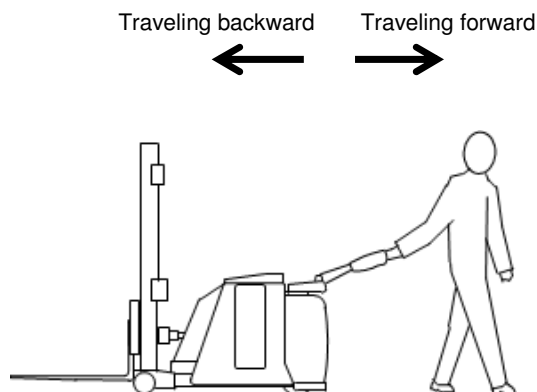
Key switch



#### WARNING

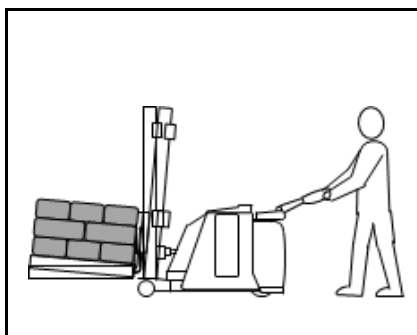
- Unqualified person must not operate the forklift.  
To operate this forklift, "forklift operation training course completion" qualification is required. If an unqualified person operates the forklift, collision and overturn accidents may occur, resulting in serious injury.
- Remove the key when the forklift is left unused.  
When the forklift is left unused, remove the key from the key switch, and keep it. If the key is left in the switch, an authorized person or a person who has not been familiarized with operation of this forklift may operate the forklift, resulting in an accident.
- Be sure to conduct preoperational inspection.  
Conduct preoperational inspection before using the forklift every day. If the inspection is omitted, a failure of the forklift can be ignored during use, resulting in an accident. Details of the inspection are described on p. 46.

### Traveling



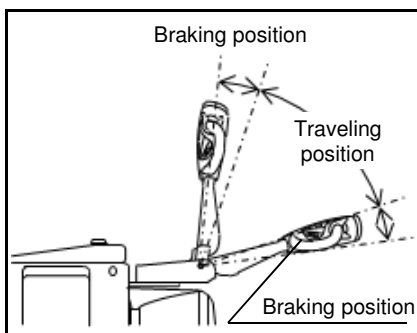
#### Traveling form

Move the forklift by pulling the vehicle body, instead of pushing it.  
To move the forklift backward when inserting the fork into a pallet, etc., run the forklift at a low speed that enables the operator to slowly and securely handle it.



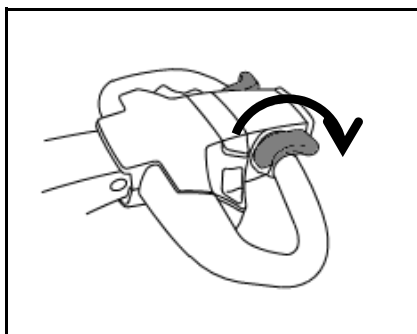
#### Set the forklift in transfer form.

Raise the fork to a height of 10 to 15 cm from the floor.  
When a cargo is loaded, tilt the mast backward to stabilize the cargo.



#### Traveling forward (toward the handle)

- (1) Turn the handle to the traveling position.  
If the handle position is low or high, the brake is activated so that the forklift does not run.

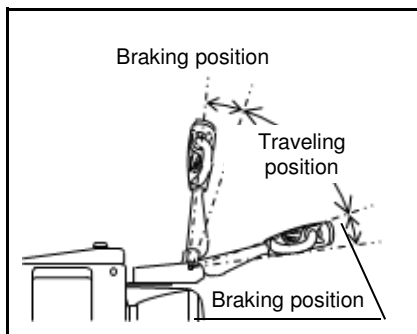


- (2) If the traveling knob attached to the steering handle is turned to the front (toward the operator's position), the forklift travels forward.



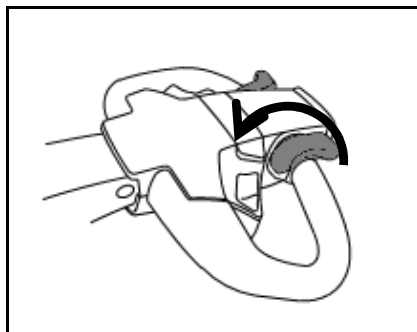
Turning the traveling knob widely increases the traveling speed.  
Once the traveling knob is released, it will return to the neutral position.  
The traveling knob is attached to both sides of the steering handle.

## 4. Handling Procedure

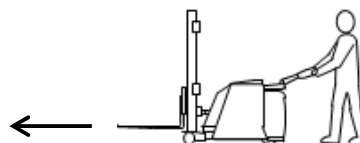


### Traveling backward (toward the fork)

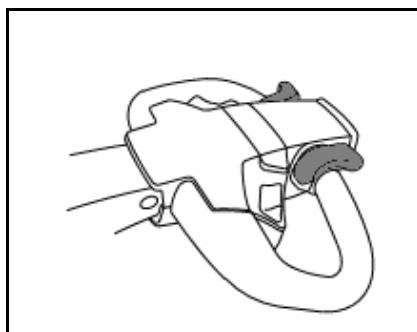
- (1) Turn the handle to the traveling position.  
If the handle position is low or high, the brake is activated so that the forklift does not run.



- (2) If the traveling knob attached to the steering handle is slowly turned toward the fork, the forklift travels backward.

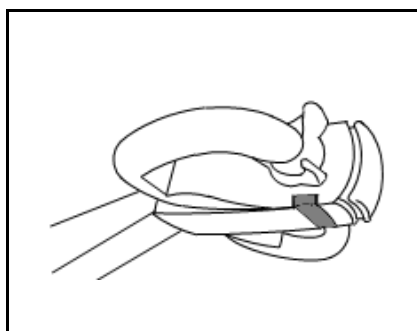


Turning the traveling knob widely increases the traveling speed.  
Once the traveling knob is released, it will return to the neutral position.  
The traveling knob is attached to both sides of the steering handle.



### Lowering the speed

Reducing the traveling knob turn angle lowers the traveling speed.  
Also, if the handle is steeply turned during travel, the traveling speed automatically lowers.

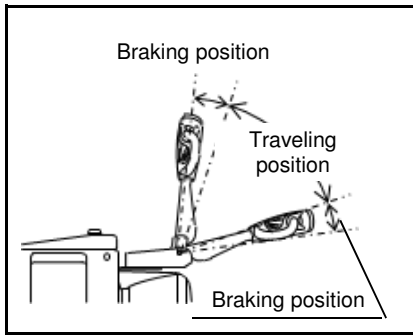


### Changing the speed

Pressing the speed change switch at the back of the handle changes the traveling speed to the low speed mode. Releasing the switch resets the low speed mode.

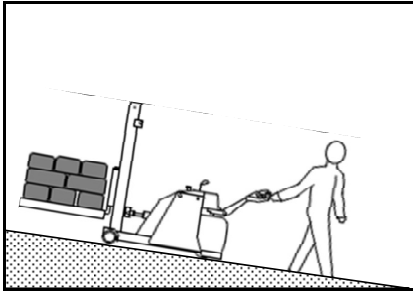
## 4. Handling Procedure

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### Stop operation

To activate the brake, release the traveling knob, and move the steering handle to the vertical or lowest position. Be sure to lower the traveling speed before the stop procedure.



### Traveling on slope

To move the forklift up/down on a slope, the operator must be at a lower position. If the fork is at the lower position, the cargo may slip and fall.

---

### Swing operation

Turning the handle swings the forklift. Increasing the handle turn angle reduces the swing radius. If you turn the handle steeply during travel, the traveling speed automatically lowers.

### Swing operation during forward travelling

When the forklift travels forward (toward the handle), the relation between the handle turn direction and the forklift swing operation is as shown below.



### Swing operation during backward travelling

When the forklift travels backward (toward the fork), the relation between the handle turn direction and the forklift swing operation is as shown below.







### WARNING

- At startup, pay attention to surrounding people.

When you start running the forklift, pay attention to surrounding people and vehicles. If you start running the forklift without attention to surroundings, it may result in collision with surrounding people and vehicles.

- Issue a start sign as required.

If surrounding people does not notice the forklift, or when the forklift is difficult to see, issue a start sign with the horn, etc. before start. If you start running the forklift without a start sign, the forklift may collide with a person.

- Do not start or accelerate the forklift rapidly.

If the forklift is rapidly started or accelerated, it may become out of control, resulting in collision, and the cargo may fall and hit a person.

- Do not turn the forklift rapidly.

If the forklift is rapidly turned, it may become out of control, resulting in collision, and the cargo may fall and hit a person.

- Do not look aside during operation.

If you run the forklift while looking aside, it may cause operation delay, resulting in collision with surrounding people and objects.

- Run the forklift slowly while traveling in a place where it is difficult to see.

When you run the forklift in a place where it is difficult to see, a person or vehicle may abruptly come into sight, resulting in a collision accident. During travel in a difficult-to-see place, run the forklift slowly.

- Be careful not to get pinched with the handle.

Be careful not to get pinched between the handle and a wall, rack, etc. during operation. If an operator gets pinched between the handle and a wall, rack, etc., it may result in a serious accident.

- Do not transfer cargo at an elevated position.

If cargo is transferred at an elevated position, the forklift becomes unstable and may overturn. If the forklift overturns, the forklift or dropped cargo may collide with a person, resulting in serious injury.

- Be careful about height of entrance/exit.

Be careful about height of an entrance/exit so that the mast does not collide with the entrance/exit. If the mast is extended during travel, the risk of collision with entrance/exit or beams will be enhanced. If the mast of the forklift collides with an entrance/exit, etc., the forklift may overturn and the cargo may fall. The forklift and dropped cargo may collide with a person, resulting in serious injury.

- Do not change the traveling direction on a slope.

If the traveling direction is changed on a slope, the forklift becomes unstable and may overturn. If the forklift overturns, the forklift or dropped cargo may collide with a person, resulting in serious injury.

- During travel on a platform, do not run the forklift near the edge.

If the forklift runs near the edge of a platform, the forklift may fall. During travel on a platform, keep a margin from the edge of the platform.

- Do not stack cargo to a height that blocks operator's view.

If the forklift runs to the back (toward the fork) with cargo being stacked to a height that blocks operator's view, the operator cannot see the area at the front of the cargo and fails to avoid collision with a person or object, resulting a collision accident.

- Allocate a guide as required.

If it is inevitable to run the forklift in a place where it may collide with a surrounding person or fall, allocate a guide to ensure safety.



### WARNING

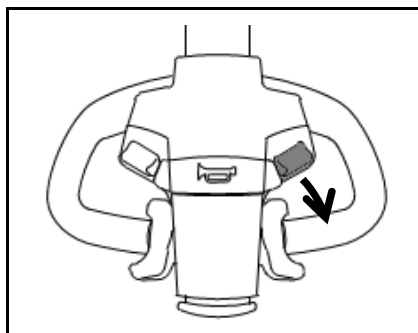
- Before loading the forklift into a truck, make sure that the truck is securely parked.  
During loading into a truck or container, if the truck or container unexpectedly starts, the forklift may fall. Before loading the forklift into a truck or container, make sure that the truck is securely parked (with parking blocks, etc.).



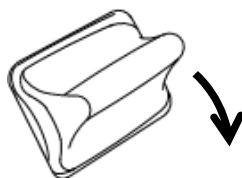
### CAUTION

- Run the forklift with the handle placed forward.  
If you run the forklift with the fork placed forward, the handle may become unstable, resulting in a collision accident. Run the forklift with the handle placed forward, except for a case where you insert the fork into a pallet or push a pallet by inserting the fork.
- During transfer, tilt the mast backward.  
Tilt the mast backward so as to stabilize the cargo during transfer. If the mast is not tilted backward, the cargo becomes unstable and may fall, resulting in a collision accident.
- Do not stop the forklift rapidly.  
If the forklift is rapidly stopped, the cargo may fall and hit a person. Also, rapidly stopping the forklift may cause collision with surrounding people and vehicles.
- During travel, do not raise the fork.  
If the fork is raised during travel, the forklift becomes unstable and may overturn, and the cargo may fall.
- Do not place the fork downward during travel on a slope.  
If the fork is placed downward during travel on a slope, the cargo may fall. The dropped cargo may collide with a person, resulting in injury.
- Do not ride the forklift.  
This forklift is not equipped with a riding device. If you ride the forklift, you may fall and suffer injury.
- Do not press cargo during transfer.  
If the forklift runs with the cargo being pressed, the person who presses the cargo may collide with the forklift and a surrounding object, resulting in injury.
- Do not override objects scattered on the floor.  
If the forklift overrides objects scattered on the floor, the forklift is inclined, causing the cargo to fall. Do not override scattered objects.
- Hold discussion about a guide sign.  
When a guide is allocated, a guide sign should be discussed in advance.  
If work starts without discussion about a guide sign, the worker may confuse the sign, causing collision and fall accidents.

### Raising/lowering the fork and tiling the mast backward

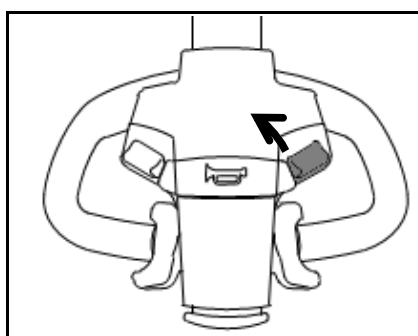


#### Raising and stopping the fork



If you turn the switch on the right side of the handle toward you, the fork is raised. Returning the switch to the neutral position stops the fork raising operation. Once the switch is released, it will return to the neutral position.

When the fork reaches the upper stroke end, immediately stop the raising operation. Before raising the fork, be sure to stop the forklift.



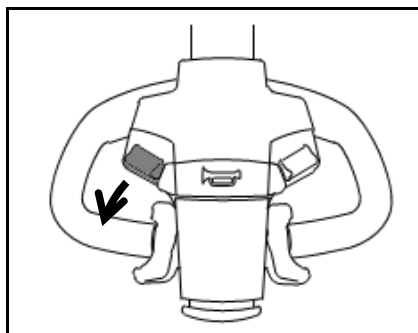
#### Lowering and stopping the fork



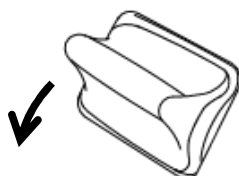
If you turn the switch on the right side of the handle toward the front, the fork is lowered. Returning the switch to the neutral position stops the fork lowering operation. Once the switch is released, it will return to the neutral position.

When the fork reaches the lower stroke end, immediately stop the lowering operation.

Before lowering the fork, be sure to stop the forklift.

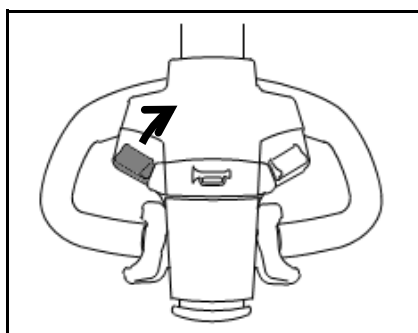


#### Tiling the mast backward and stopping the mast



If you turn the switch on the left side of the handle toward you, the mast is tilted backward. Returning the switch to the neutral position stops the mast backward tilt operation. Once the switch is released, it will return to the neutral position.

The mast backward tilt switch is used to prevent fall of cargo when the forklift transfers cargo.



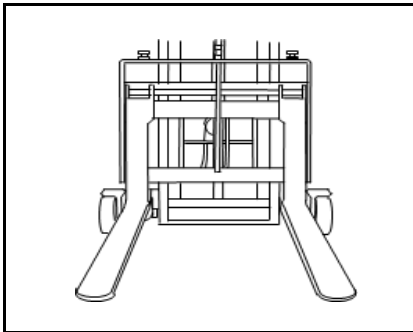
#### Setting the mast vertical and stopping the mast



If you turn the switch on the left side of the handle toward the front, the mast moves to be the vertical form. Returning the switch to the neutral position stops the vertical movement. Once the switch is released, it will return to the neutral position.

After the mast is restored to the vertical form, stop this operation.

### Loading/unloading cargo



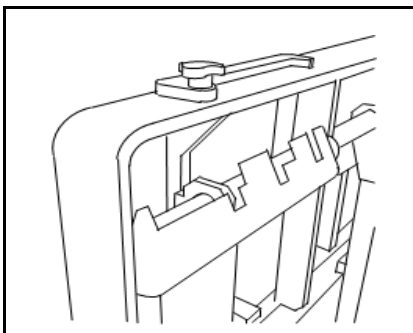
#### Adjust the fork width.

To transfer a pallet stably, the fork outer width should be adjusted to be 70% or wider than the pallet width.

The fork width can be adjusted in three levels:

Adjusting width (Fork outer width)

- 630 mm
- 480 mm
- 400 mm

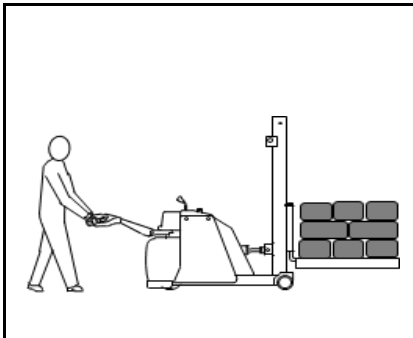


#### Fork width adjusting procedure

If you turn the lock plate on the fork sling shaft, you can slide the fork laterally.

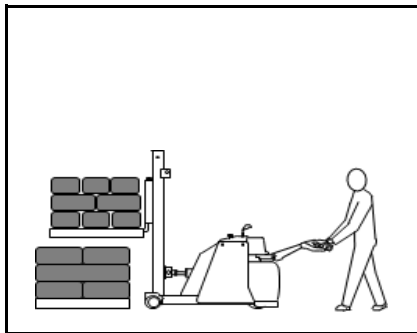
After adjusting the fork width, reset the lock plate to fix the fork width.

#### Loading cargo



To load cargo onto the forklift, the following procedure is recommended:

- [1] Stop the forklift at the front of cargo, and set the mast vertical.
- [2] Adjust the fork height according to the inserting position.
- [3] Move the forklift slowly so that the fork is inserted into the pallet by three fourths of the fork length.
- [4] Raise the fork by 5 to 10 cm, and make sure that cargo can be stabled loaded.
- [5] Lower the cargo once.
- [6] Move the forklift slowly so that the root of the fork is inserted into the pallet.
- [7] Raise the cargo by 5 to 10 cm, and move the forklift slowly to a position that enables cargo lowering operation.
- [8] Raise the cargo to approx. 10 to 15 cm height above the floor.
- [9] Tilt the mast backward to set it in the transfer form.



### Unloading cargo

To unload cargo from the forklift, the following procedure is recommended:

- [1] Stop the forklift at the front of the unloading position, and set the mast vertical.
- [2] Raise the fork 5 to 10 cm higher than the unloading height.
- [3] Move the forklift slowly, and temporarily put the cargo at an intended position.
- [4] Make sure that the cargo is stable.
- [5] Pull the fork slightly out of the pallet.
- [6] Raise the cargo by 10 to 15 cm again, and transfer the cargo to a proper unloading position that makes the cargo stable
- [7] Place the cargo at the position that makes the cargo stable.
- [8] Move the forklift slowly until the fork is pulled out of the pallet.
- [9] Set the forklift in the traveling form.



### WARNING

- Do not use the forklift for sling work.

Do not sling a cargo with the fork. If a cargo is slung with the fork, it may collide with a person when the cargo swings, resulting in injury to the person. Also, if the cargo swings, the forklift becomes unstable and may overturn. The forklift may collide with a person, resulting in serious injury.

- Stacking a long object makes the forklift unstable.

If a long object is stacked, the forklift becomes unstable and may overturn. Also, the cargo may fall. If such a case, the forklift and dropped cargo may collide with a person, resulting in serious injury.

- Do not enter the area under the fork.

If you enter the area under the fork, you may hit by a dropped cargo or lowered fork, resulting in serious injury.

- Do not use the forklift for work at an elevated position.

Do not raise the fork with a person riding the fork or pallet. The person may fall and suffer serious injury.

- Do not conduct loading/unloading work on a slope.

If you conduct loading/unloading work with the forklift placed on a slope, the cargo may fall, and the forklift becomes unstable and may overturn. In such a case, the cargo and forklift may collide with a person, resulting in serious injury.

- Do not put a hand in the clearance of the mast.

If you put a hand in the clearance of the mast, the hand may be caught by the mast when it moves, resulting in serious injury, or may be caught by the chain, resulting in injury.

- Do not put a part of your body between the mast and the vehicle body.

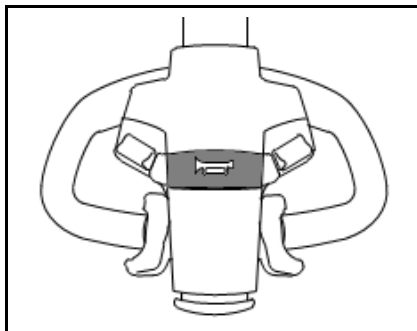
Do not put a part of your body (hand, arm, foot, etc.) between the mast and the vehicle body. When the mast or vehicle body unexpectedly moves, the part of your body may be pinched between the mast and the vehicle body, resulting in serious injury.



### CAUTION

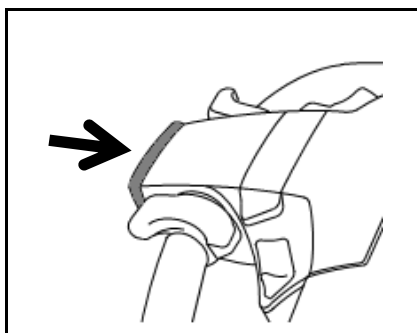
- Do not put cargo at the tip of the fork.  
If a pallet is not inserted to the root of the fork, the forklift becomes unstable and may overturn. Also, the pallet may fall from the fork.
- Adjust the fork width according to the pallet being used.  
If the fork width is not adjusted according to the pallet being used, the pallet becomes unstable, causing the cargo to fall.
- Do not stack cargo in a condition that it may collapse.  
Stack cargo on a pallet so that it will not collapse. If the cargo collapses, the dropped cargo may collide with a person, resulting in injury.
- Do not stack cargo higher than the backrest.  
If cargo is stacked higher than the backrest, the cargo over the backrest height falls and may collide with a person, resulting in injury.
- Do not put cargo directly on the fork.  
The surface of fork is slippery. If cargo is directly put on the fork, the cargo will slip and fall, and it may collide with a person, resulting in injury. Be sure to use a pallet to stack cargo.
- Do not stack cargo under uneven load condition.  
If cargo is stacked under uneven load condition, the pallet may be inclined when it is raised, causing the cargo to fall. If the cargo falls, it may collide with a person, resulting in injury.
- Do not use a damaged pallet.  
If a damaged pallet is used, the pallet and cargo falls, and may collide with a person, resulting in injury.
- Use caution when handling the fork width lock bracket.  
When adjusting the fork width, handle the fork width lock bracket carefully so that your hand will not be pinched with the bracket.
- Do not lower the fork rapidly.  
If the fork is rapidly lowered, the cargo falls and may collide with a person, resulting in injury.
- Do not step on the fork or pallet  
If you step on the fork or pallet, you may overturn if the forklift or fork unexpectedly moves, resulting in injury.
- Do not pry a cargo with the fork.  
If a cargo is pried with the fork, the forklift and cargo move unexpectedly, and may collide with a person, resulting in injury.
- Be careful to prevent collision of the mast with a ceiling.  
As the fork is raised, the mast is also raised. When raising the fork, be careful to prevent collision of the mast with a ceiling. If the mast collides with a ceiling, the cargo falls and may collide with a person, resulting in injury.

### Safety devices



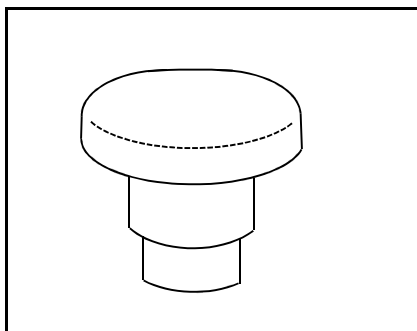
#### Horn

Pressing the horn button turns on the horn.  
The horn button is located on the upper surface of the steering handle.



#### Pinch accident prevention switch

When the handle is at the traveling position, pressing the pinch accident prevention switch moves the forklift backward (toward the fork).  
Even if the pinch accident prevention switch is pressed while the forklift is moving backward, the forklift does not move forward.  
The pinch accident prevention switch should be pressed only when the operator may almost get pinched between the handle and a wall, rack, etc.

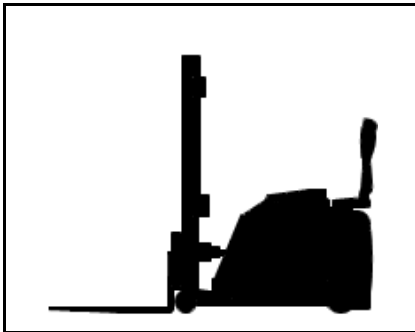


#### Emergency stop button

The emergency stop button is located at the top of the vehicle body.  
Pressing this button turns OFF the power supply. Use this button in case of emergency only.

Pulling this button resets the emergency stop status. Before resetting the button, eliminate hazard, and ensure safety.

### At end of work



#### Parking

To park the forklift after completion of work, follow the procedure below:

- (1) Set the mast vertical.
- (2) Lower the fork to the lower stroke end.
- (3) Return the steering handle to the vertical position.
- (4) Turn OFF the key switch, and remove the key.



#### WARNING

- Do not park the forklift on a slope.

If the forklift is parked on a slope, it may unexpectedly move, and collide with a building and surrounding object, resulting in damage to these objects. Also, it may collision with a person.

- Turn OFF the key switch.

If the key switch is not turned OFF, a person may accidentally touch the operating part without noticing that the forklift is ready to start. In this case, the forklift unexpectedly starts running, resulting in a collision accident, etc.

- Remove the key, and keep it.

If an operator leaves the forklift with the key being inserted, a person unauthorized for the forklift operation or a person that has not been familiarized with this forklift may operate it. In this case, operation delay or operation error may occur, resulting in a collision accident. Remove the key, and keep it.



#### CAUTION

- Restore the fork to the lower stroke end.

Restore the fork to the lower stroke end. If the fork is left at an elevated position, it may accidentally collide with a person, resulting in injury. Also, it causes collision with other vehicles.



### Charging

#### Charge timing

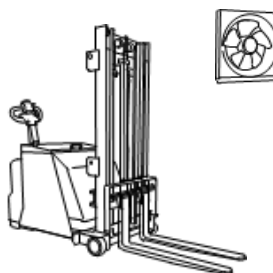
Charge the battery at the following timing:

- When the forklift is fully operated every day  
Conduct the normal charging every day after completion of work. If the daily “normal charging” is not enough, conduct supplementary charging in an intermission (lunch break, etc.).
- When daily operation time of the forklift is short  
Count a number of days until the battery discharge meter’s indication becomes lower than a half level after the battery is fully charged, and conduct the normal charging at the interval of the relevant number of days.

#### Charging place

While the battery is charged, hydrogen gas is generated from the battery. Battery charging should be conducted in a well-ventilated place where hydrogen gas will not remain and free from exposure to rain.

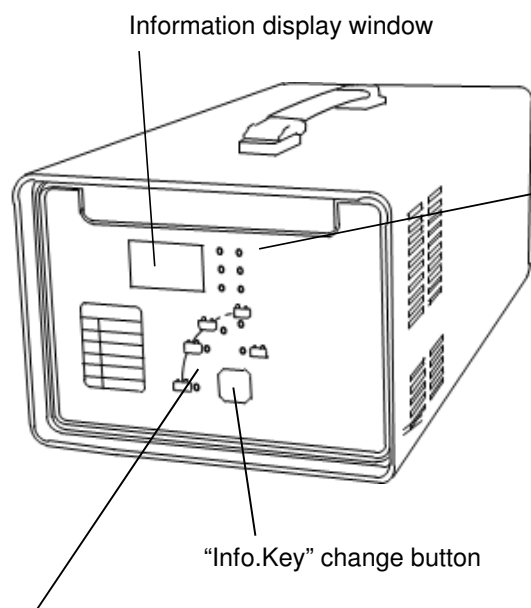
To charge the battery indoors, use through caution to ensure ventilation. (Install a ventilation fan, etc.)



#### Tips for extending the battery service life

- Do not use the battery until it is completely exhausted. (Avoid discharging the battery excessively.)  
If the battery is discharged until the forklift does not run, the battery service life will be shortened.
- Do not charge the battery more than required. (Avoid charging the battery excessively.)  
If the battery is re-charged when it is fully charged, the battery service life will be shortened.  
As a typical example, if the normal recharging is conducted every day for the battery whose daily operating time is short, it results in shortened battery service life.
- Do not use the battery with the battery electrolyte consumed.  
If the battery electrolyte volume becomes smaller than the specified level, the battery electrodes will be damaged. Check the battery electrolyte volume every day, and replenish purified water as required.

## Charger



The indicator lamps indicate contents of the information display window and fault of the charger.

Charge current (A)

○ A

○ V

Battery voltage (V)

Charge capacity (Ah)

○ Ah

○ H

Charge time (H)

Query value

○ I.F



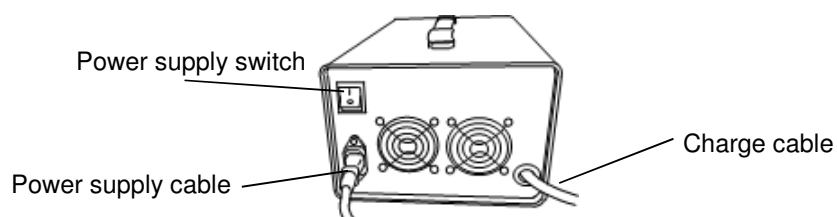
Lit: Fault of charger

Blinking:

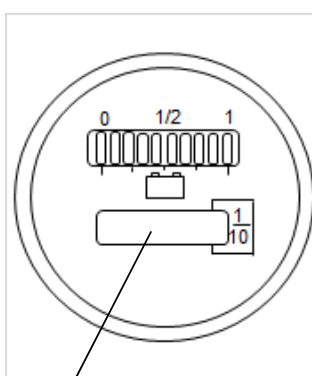
Overheating of charger

Output contact failure

On	Lit during charging
80%	Lit in green: 60% charged Lit in red: 80% charged
100%	Lit: Completion of charging
Equalizing Charging	Lit: During equalizing charging
Initial Charging	Lit: During initial charging (This lamp is inactive because the battery is charged before shipment.)



## Before charging



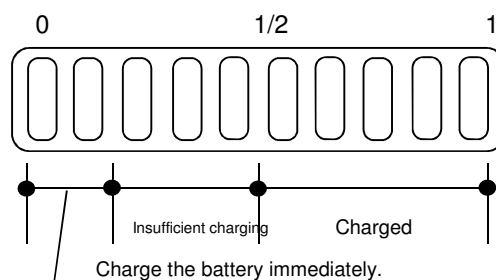
Hour meter  
(Operation time integrating meter)

## Check the residual charge level.

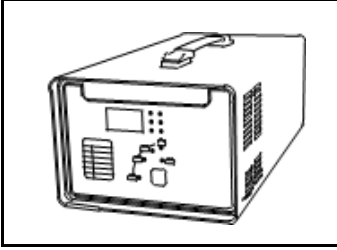
Check the residual charge level with the battery discharge meter on the vehicle body.

To check the residual charge level, follow the procedure below:

- (1) Turn ON the key switch.
- (2) The lamp of the battery discharge meter lights. Check the charge level by the lamp lit position.



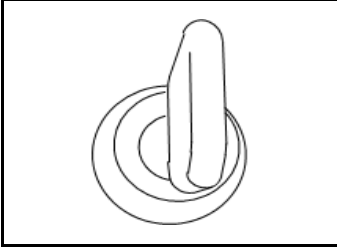
### ■ Battery charging (normal charging) procedure



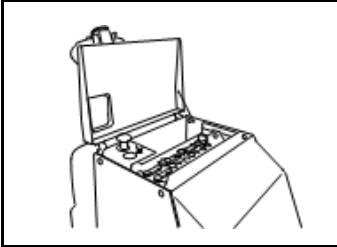
#### (1) Prepare the charger.

Install the charger in a well-ventilated place where no flammable is present around it.

Do not put the charger in a place where it is exposed to moisture or rain.  
Provide at least 1 m distance between the forklift and the charger.

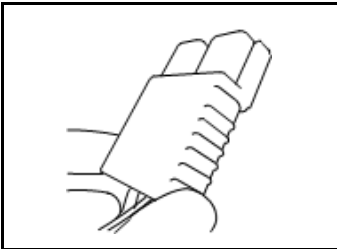


#### (2) Turn OFF the key switch.



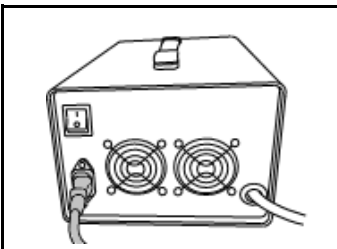
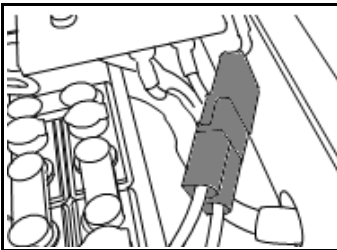
#### (3) Open the battery cover.

During charging, the battery cover should be kept open.



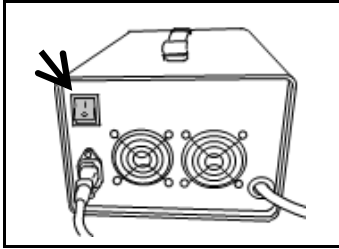
#### (4) Connect the plug of the charger to the battery plug.

Disconnect the battery plug from the plug of the vehicle body, and connect the battery plug to the charge plug of the charger.



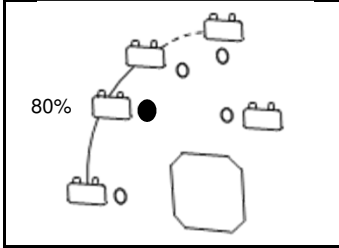
#### (5) Connect the power supply cable to the charger.

Connect the power supply cable to the charger, and connect the power supply cable to the outlet.



### (6) Turn ON the power supply switch of the charger.

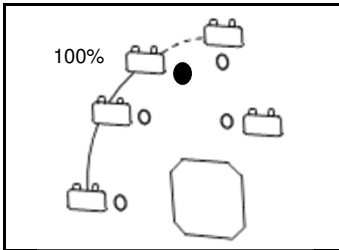
Turning ON the power supply switch of the charger starts charging. The "ON" indicator lamp at the left top of the charger lights. After approx. 10 seconds, the indicator lamp and information display window of the charger will turn on in sequence.



When the battery is charged by 60%, the "60%" indicator lamp is lit in green. When the battery is charged by 80%, the "80%" indicator lamp is lit in red.

### Charging time

When the battery is discharged by 80%, the charge time is 9 to 12 hours.

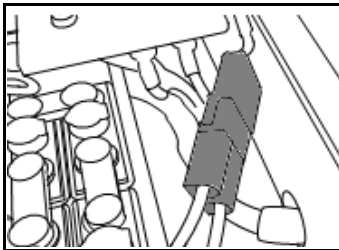


### (7) Completion of charging

When the "100%" indication lamp is lit, the charger automatically stops charging.

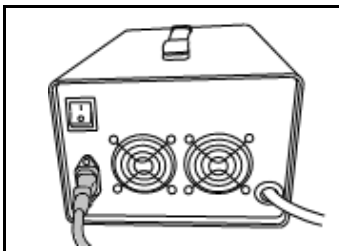
After completion of charging, turn OFF the power supply switch of the charger.

If the power supply switch remains ON after the battery is fully charged, the charger will restart charging at elapse of 24 hours.



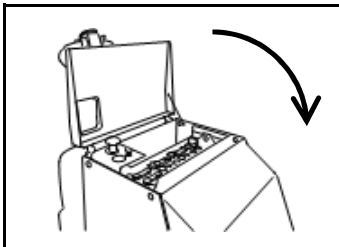
### (8) Reconnect the plugs.

After completion of charging, disconnect the charge plug of the charger from the battery plug, and connect the battery plug to the plug of the vehicle body.

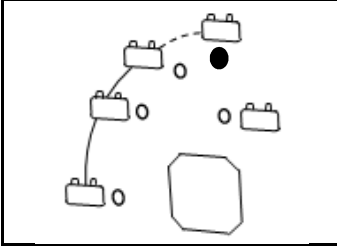


### (9) Disconnect the power supply cable.

Disconnect the power supply cable from the outlet.



### (10) Close the battery cover.



### (11) Equalizing charging

While the battery is used for a certain period, the battery electrolyte level in each battery cell varies. To equalize the battery electrolyte level in each cell, equalizing charging should be conducted at a specified interval.

Equalizing charging will be automatically conducted in fully-charged status after normal charging is conducted twenty times.

#### Stopping equalizing charging

To stop equalizing charging, keep pressing the Info.Key (change) button for 6 seconds. The “equalizing charging” indicator lamp turns off, and equalizing charging stops.

#### Manual equalizing charging

If you keep pressing the Info.Key (change) button for 4 seconds, equalizing charging starts.

If the power supply is connected even after equalizing charging is completed, equalizing charging will be automatically restarted at elapse of one hour after completion of equalizing charging.

Once equalizing charging is manually executed, equalizing charging will not be automatically conducted afterwards.

### (12) Supplementary charging

If the daily “normal charging” is not enough, conduct supplementary charging in an intermission (lunch break, etc.).

## ■ Function of “Info/Key”

The “Info/Key” (change) switch provides the following functions (The number of seconds for which the “Info/Key” switch is pressed is displayed on the information display window.) :

#### Information display

If you press the “Info/Key” (change) switch for 2 seconds, charge data are displayed on the information display window in sequence.

Pressing this switch for 3 seconds quits the information display.

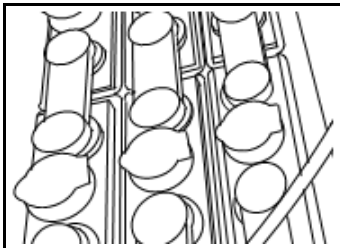
#### Equalizing charging

If you press the “Info/Key” (change) switch for 4 seconds, manual equalizing charging starts.

Pressing this switch for 6 seconds quits the equalizing charging.

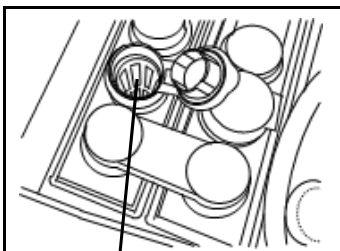
### Battery maintenance

Failure to conduct daily maintenance of the battery results in shortened service life.  
Shortage of the battery electrolyte causes the battery to overheat and burn out.



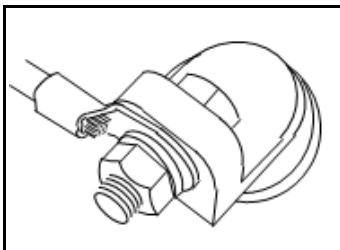
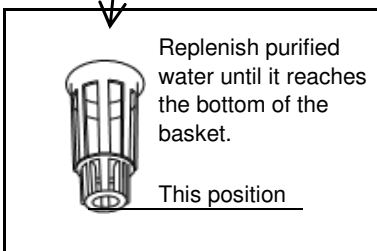
#### Check the battery electrolyte level every day.

Check the battery electrolyte level every day. If battery electrolyte runs short, replenish purified water (battery replenisher) as required.  
(Do not replenish water (tap water, etc.) other than purified water.)  
Check for looseness of the terminals.



#### ■ Battery electrolyte level checking procedure

Remove the cap at the top of the battery, and look into the filling port.  
When the electrolyte level reaches the bottom of the basket in the filling port, it is the normal level.

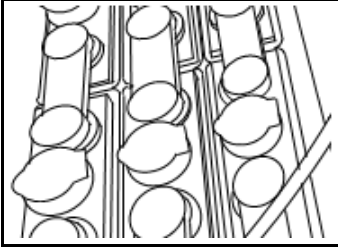


#### ■ Inspection of terminal

Check the battery terminals for any of the following faults:

- ☐ Looseness of terminal bolt
- ☐ Corrosion at the root of wire
- ☐ Damage to crimped part of wire
- ☐ Check for discoloration (black) and spark mark (When DC plug is used)

### ■ Checking specific gravity of battery electrolyte



Charge status can be checked with specific gravity of battery electrolyte. Through measurement of specific gravity of battery electrolyte, a fault of the battery can be found out. It is recommended that specific gravity of battery electrolyte should be periodically measured.

Relation between specific gravity of battery electrolyte and charge status is shown in the table below. You can find out a fault inside the battery by comparing specific gravity of battery electrolyte between before charging and after charging.

Specific gravity of battery electrolyte	Charge status	Time to full-charge status
1.26 or more	100%	Charging is not required.
1.21 or more	75%	4 to 6 hours
1.16 or more	50%	6 to 8 hours
1.10 or more	20%	9 to 12 hours

\* The above table applies to a case where battery electrolyte is 20°C. When battery electrolyte is at a lower temperature, indication of charge status becomes lower.



### WARNING

- Battery electrolyte is hazardous.

Battery electrolyte contains dilute sulfuric acid. When checking the battery electrolyte level and replenishing the battery electrolyte, wear rubber gloves and protective goggles. If the battery electrolyte touches the eye, skin, clothes, etc., immediately wash it off with a large amount of water. Particularly, if the battery electrolyte touches the eye, it may cause loss of eyesight. Immediately wash the eye with a large amount of water, and take doctor's diagnosis. Never attempt to lick or drink it. Such an action may result in death.

- Check the battery electrolyte level.

Shortage of the battery electrolyte causes battery performance deterioration, and reduction in battery service life. If the battery is charged with the battery electrolyte running short, it may cause explosion and fire.

- Be sure to open the battery cover.

When the battery is charged, the battery cover must be opened. If the battery is charged with the battery cover closed, hydrogen gas generated from the battery is retained during charging, which may cause explosion and fire.

- Flammable – Keep out.

The battery generates hydrogen gas during charging. Do not use fire around the forklift while the battery is charged. Also, do not work with sparks around the forklift. Otherwise, hydrogen gas may catch a spark, resulting in explosion and fire.

- Charge the battery in a well-ventilated place.

Battery charging should be conducted in a well-ventilated place. If the battery is charged in a place with poor ventilation, hydrogen gas generated from the battery is retained during charging, which may cause explosion and fire.

- Do not disconnect the cable from the outlet during battery charging.

If you disconnect the cable from the outlet during battery charging, hydrogen gas generated during charging may catch a spark, resulting in explosion.



### CAUTION

- Do not use a battery charger other than that included in the forklift.

If you use a battery charger incompatible with the battery for the forklift, the battery charger may overheat, emit smoke and catch fire. If you touch the battery charger in such conditions, you may get burns.

- Do not put a tool on the battery.

If you put a tool on the battery, the tool may touch the terminals, causing the terminals to be short-circuited, which may result in explosion of the battery.

- Be careful not to confuse the + and - terminals.

When connecting the cable to the battery terminals, be careful not to connect the positive and negative terminals in reverse. Incorrect connection of the cable results in damage to the electric circuit. Also, the battery may generate heat, and you may get burns.

- Connect the cable securely.

Loose connection of the cable to the battery terminals, or using the battery with corrosion of the battery terminals causes the battery to emit sparks and generate heat, and you may get burns.



## 5. Inspection and Maintenance

Conduct preoperational inspection every day, and voluntary inspection periodically once a month.

### Preoperational inspection

Be sure to conduct preoperational inspection every day before start of work. Details of preoperational inspection are as follows:

Parts subject to inspection		Description of inspection
1. Inspection to be conducted with the key switch turned OFF		
(1) Appearance of vehicle body	[1] Exterior of vehicle body	Check for dent, warpage or crack of the vehicle body. Check for oil drip under the vehicle body. (Oil leak check)
	[2] Mast	Check for damage of the mast.
	[3] Fork	Check for looseness and damage of the fork.
	[4] Tire	Check for damage or abnormal wear of each tire.
	[5] Main bolt/nut	Check for looseness.
(2) Hydraulic unit	Cylinder and piping	Check for oil leak from the cylinder and piping.
(3) Battery	Battery electrolyte volume	Check the battery electrolyte volume.
		<b>Maintenance:</b> If the battery electrolyte volume is insufficient, replenish purified water.
2. Inspection to be conducted with the key switch turned ON		
(1) Charge level	Battery discharge meter	Check the battery charge level.
		<b>Maintenance:</b> If the battery charge level is insufficient, charge the battery.
(2) Fork operating device	[1] Raising the fork	Turning the switch toward the operator raises the fork.
	[2] Lowering the fork	Turning the switch toward the front lowers the fork.
(3) Tilt operating device	[1] Tilting the mast backward	Turning the switch toward the operator tilts the mast backward.
	[2] Setting the mast vertical	Turning the switch toward the front resets the mast to the vertical form.
(4) Safety device	[1] Horn	Press the horn button to make sure that the horn sounds.
3. Inspection to be conducted while traveling slowly		
(1) Traveling and braking	[1] Forward traveling and braking Speed change	Turn the traveling knob toward the operator to travel forward.
		While traveling, lower the handle to make sure that the forklift stops.
		Run the forklift again, and set the handle vertical to make sure that the forklift stops.
	[2] Backward traveling and braking	While traveling, press the speed change switch to make sure that the traveling speed changes to the low speed mode.
		Turn the traveling knob toward the vehicle body to travel backward.
		While traveling, lower the handle to make sure that the forklift stops.
(2) Handle	[1] Pinch accident prevention switch	Run the forklift again, and set the handle vertical to make sure that the forklift stops.
		Press the pinch accident prevention switch to make sure that the forklift travels backward.
(3) Safety device	[2] Emergency stop button	Press the emergency stop button to make sure that all operations stop.
	(4) Abnormal sound	Check for abnormal sound during operation of each part.

- The above inspections should be conducted with the forklift placed on a flat place under no load (without cargo).
- If abnormality is found, repair the relevant part immediately.

### Monthly inspection (Voluntary inspection)

The forklift should undergo voluntary inspection at an interval of shorter than one month. The user is obliged to keep the inspection record for three years. Details of the voluntary inspection are as follows:

Parts subject to inspection		Description of inspection
1. Inspection to be conducted with the key switch turned OFF		
(1) Appearance of vehicle body	[1] Exterior of vehicle body	Check for dent, warpage or crack of the vehicle body (including the backrest).
		Check for oil drip under the vehicle body.
	[2] Mast	Check for damage of the mast.
		<b>Maintenance:</b> Apply grease to the mast.
	[3] Fork	Check for looseness or damage of the fork.
	[4] Tire	Check for damage or abnormal wear of each tire.
(2) Hydraulic unit, etc.	[5] Main bolt/nut	Check for looseness.
		<b>Maintenance:</b> Re-tighten main bolts and nuts securely.
	[1] Hydraulic oil tank	Check for oil leak.
		Check the hydraulic oil volume,
		<b>Maintenance:</b> If the hydraulic oil volume is insufficient, replenish the hydraulic oil. Specified oil: ISO VG32
	[2] Cylinder and piping	Check for oil leak from the cylinder and piping.
(3) Electric circuit		Check for damage and check the mounting condition of the cylinder and piping.
	[3] Lift chain	<b>Measurement:</b> Measure the amount of wear of the chain.
		For the measuring procedure, refer to p. 48.
		Check for looseness of the chain mounting parts.
		<b>Maintenance:</b> Apply machine oil to the chain.
		<b>Maintenance:</b> Apply machine oil to the chain wheel.
(4) Battery	[1] Wiring	Check for outer damage or looseness.
	[2] Fuse	Make sure that the specified fuses are attached.
		Check for looseness.
	[3] Magnet switch	Check for contact seizure or short-circuit.
	[4] Electromagnetic brake	<b>Measurement:</b> Measure the clearance.
		<b>Maintenance:</b> Replace the brake, as required.
(5) Drive unit	[5] Drive unit	<b>Maintenance:</b> Replace the oil seal at an interval of 1250 hours (indication of the hour meter).
	[1] Battery electrolyte volume	Check the battery electrolyte volume.
		<b>Maintenance:</b> If the battery electrolyte volume is insufficient, replenish purified water.
	[2] Terminal	Check for looseness.
(6) Terminal		<b>Maintenance:</b> Apply grease to the terminal.

## 5. Inspection and Maintenance

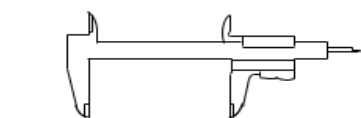
Parts subject to inspection		Description of inspection
2. Inspection to be conducted with the key switch turned ON		
(1) Charge level	Battery discharge meter	Check the battery charge level. <b>Maintenance:</b> If the battery charge level is insufficient, charge the battery.
(2) Fork operating device	[1] Raising the fork	Turning the switch toward the operator raises the fork.
	[2] Lowering the fork	Turning the switch toward the front lowers the fork.
(3) Tilt operating device	[1] Tilting the mast backward	Turning the switch toward the operator tilts the mast backward.
	[2] Tilting the mast forward	Turning the switch toward the front resets the mast to the vertical form.
(4) Safety device	[1] Horn	Press the horn button to make sure that the horn sounds.
3. Inspection to be conducted while traveling slowly		
(1) Traveling and braking	[1] Forward traveling and braking	Turn the traveling knob toward the operator to travel forward.
		While traveling, lower the handle to make sure that the forklift stops.
		Run the forklift again, and set the handle vertical to make sure that the forklift stops.
	[2] Backward traveling and braking	While traveling, press the speed change switch to make sure that the traveling speed changes to the low speed mode.
		Turn the traveling knob toward the vehicle body to travel backward.
		While traveling, lower the handle to make sure that the forklift stops.
(2) Handle		Run the forklift again, and set the handle vertical to make sure that the forklift stops.
		Check for play and looseness of the handle. <b>Maintenance:</b> Apply machine oil to the rotary part at the root of the handle.
(3) Safety device	[1] Pinch accident prevention switch	Press the pinch accident prevention switch to make sure that the forklift travels backward.
	[2] Emergency stop button	Press the emergency stop button to make sure that all operations stop.
(4) Abnormal sound/smell		Check for abnormal sound during operation of each part.
		During traveling and operation of the forklift, check for abnormal smell.

- The above inspections should be conducted with the forklift placed on a flat place under no load (without cargo).
- If abnormality is found, repair the relevant part immediately

### ■ Position of equipment

The fuse and hydraulic oil tank positions are shown in p. 49 and p. 50.

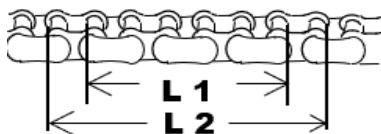
### ■ Chain elongation measuring procedure



- ☐ Measure dimensions of L1 and L2 with calipers.

(Measurement with 6 links)

- ☐ Determine the judgment dimension with the following formula:



L1: Inside of roller ⇒ Internal dimension

L2: Outside of roller ⇒ External dimension

$$\text{Judgment dimension } L = \frac{L1 + L2}{2}$$

- ☐ When the judgment dimension is longer than the standard dimension by approx. 2% or more, replace the chain.

Number of links	6 links	
Standard dimension (mm)	114.3	
Dimension that needs replacement (mm)	116.01 or more	

### ■ Judgment criteria of electromagnetic brake measurement result

When the clearance is 1.0 mm or more, replace the brake.

### Periodic replacement parts

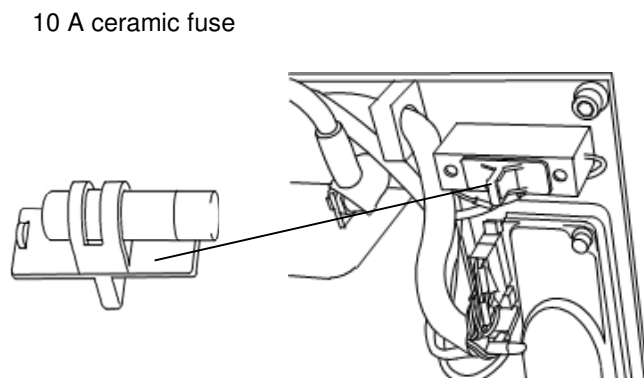
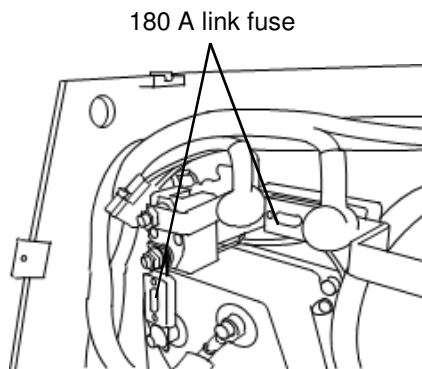
Replace the following parts and consumables periodically.

The replacement intervals vary depending on the forklift operation time. Replace these parts and consumables at the following intervals, as standard.

The following standard intervals are based on the assumption that the forklift operates for 8 hours per day, and for 240 days per year.

Part name		Occasionally	Yearly	Every 2 years	Every 3 years	Every 4 years	Remarks
Tire	Drive tire					✓	
	Load tire				✓		
Chain						✓	
Battery	Battery plug			✓			
	Oil seal	✓					Every 1250 hours, as standard
Brake and related parts	Brake lining				✓		
	Electromagnetic brake	✓					To be replaced depending on monthly inspection measurement result
Switches	Key switch			✓			
Meters	Hour meter			✓			
Electric parts	Relay			✓			
	Contactors				✓		
Exterior	Gas spring			✓			
	Rubber parts			✓			To be replaced depending on deterioration level at the replacement timing
Consumables	Hydraulic oil						Specified oil: ISO VG32
	Fuse						Both 180 A and 10A

**Fuse** The fuses are located at the following positions:

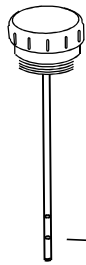
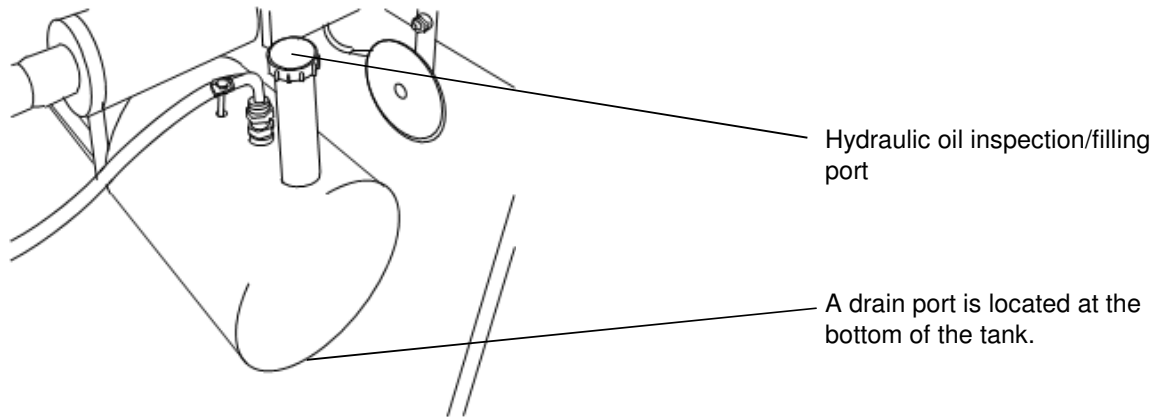


#### CAUTION

- Use the specified genuine fuse.

Using a fuse other than the genuine fuse results in overcurrent, causing burnout of parts, fire and electric shock. Be sure to use the specified genuine fuse.

### Hydraulic oil tank



#### Inspection of hydraulic oil

During inspection of hydraulic oil, lower the mast to the lower stroke end, and set the mast vertical.



#### CAUTION

- The hydraulic oil tank becomes hot.

The hydraulic oil tank becomes hot during operation of the forklift or immediately after startup. If you touch the hydraulic oil tank, you may get burns.



### WARNING

- Be sure to conduct preoperational inspection.  
Conduct preoperational inspection before using the forklift every day. If the inspection is omitted, a failure of the forklift can be ignored during use, resulting in an accident.
- Conduct voluntary inspection once a month.  
Conduct voluntary inspection of the forklift at one month or shorter intervals. If the inspection is omitted, a failure of the forklift can be ignored, resulting in an accident involving injury to the operator and surrounding persons.
- Appoint a work leader for repair work.  
If repair work is conducted without a work leader, incorrect work procedure, etc. may cause fall of parts and equipment. Also, incorrect connection of the electric circuit may cause the worker to suffer injury or burns.
- Be sure to conduct periodic parts replacement.  
If the forklift is kept running without replacement of the periodic replacement parts, wear or deterioration of the parts may result in strength deterioration and malfunction of the forklift, causing an accident. Be sure to replace the periodic replacement parts at specified intervals.
- Use genuine parts.  
If the genuine parts are not used, the parts and equipment may fall because of insufficient strength, and in the worst case, the forklift may overturn. In such a case, you may suffer injury.
- Before start of work, take fall preventive measures.  
Before handling the fork or other equipment that may fall, take fall preventive measures by using a safety column, safety block, etc. If the equipment falls, it may collide with a person, resulting in serious injury.
- When jacking up the forklift, observe the safety instructions.  
When jacking up the forklift, observe the basic safety instructions. (Use a jack on a level, rigid base, use a jack with sufficient jacking capacity, etc.)
- When slinging the forklift, hook it by a specified sling part.  
To sling the forklift, be sure to hook it by the specified sling part. For sling work, use appropriate sling gear. If the forklift falls, it may collide with a person, resulting in serious injury.



### CAUTION

- Do not wash the forklift with high-pressure washing machine.  
If the forklift is washed with a high-pressure washing machine, water and mist enter the vehicle body, which may result in a trouble of the control circuit. A trouble of the control circuit causes operation failure and erroneous operation, which may result in a collision accident etc.
- Do not wash the forklift with water.  
When cleaning the forklift, wipe it with rags, etc. Washing the forklift with water causes water intrusion into the vehicle body, which may result in a trouble of the control circuit. A trouble of the control circuit causes operation failure and erroneous operation, which may result in a collision accident etc.
- Replace or replenish consumables.  
If the forklift is kept running without application of consumables (grease, etc.) or without replenishment/replacement of hydraulic oil, the forklift may malfunction, resulting in an accident. Replenish or replace consumables at specified intervals.
- Use the specified genuine fuse.  
Using a fuse other than the genuine fuse results in overcurrent, causing burnout of parts, fire and electric shock. Be sure to use the specified genuine fuse.
- Before handling a large component and equipment, check the weight.  
When removing a large component or equipment, check its weight in advance. If the weight check is omitted, the worker may drop the component or equipment because it cannot be held by hand when the weight is larger than expected. During sling work, if a component or equipment is too heavy to sling, it may fall and collide with a person, resulting in injury. Also, the large component or equipment may collide with the forklift and floor, resulting in damage to these objects.
- The hydraulic oil tank becomes hot.  
The hydraulic oil tank becomes hot during operation of the forklift or immediately after startup. If you touch the hydraulic oil tank, you may get burns.

# Troubleshooting

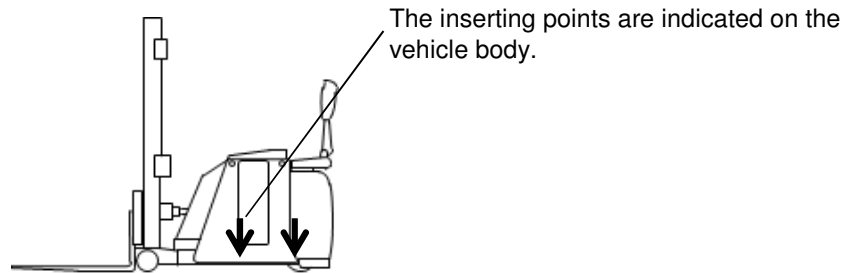
## ■ Troubleshooting

If a fault occurs with the forklift, take the following actions described on this page. In case where the fault cannot be eliminated even if you take the corrective actions described on this page, please contact our authorized service company

To transfer the forklift when it cannot run due to a fault, take the following action.

## ■ To transfer the forklift

Prepare a rescue forklift that can lift this forklift. Lift and transfer this forklift with the rescue forklift. In this case, insert the fork into the following points.



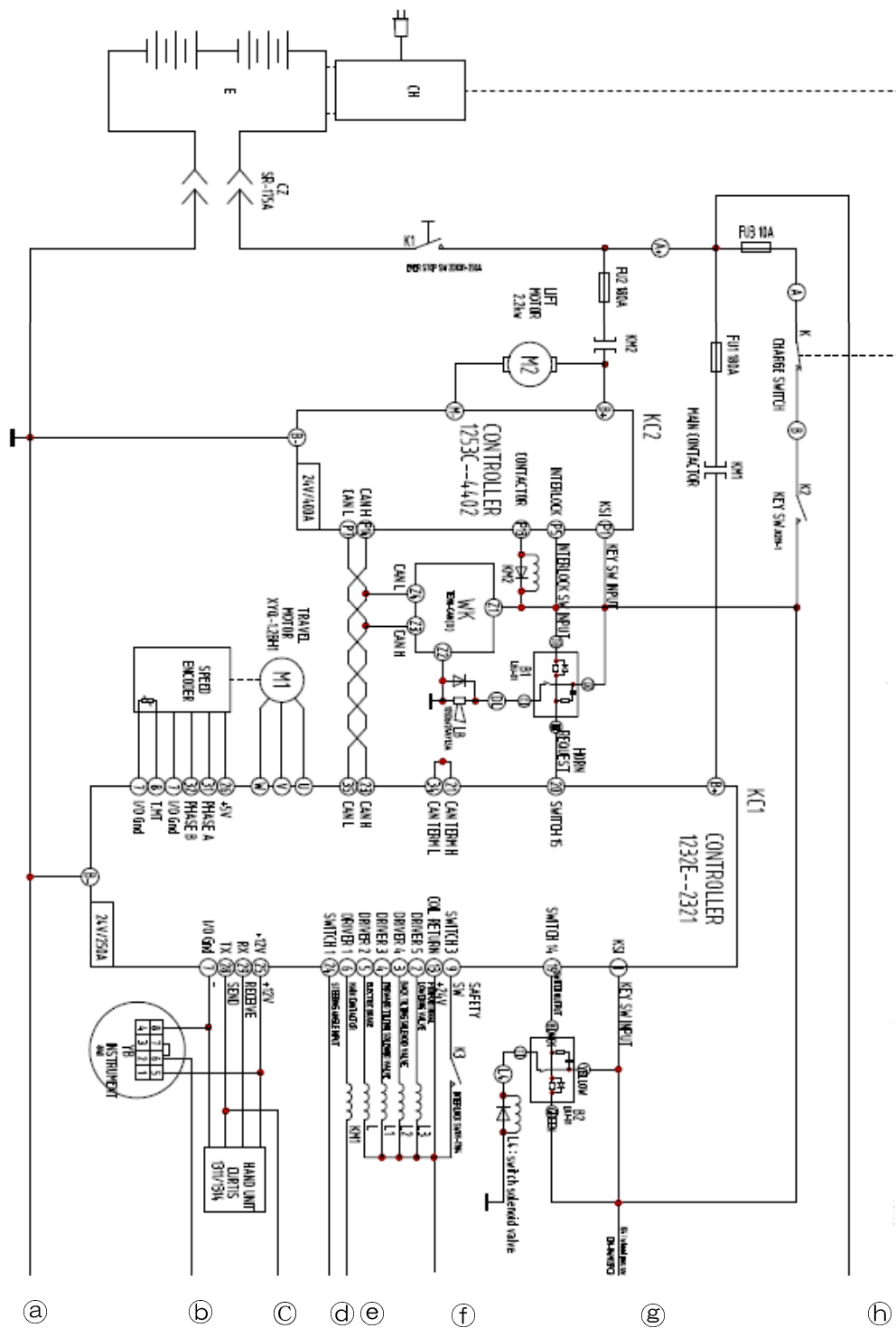
If a fault occurs with the forklift, take corrective actions according to the following table.

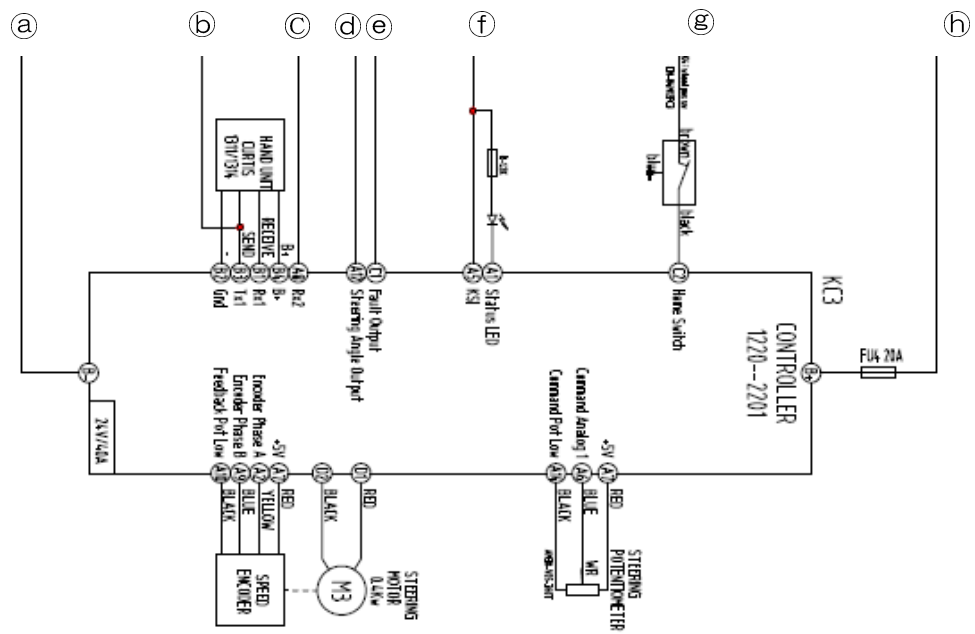
Trouble	Cause	Corrective action
The fork does not move.	[1] The key switch is turned OFF. [2] The emergency stop button has been pressed. [3] Insufficient charging [4] Load capacity is exceeded. [5] A fuse has blown out. [5] Fault of the electric circuit [6] Fault of the hydraulic circuit [7] Damage to the mast or chain	[1] Turn ON the key switch. [2] Reset the emergency stop button. [3] Charge the battery. [4] Reduce the cargo weight so that it does not exceed the maximum allowable load. [5] Replace the fuse. (To be replaced after the cause of trouble is eliminated) [5] Please contact our authorized service company. [6] Please contact our authorized service company. [7] Please contact our authorized service company.
The fork does not smoothly move.	[1] Insufficient charging [2] Load capacity is exceeded. [3] Fault of the electric circuit [4] Fault of the hydraulic circuit [5] Damage to the mast or chain	[1] Charge the battery. [2] Reduce the cargo weight so that it does not exceed the maximum allowable load. [3] Please contact our authorized service company. [4] Please contact our authorized service company. [5] Please contact our authorized service company.

Trouble	Cause	Corrective action
The fork lowers under its own weight.	[1] Oil leak from the hydraulic circuit [2] Fault of the hydraulic circuit	[1] Please contact our authorized service company. [2] Please contact our authorized service company.
Fork movement is unstable.	[1] Load capacity is exceeded. [2] Shortage of hydraulic oil volume [3] Air intrusion in the hydraulic circuit	[1] Reduce the cargo weight so that it does not exceed the maximum allowable load. [2] Replenish the hydraulic oil. Specified oil: ISO VG32 [3] Please contact our authorized service company.
The forklift cannot travel.	[1] The key switch is turned OFF. [2] Insufficient charging [3] The emergency stop button has been pressed. [4] A fuse has blown out. [5] Fault of the electric circuit [6] Fault of the drive unit	[1] Turn ON the key switch. [2] Charge the battery. [3] Reset the emergency stop button. [4] Replace the fuse. (To be replaced after the cause of trouble is eliminated) [5] Please contact our authorized service company. [6] Please contact our authorized service company.
Transfer/traveling operation is not smooth.	[1] Dust is clogged in the wheel. [2] Insufficient charging [3] Load capacity is exceeded.	[1] Eliminate dust. [2] Charge the battery. [3] Reduce the cargo weight so that it does not exceed the maximum allowable load.
The forklift does not stop even if the handle is turned to the brake position.	[1] Fault of the electric circuit [2] Wear of the brake lining	[1] Please contact our authorized service company. [2] Please contact our authorized service company.
The battery cannot be charged.	[1] The power supply is OFF. [2] The power supply cable is disconnected. [3] Wire break of the cable [4] A fuse has blown out. [5] Fault of the charger [6] Fault of the battery	[1] Turn ON the power supply. [2] Connect the cable. [3] Please contact our authorized service company. [4] Replace the fuse. (To be replaced after the cause of trouble is eliminated) [5] Please contact our authorized service company. [6] Please contact our authorized service company.



## Electric circuit diagram

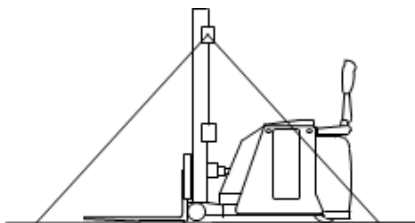




## 6. Transportation

For transportation of the forklift, take the following measures:

### ■ Fastening the forklift on truck



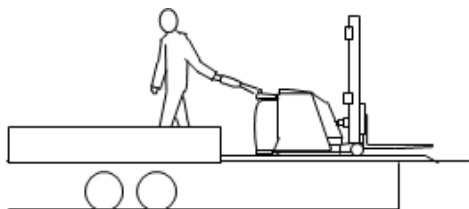
Insert stoppers under the wheels, and apply rope to two points of the mast to fasten the mast by pulling the rope from the front and back.

When applying rope to the mast, be sure to hook the rope onto the part indicated by the sling position mark.



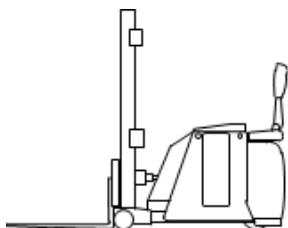
Sling position mark indicated on the vehicle body

### ■ When loading the forklift into truck by running it



To load the forklift into a truck by running the forklift, use through caution about gradient of the work site, and length, width and strength of the ramp.

### ■ When loading the forklift into truck by lifting it



When lifting the forklift, be sure to hook the sling gear onto the part indicated by the sling position mark.



Sling position mark indicated on the vehicle body

## 6. Transportation



### WARNING

- Lift the forklift with the specified sling part.

When loading/unloading the forklift by lifting it, be sure to sling the forklift with the specified sling part. For sling work, use appropriate sling gear. If forklift is lifted at any position other the specified position, the forklift may fall and collide with a person, resulting in serious injury.



### CAUTION

- Ensure sufficient margin of ramp.

To move the forklift via a ramp during loading/unloading work, use through caution about gradient of the work site, and length, width and strength of the ramp. If there is no margin in these items, the forklift may fall and collide with a person, resulting in injury.

## 7. Disposal

For disposal of the forklift, take the following measures:

- Order the battery distributor to dispose of the battery.
- Drain the hydraulic oil, and order a waste oil disposal company to dispose of the oil.



### WARNING

- For disposal of the battery, order the battery distributor.

To dispose of the battery, order the distributor of the battery. If the battery is left without disposal, a person may touch the battery electrolyte and get burns, because the battery electrolyte contains dilute sulfuric acid.