

# CHAPTER 1 SAFETY HINTS

## 1. DAILY INSPECTION

At the beginning of each shift, inspect your truck and fill out a check, maintenance and lubrication table. Check for damage and maintenance problems. Have repairs made before you operate the truck.

Do not make repairs yourself. Lift truck mechanics are trained professionals. They know how to make repairs safely.



## 2. DO'S AND DON'TS



Do watch for pedestrians.



Do wear safety equipment when required.



Do not mix drugs or alcohol with your job. You can be punished according to the relevant laws and regulations.



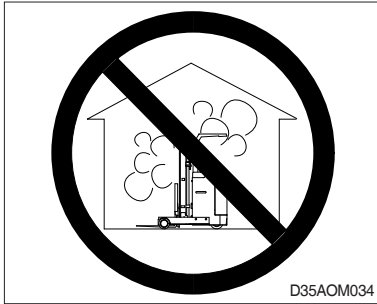
Do not block safety or emergency equipment.



Do not smoke while charging or operating the truck. It can result in fire.



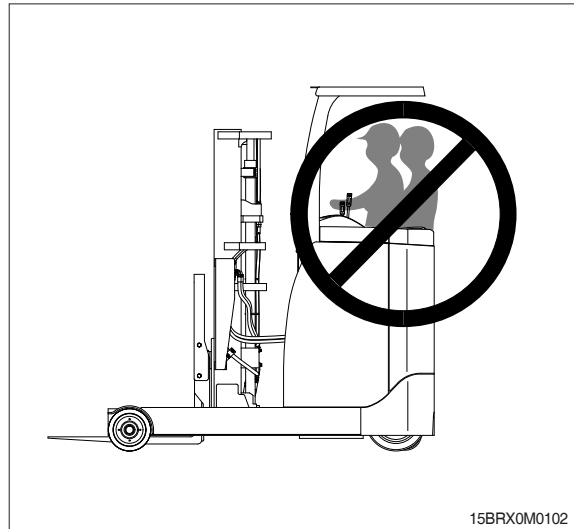
Do not operate the truck outdoors in rainy day.



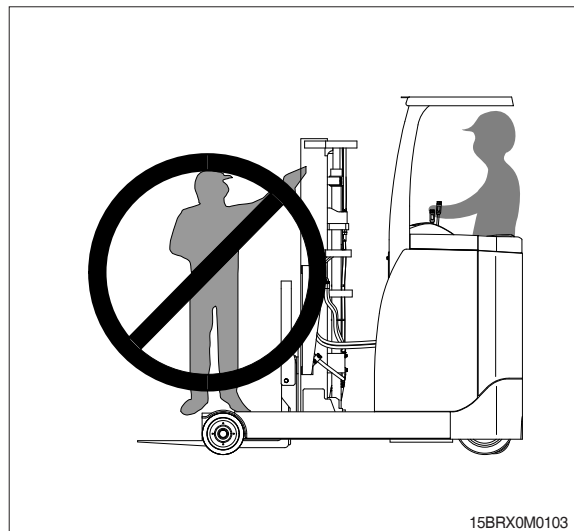
Do not charge in indoor environment where ventilation is not performed.

### 3. NO RIDERS

- 1) The operator is the only one who should be on a truck.



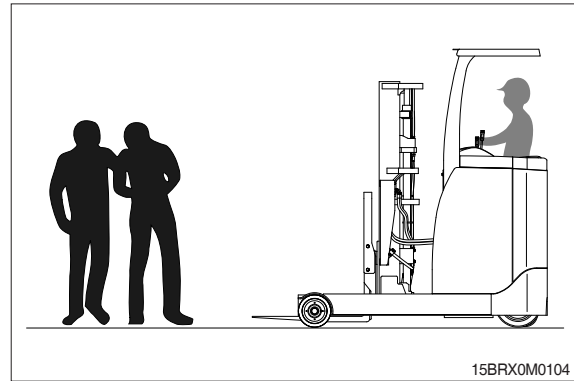
- 2) Never let anyone step on the forks.



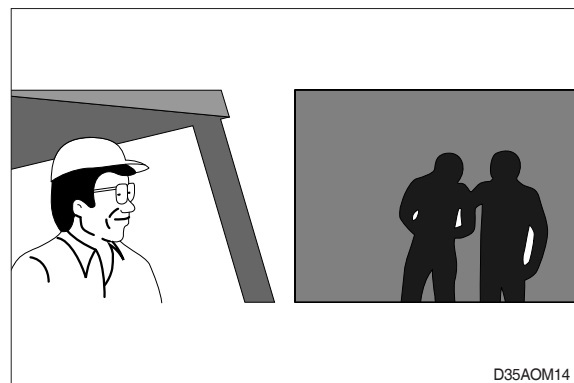
## 4. PEDESTRIANS

- 1) Watch where you are going. Look in the direction of travel.

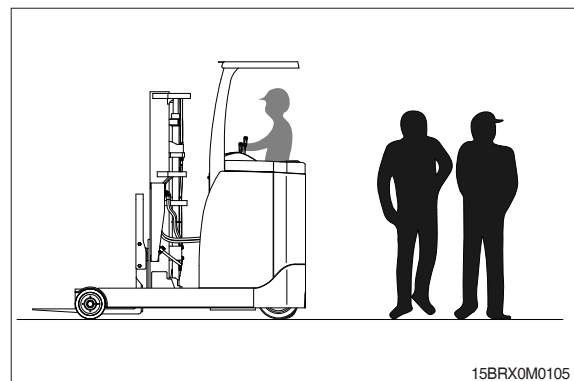
Pedestrians may use the same roadway you do. Sound your horn at all intersections or blind spots.



- 2) Watch for people in your work area even if your truck has warning lights or alarms. People may not watch for you.

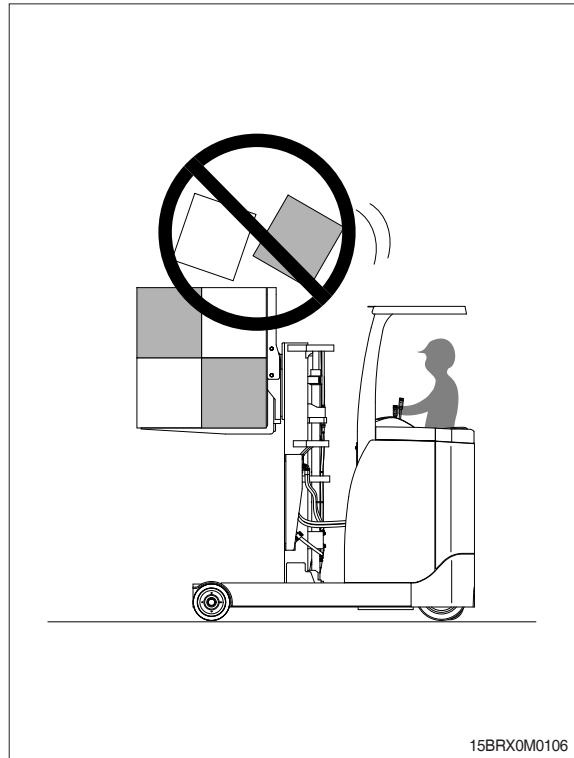


- 3) Watch for people standing back, even when you are parked.

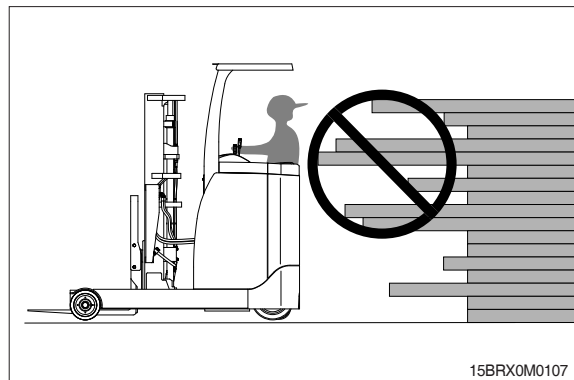


## 5. OPERATOR PROTECTION

- 1) Keep yourself under the overhead guard while operating.
  - 2) Always keep your body on the seat within the confines of the truck.
- ⚠ Do not operate truck without the overhead guard, unless condition prevents use of it.**

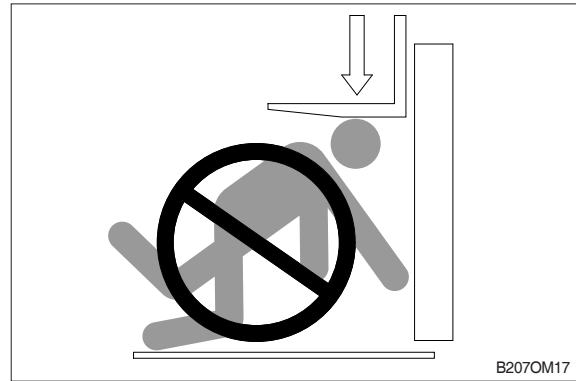


- 3) Take special caution when driving backward or operating the truck in narrow space.

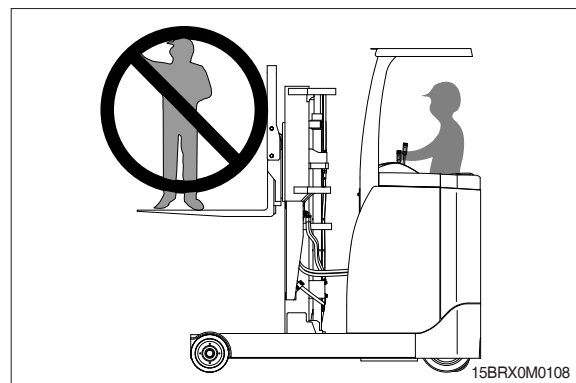


## 6. FORK SAFETY

- ⚠ Never allow anyone to walk under raised forks.

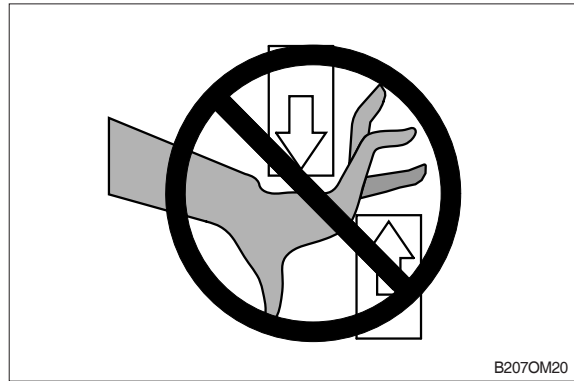


- ⚠ Do not use the forks of the truck as an elevator for work at high place.



## 7. PINCH POINTS

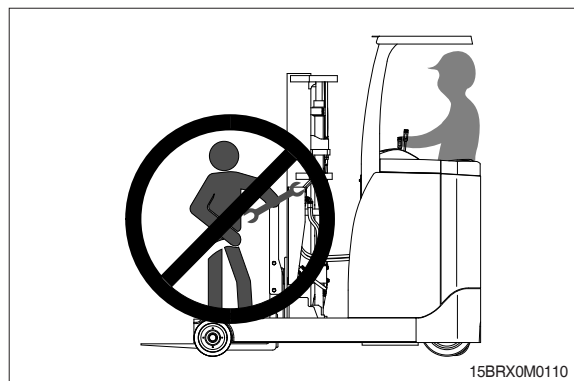
**⚠ Keep hands, feet and legs out of the mast.**



**⚠ Do not use the mast as a ladder.**



**⚠ Never try to repair the mast, carriage, or attachment by yourself. Always get a trained mechanic.**

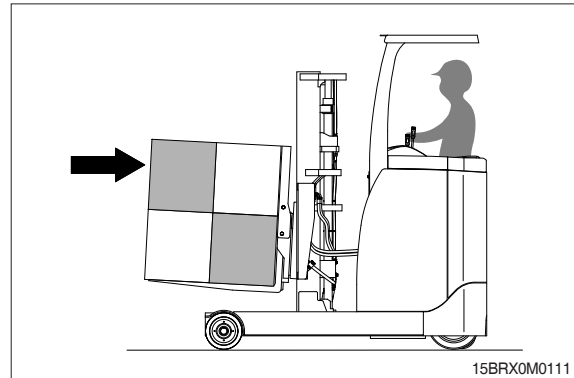




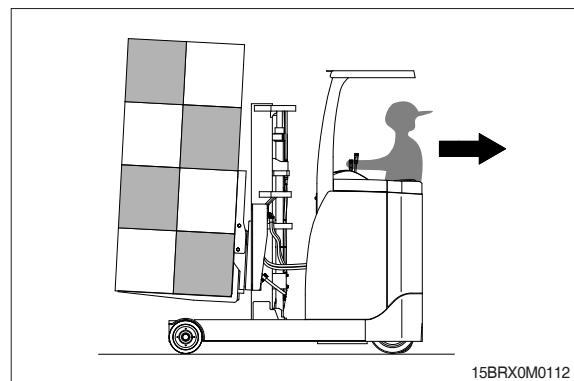
## 8. SAFE OPERATION DURING CARGO LOADING

- 1) Follow the proper loading amount, tilt the mast backward at all times during travel, and travel with the load near the floor and the ground.

**⚠ Never lift or lower the load when the truck is in motion.**

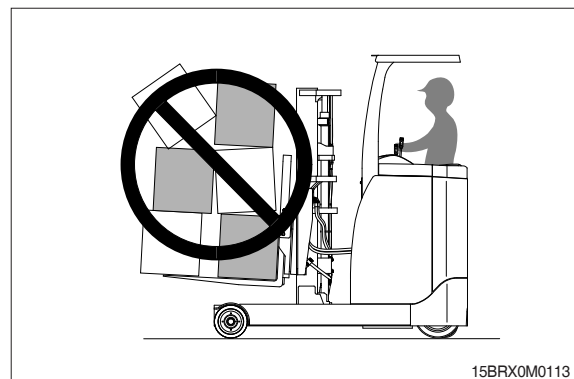


- 2) When handling bulky loads that restrict your vision operate your truck in reverse to improve visibility. Be sure to pivot in the seat to give maximum visibility.



- 3) Unstable loads are a hazard to you and to your fellow workers.

Always make certain that the load is well stacked and evenly positioned across both forks. Never attempt to lift a load with only one fork.

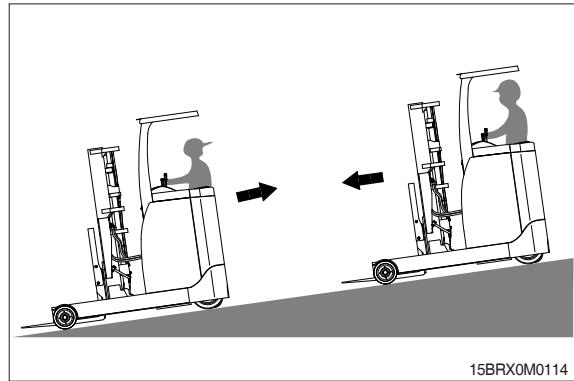


## 9. GRADES, RAMPS, SLOPES AND INCLINES

⚠ Never turn on a grade, either loaded or unloaded.

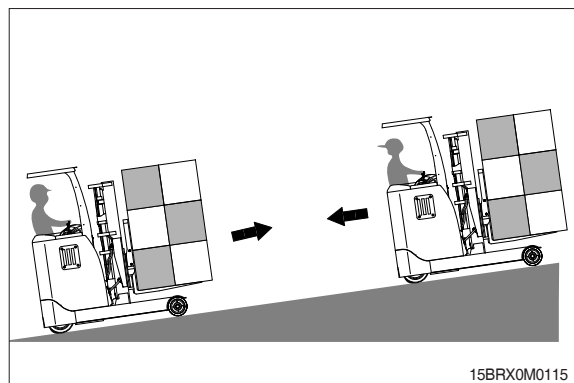
### 1) UNLOADED

Forks downgrade



### 2) Loaded

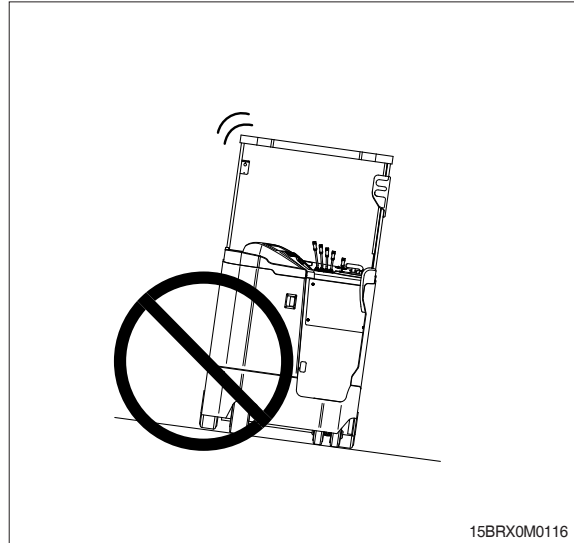
Travel with the fork in the upper direction.



## 10. TIP OVER (OVERTURN)

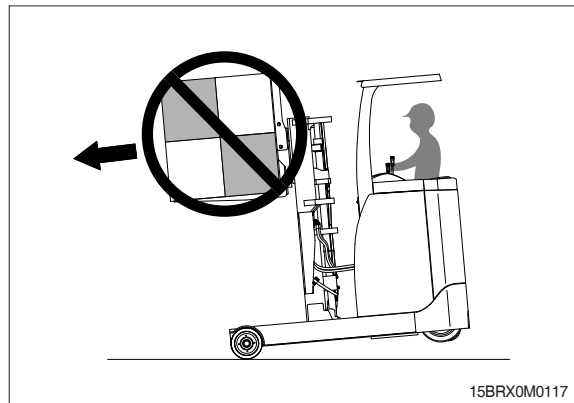
### 1) LATERAL TIP OVER

- (1) Lateral tip over can occur with a combination of speed and sharpness of turn. This combination will exceed the stability of the truck. This condition is even more likely with an unloaded truck.
- (2) With the load or mast raised, lateral tip over can occur while turning and/or braking when traveling in reverse or accelerating and turning while traveling forward.
- (3) Lateral tip over can occur loaded or unloaded by turning on an incline or ramp.



### 2) LONGITUDINAL TIP OVER

- (1) Longitudinal tip over can occur with combination of overloading and load elevated. This condition is even more likely with excessive forward tilt, braking in forward travel or accelerating rearward.
- (2) Longitudinal tip over can occur by driving with the load down slope on a steep grade. Lateral and longitudinal tip over can occur if the truck is driven over objects on the floor or ground, off the edge of improved surfaces, or into potholes in the road surface, or by running into overhead objects or collisions. An off dock type of tip over can occur if the truck is steered too close to the dock edge, driven off the edge of the dock or ramp, or if the highway truck or trailer rolls away from the dock or is driven away during loading.

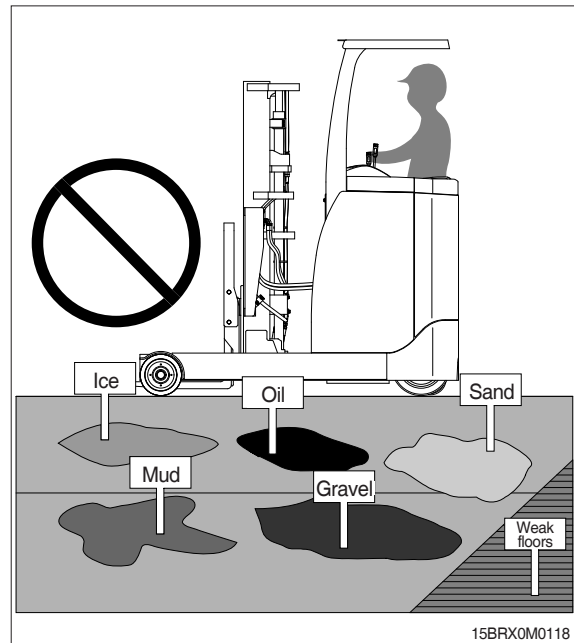


- ⚠ The conditions listed above can be further aggravated by overloading, excessive tilt, or off center loads.
- ⚠ Lift truck tip over can cause serious injury or death if the operator is trapped between the truck and the ground.

## 11. SURFACE AND CAPACITY

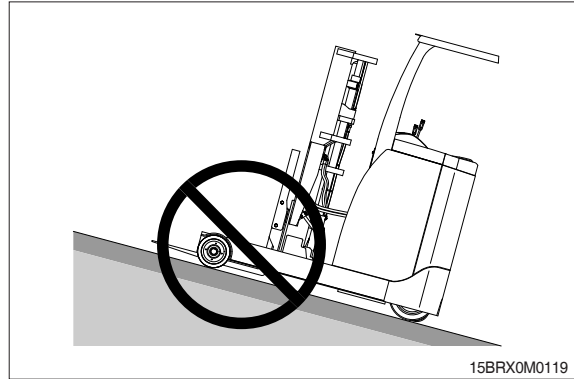
Avoid these conditions shown on the right. They can cause a truck to tip over or lose traction for braking or driving.

- ⚠ **Know the weight of your truck and load, and especially when using elevators, know the capacity of the elevator you intend to use. Do not overload.**

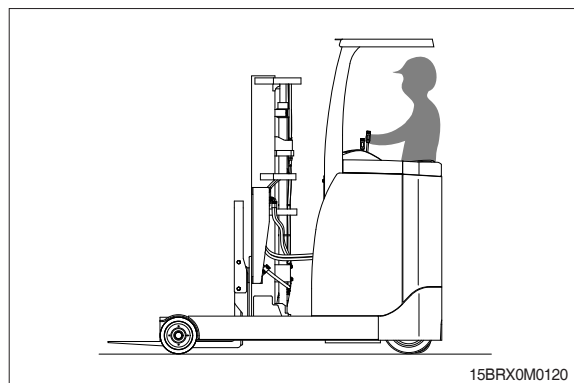


## 12. PARKING

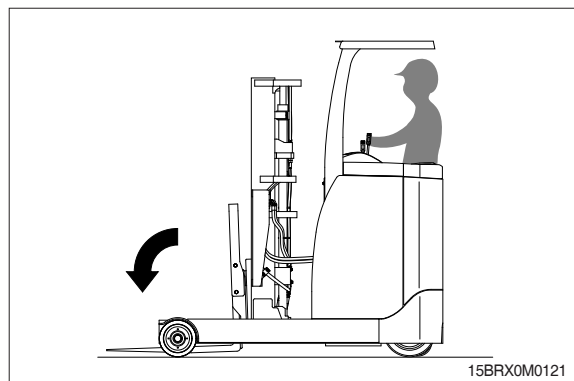
- 1) Never park on a grade.



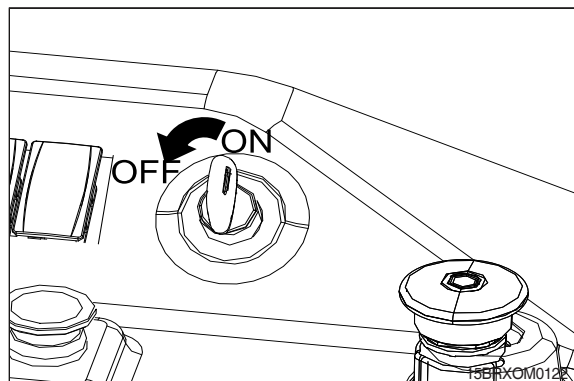
- 2) Always check that the truck comes to a complete stop before leaving truck. Be sure the travel control is in NEUTRAL.



- 3) Lower forks fully to the floor and tilt mast forward



- 4) Turn start key to OFF position.



## 13. LIFTING, JACK-UP AND BLOCKING

▲ Lifting or Jack-up of large-scale equipment such as the lift truck can cause risk during the work, so special caution and preventive measures are required.

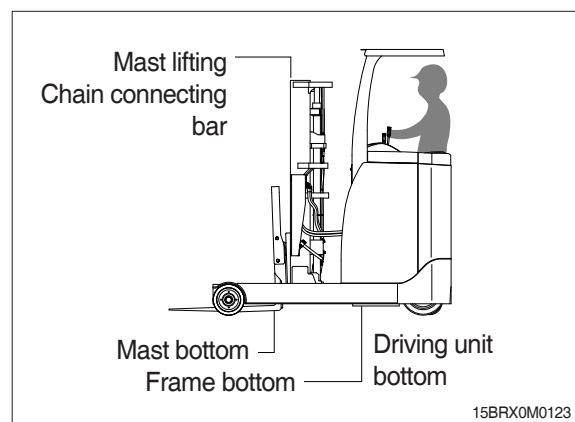
### 1) SAFE PARKING

- (1) Park the lift truck on a flat and firm surface.
- (2) Erect the mast vertical, and fully lower the forks or the attachment.
- (3) Put all controls in NEUTRAL, and turn the start switch to OFF position to withdraw the key.
- (4) Apply the parking brake, and keep the tires stationary with blocks.

▲ Defective truck may cause accident. All tools and lifting devices must maintain the normal state, and satisfy the standard of proper loading capacity.

### 2) POSITIONS OF LIFTING, FIXING AND JACK-UP

See the figure for fixing sections of the truck during work of lifting, fixing and jack-up. Fully understand lifting, fixing and jack-up procedures, and perform the procedures precisely and safely.



### 3) LIFTING WITH CRANE

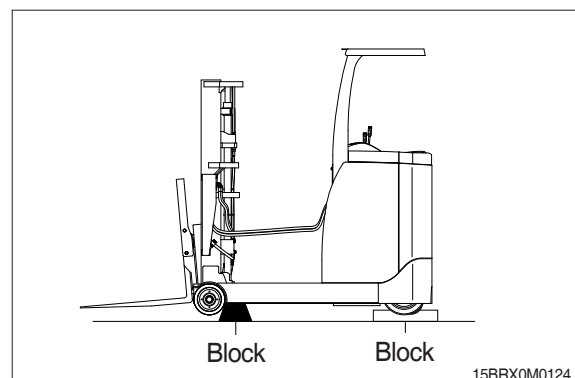
Lift the front part of the truck with a crane to install the block below the frame.

▲ Look carefully whether the truck maintains the balance during the lifting. The truck may tip over to the left or the right. Support both sides of the truck or the overhead guard, or use the guide to prevent tip over.

- (1) Park the truck safely, and install blocks on the rear wheels (steering wheels).
- (2) Tie the outer master rails with two chains respectively to lift the front of the truck by making use of the mast.

▲ Make sure that capacity of the chain or the crane is sufficient for lifting the truck before lifting the truck. Refer to the nameplate on the truck.

- (3) Slowly lift the truck, and then lower the truck slowly onto blocks under the frame.
- (4) Once maintenance is complete, perform the lifting procedures in reverse order to safely lower the truck. Care should be exercised to prevent tools or other devices left under the wheels.



#### 4) LIFTING AND FASTENING THE MAST

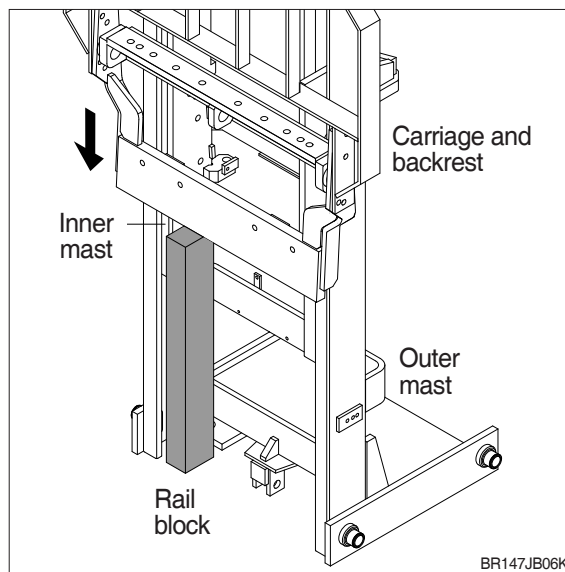
- (1) Part the lift truck safely.
- (2) Install blocks on the front and the rear of the load wheel.  
Move two supporting blocks near the mast rail before lifting the mast.
- (3) Use two strong wooden blocks of 1100 mm in length or in the length of about 300 mm or 600 mm.

※ The block length may require to be reduced on the standard mast.

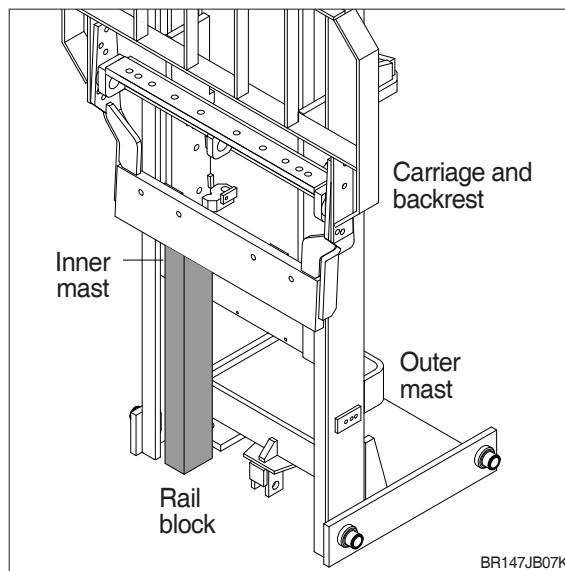
As shown in the illustration, the carriage may be fixed on the block on the 3-stage mast.

- (4) Start the engine, and ascend the mast and the carriage.

- (5) Fix the long block on the inner rail, and lower the mast until the carriage is settled on the block.



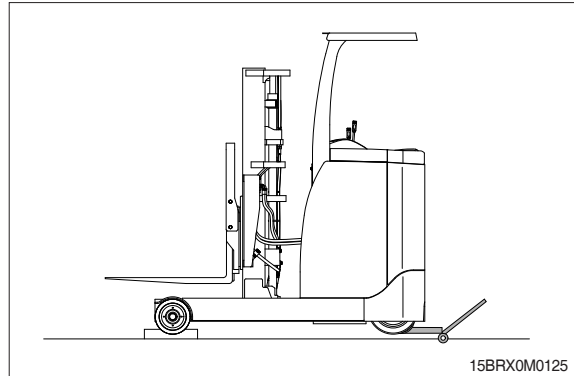
- (6) Fix the short block on the inner rail, and lower the mast until the inner rail is settled.
- (7) Perform the work in reverse order as indicated above to remove the block.



## 5) LIFTING REAR SIDE OF THE TRUCK

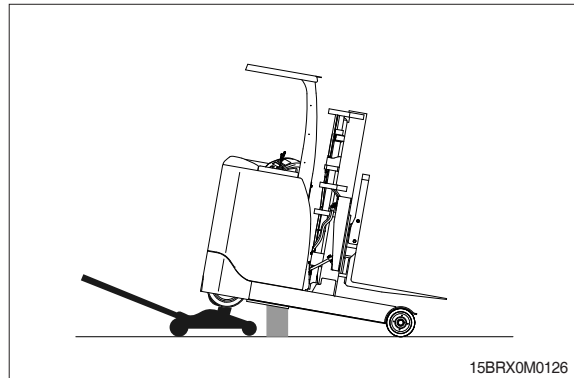
Block can be installed below the frame on back of the truck or jack-up for lifting.

- (1) Park the lift truck safely. Block is installed on the front and rear side of the load wheel.
- (2) Install the floor jack on the frame unit.
- ※ **If there is no space sufficient for installing the jack under the frame, move the truck over the seam to secure required space.**
- (3) Lift the truck to the least height for allowing maintenance.



- (4) Install blocks in same number on both sides of the truck to keep the block balanced for operation.

▲ **Make sure that blocks are safely installed before beginning maintenance.**



- (5) After finishing the maintenance, perform the work in the reverse order of the above process to lower the rear side of the truck to the ground.  
Lower one side of the truck by 50 mm each.
  - Place jack under the frame bottom to lift the truck.
  - Carefully remove blocks, and lower the truck.
  - Remove jack and blocks from the driving wheel.

## 6) LIFTING ENTIRE TRUCK

The truck weight is indicated on the nameplate.

- (1) Park the lift truck safely.
- (2) Park the truck on board, if required, to expand gap from the ground.

### ▲ LATERAL TIP OVER

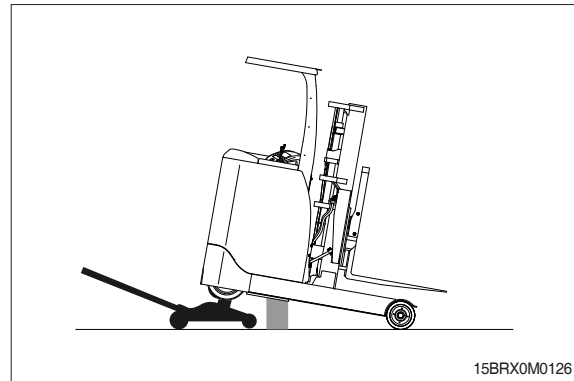
**When lifting one side of the truck, adjust the opposite side of the lifted side from having the difference of 50 mm or more to prevent lateral tip over.**



(3) Install the jack on the bottom of the side frame.

※ **Correctly install jack on the bottom of the main side frame.**

(4) Lift in one direction at a time alternately in opposite direction up to 150 mm for maintenance work.



(5) Install the block on the bottom of the bumper on the rear side of the frame. Install the block near the steering wheel and load wheel for stabilization as much as possible.

(6) When only one jack is used, put the truck on blocks, and then move the jack to the opposite side to work.

(7) Repeat individual lifting procedures.

Use the block of same size to maintain the flatness.

▲ **Correctly install jack on the bottom of the main side frame.**

(8) After finishing the maintenance lower the entire truck safely to the ground in the reverse order of lifting.

Remove the block carefully from each direction at a time. Check for any tools or other equipment below the truck or the wheel.

※ **A number of seams may be required to install under tires dependent upon the height of jack.**

## 7) HOW TO FASTEN THE TRUCK WHEN SHIPPING

### (1) Front of truck

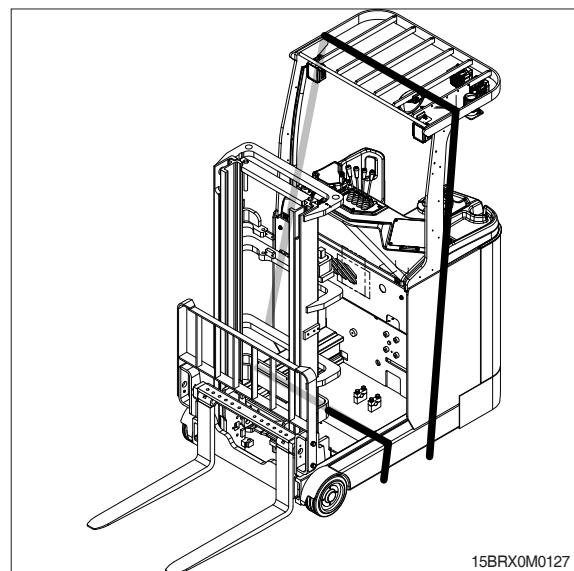
#### ① Mast and carriage mounted

- Fully lower the carriage.
- Use the chain or sling belt to fix the truck.

#### ② Mast and carriage not mounted

- Install chain over the floor plate of the truck,

※ **When using the chain, use a chain with the protective cover, or install the protective material on the contact part with the truck to prevent the truck from damage by the chain.**



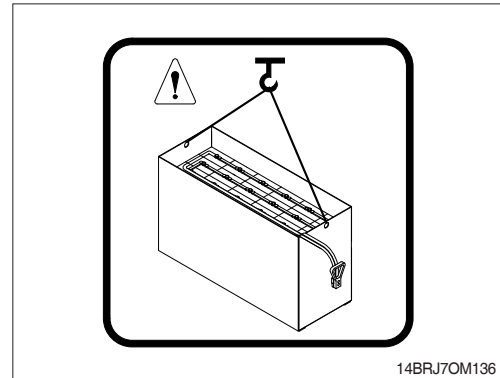
### (2) Rear of truck

Fix by using the chain or sling belt on the upper part of the head guard.

## 14. LIFTING OF LIFT TRUCK

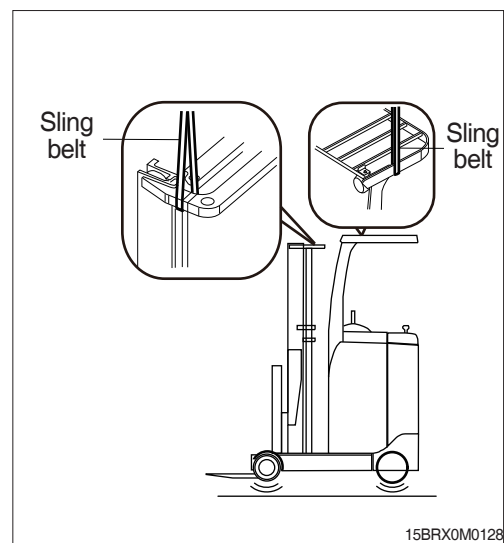
- 1) Check the weight, the full length, the full width, and the full height before lifting the truck.

**⚠ The battery should be removed before lifting the lift truck. Lifting the truck without removing the battery can cause serious casualties or truck damage due to electric shock or electrolyte leakage.**  
Please see Page 7-20 for the method of removing the battery.



- 2) Check the truck weight, and consider the position and lifting part of the crane to select the appropriate sling belt, and check for any damages.
- 3) Position a crane at adequate place.
- 4) Install the sling belt as illustrated on the right.

**⚠ Use the sling belt and lifting tools without damage, and product certified with sufficient strength.**  
**⚠ Do not apply load suddenly on the sling belt and lifting tool.**  
**⚠ Prevent access of people under the lift truck during lifting, and to surroundings of the truck.**  
**⚠ Inappropriate lifting method or use of the sling belt may result in falling of the truck during lifting to cause casualties or truck damage.**



**⚠ Connect the sling belt only on the locations indicated on the lifting label. There may be risk of truck falling when the belt is connected and lifted on the inappropriate position.**  
**⚠ Lifting of the lift truck should safely be done upon instructions of skilled engineer.**  
**⚠ If you have any trouble for lifting, please call the service center.**