

# 1. GENERAL SAFETY RULES

## 1. DAILY INSPECTION

At the beginning of each shift, inspect your battery tractor and fill out a check, maintenance and lubrication table.

Check for damage and maintenance problems.

Have repairs made before you operate the battery tractor.

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

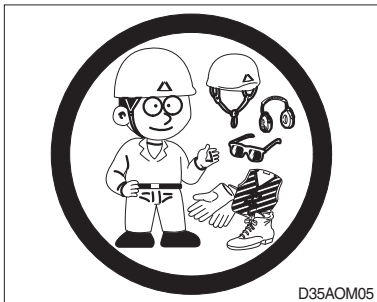


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## 2. DO'S AND DON'TS



Do watch for pedestrians.



Do wear safety equipment when required.



Don't mix drugs or alcohol with your job.



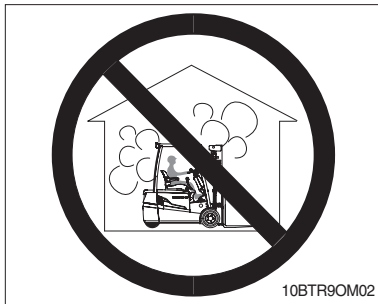
Don't block safety or emergency equipment.



Don't smoke in NO SMOKING areas or when charging.



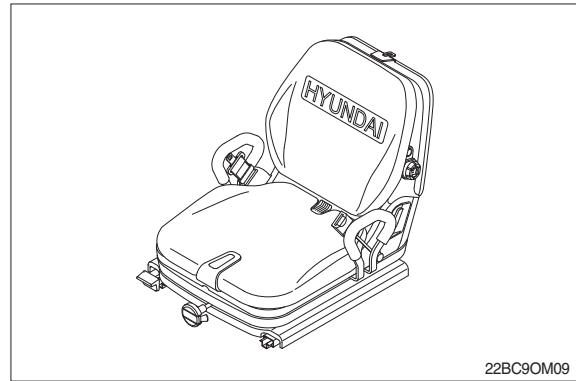
Don't operate the truck outdoors in rainy day.



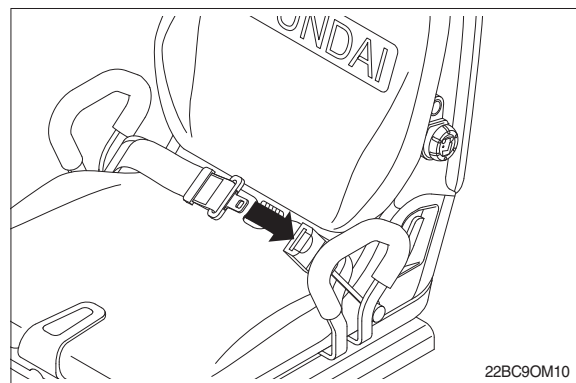
Don't perform battery charging service in the room without adequate ventilation.

### 3. SEAT BELTS

⚠ Always buckle up for the machine equipped with safety belt.

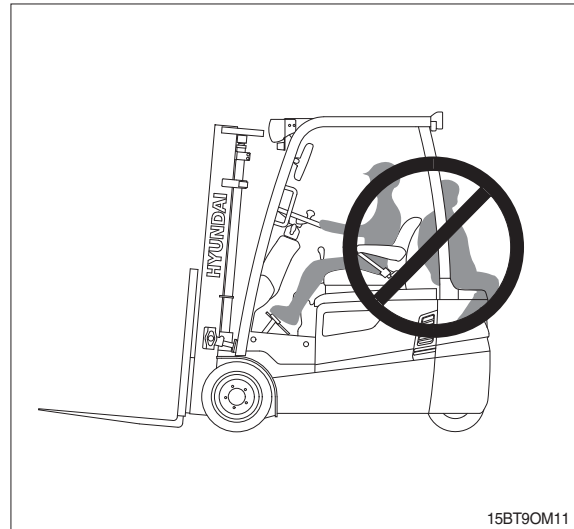


⚠ Seat belts can reduce injuries.

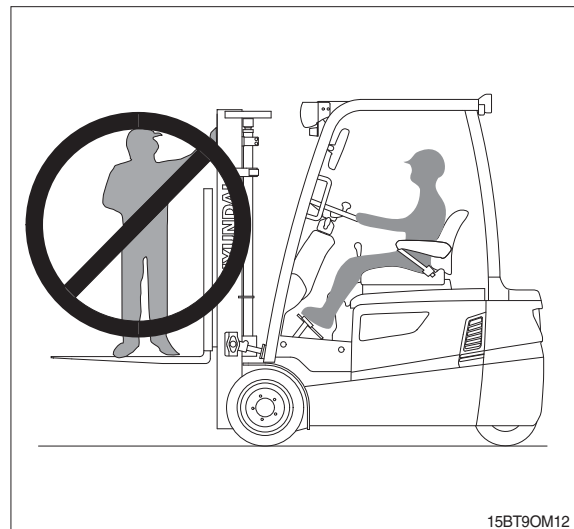


## 4. NO RIDERS

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

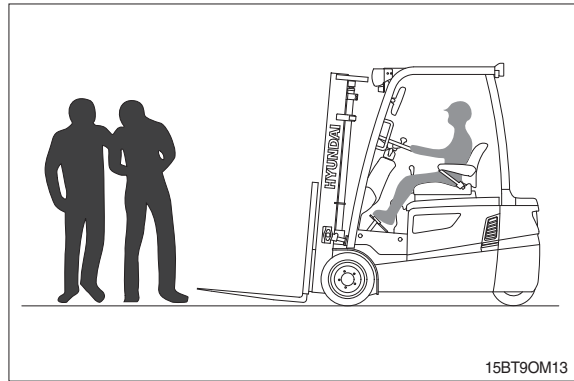


- 2) Never transport personnel on the forks of a lift truck.

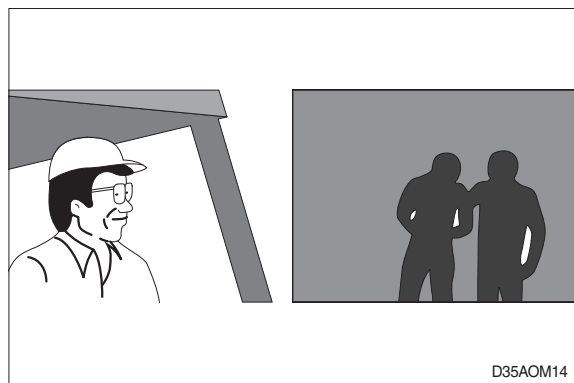


## 5. PEDESTRIANS

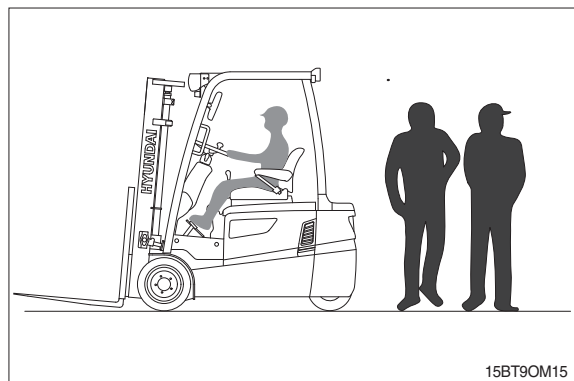
- 1) Watch where you are going. Look in the direction of travel. Pedestrians may use the same roadway you do. Sound your horn at all intersections or blind spots.



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

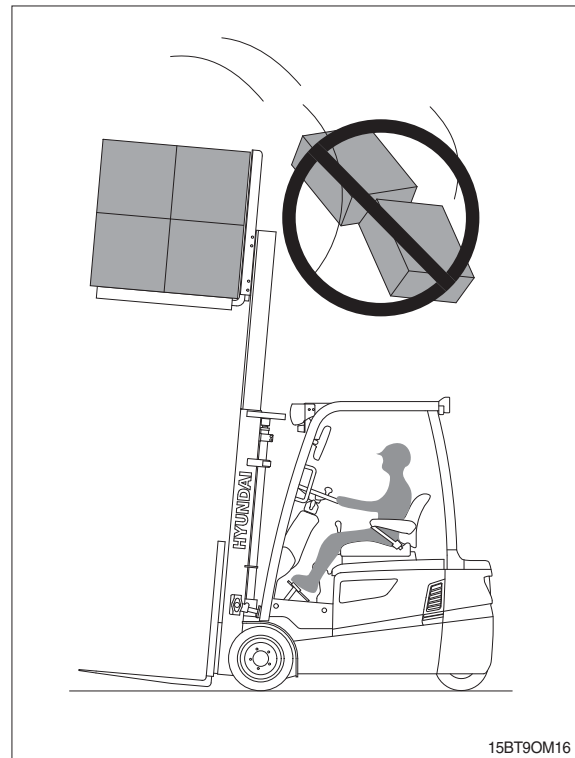


- 3) Make people stand back, even when you are parked.



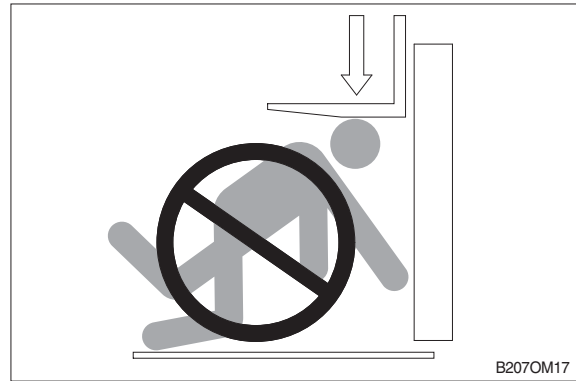
## 6. OPERATOR PROTECTION

- 1) Keep under the overhead guard.
- 2) Always keep your body within the confines of the truck.

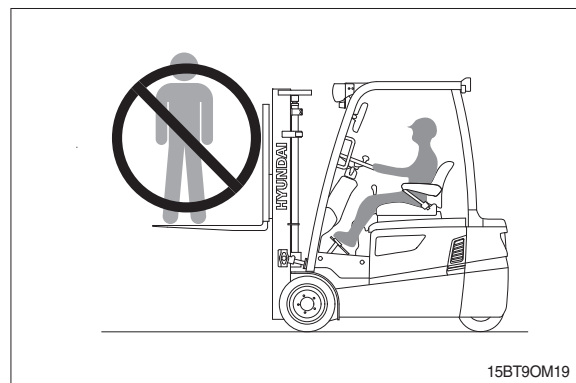


## 7. FORK SAFETY

Never allow anyone to walk under raised forks.



There is special equipment to raise people for overhead work.  
DO NOT USE LIFT TRUCKS.



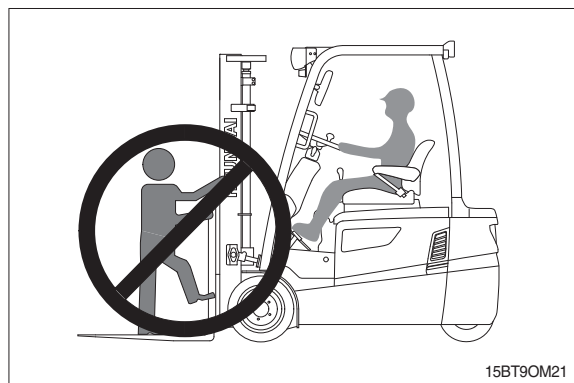


## 8. PINCH POINTS

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



**⚠ Don't use the mast as a ladder.**



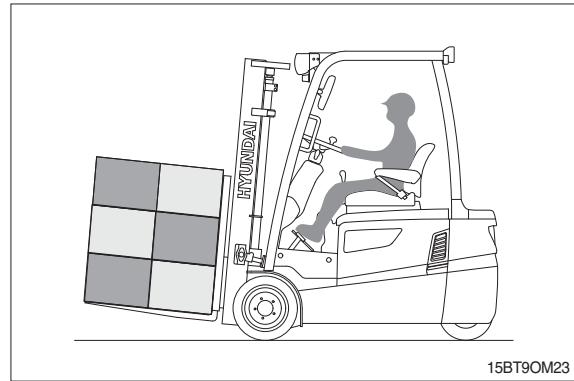
**⚠ Never try to repair the mast, carriage, chain, or attachment yourself. Always get a trained mechanic.**



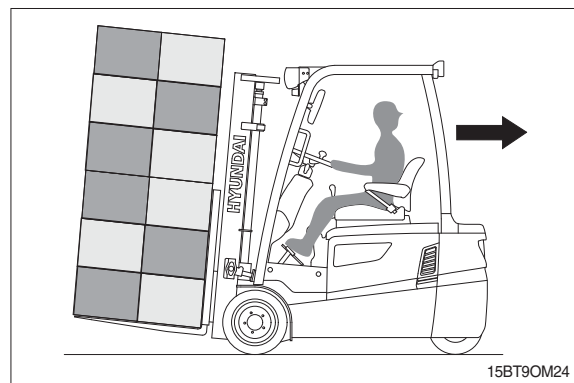
## 9. TRAVEL

- 1) Travel with the load near the floor/ground with mast tilted back to cradle the load whenever possible.

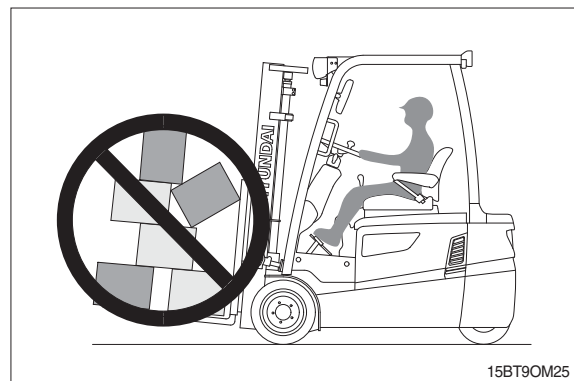
**▲ Never lift or lower the load when the truck is in motion.**



- 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.



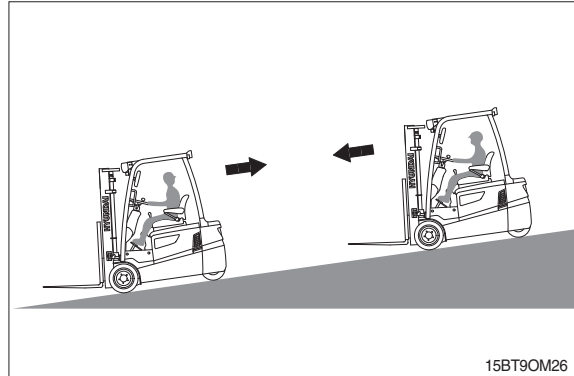
- 3) Unstable loads are a hazard to you and to your fellow workers. Always make certain that the load is well stacked and evenly positioned across both forks. Never attempt to lift a load with only one fork.



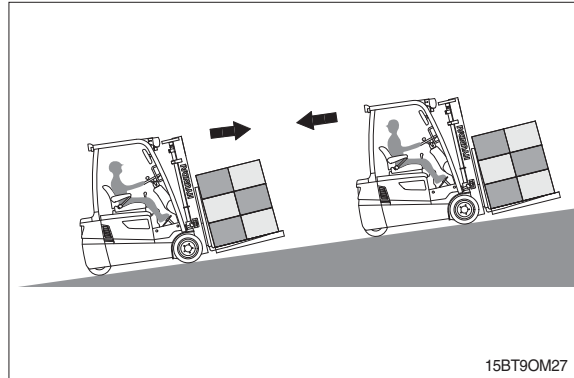
## 10. GRADES, RAMPS, SLOPES AND INCLINES

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

1) **UNLOADED** - Forks downgrade



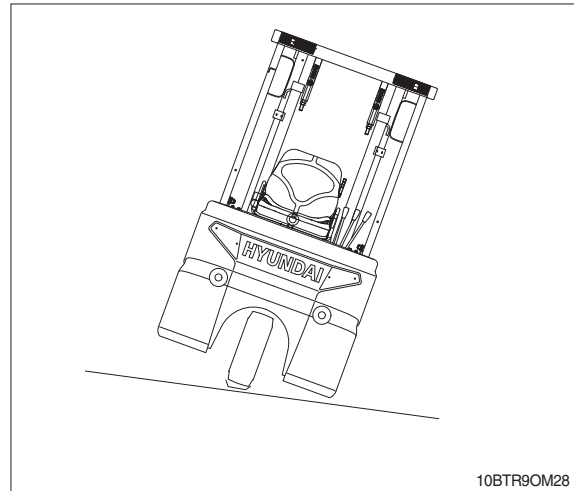
2) **LOADED** - Forks upgrade



## 11. TIP OVER

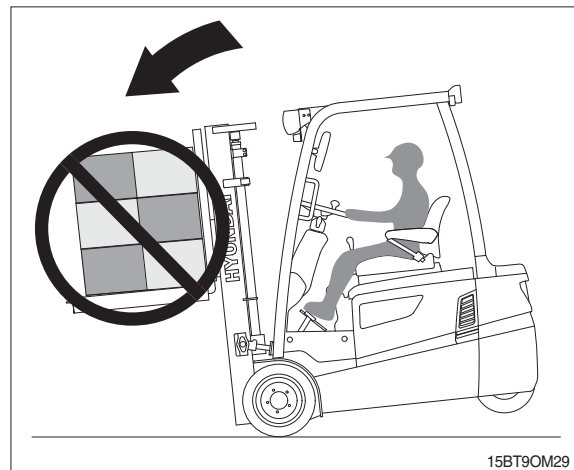
### 1) LATERAL TIP OVER

- (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 also with capacity load and elevated. This combination will exceed the stability of the truck. 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.**

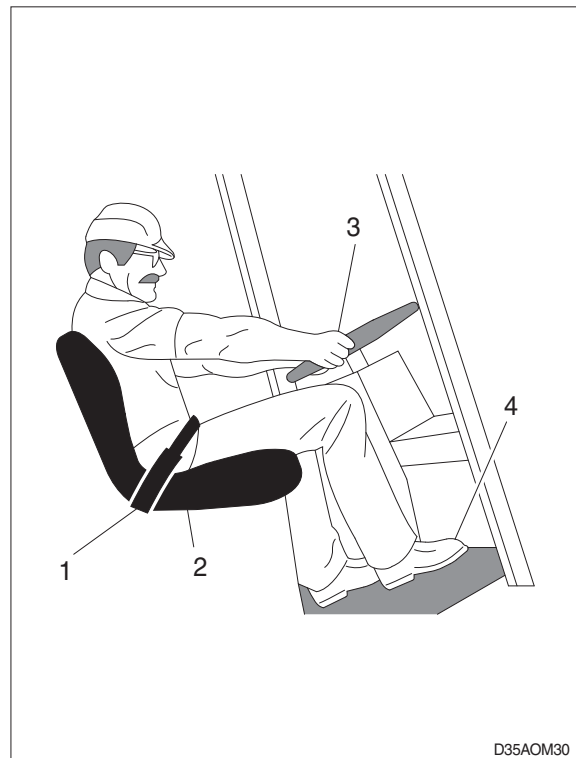
### 3) WHAT TO DO IN CASE OF A TIP OVER

⚠ If your truck starts to tip over, Do not jump.

⚠ Brace yourself as illustrated right.

- 1 Make sure your seat belt is fastened securely, if the truck is equipped with seat belt.
- 2 Stay in your seat.
- 3 Grip the wheel.
- 4 Brace your feet.

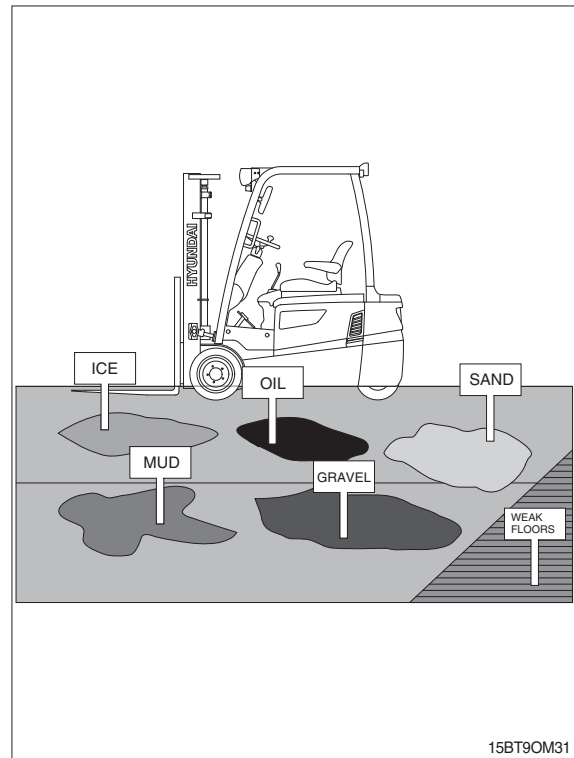
⚠ Your chances for survival in a tip-over are better if you stay with the truck, in your seat.



## 12. SURFACE AND CAPACITY

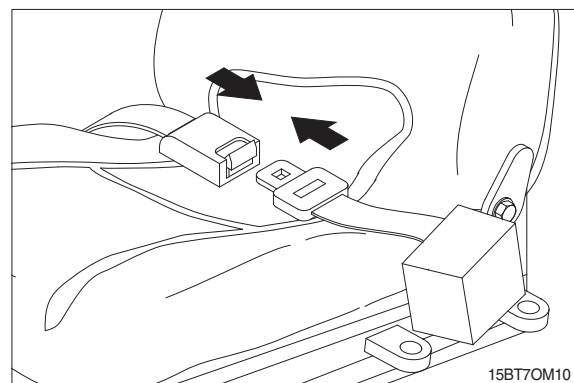
Avoid these conditions. They can cause a truck to tip over or lose traction for braking or driving.

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



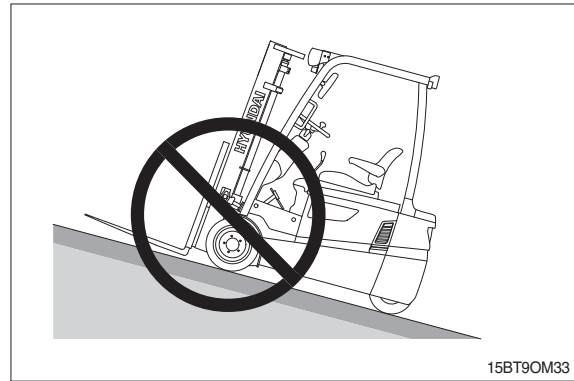
### TIP OVER

- ⚠ **Seat belts can reduce injuries. ALWAYS BUCKLE UP**

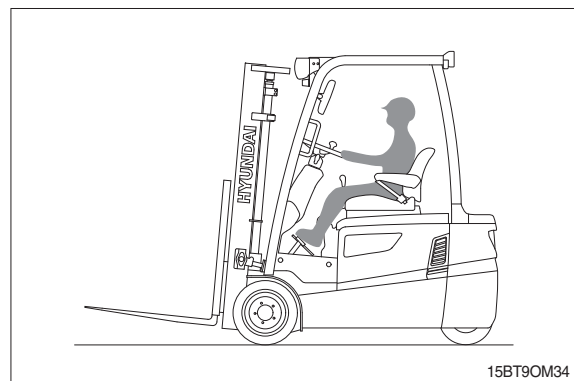


## 13. PARKING

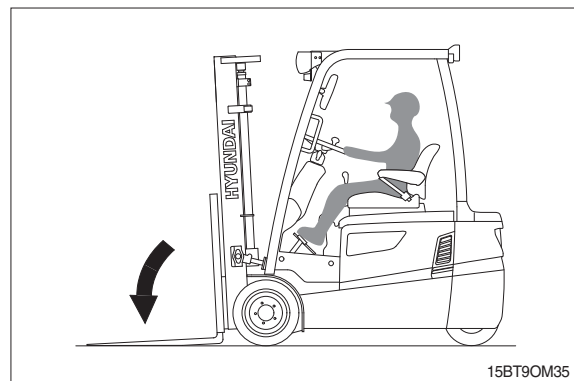
- 1) Never park on a grade.



- 2) Always come to a complete stop before leaving truck. Be sure travel control is in NEUTRAL.



- 3) Lower forks fully to floor and tilt forward.

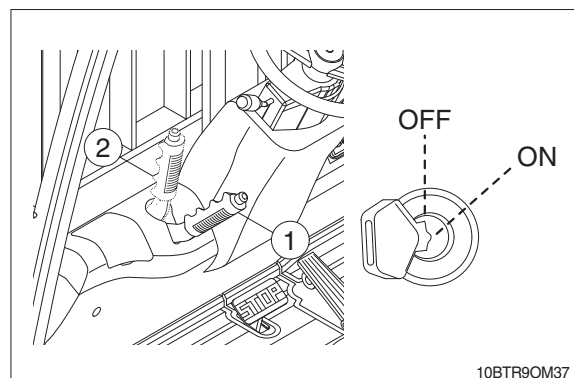


- 4) Set parking brake.

Position ① : Lock

Position ② : Release

- 5) Turn key to OFF position.



## 14. LIFTING, JACKING AND BLOCKING

**▲ Lifting or jacking any large piece of equipment such as forklift truck presents obvious hazards. It must be done with great care and forethought.**

### 1) SAFE PARKING

Before working on truck :

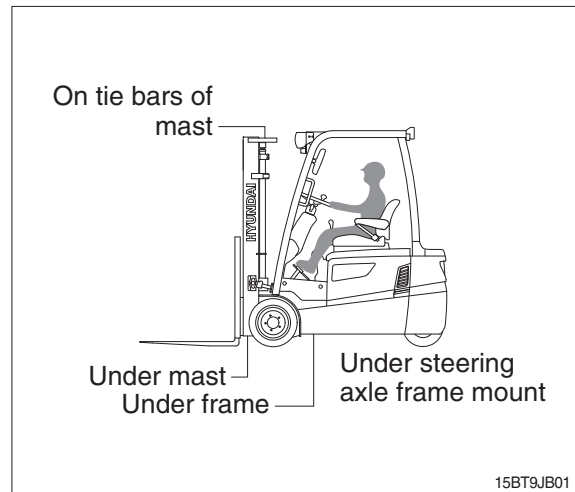
- (1) Park truck on a hard, level and solid surface, such as a concrete floor with no gaps or breaks.
- (2) Put mast in vertical position and fully lower the forks or attachment.
- (3) Put all controls in neutral. Turn key switch OFF and remove key.
- (4) Apply the parking brake and block the wheel.

**▲ Defective equipment can cause accidents. All tools and lifting equipment must be in good condition, meet the load capacity requirements and have OSHA labels when required. Tools with defects have failures cause severe injury or death.**

### 2) LIFTING, BLOCKING AND JACKING POINTS

Use the following illustration to locate general lifting, blocking and jacking points on the truck. Read the procedures for raising, blocking or jacking specific components of the truck to make sure you understand the correct, safe procedures.

**▲ Do not attempt to lift the truck by the overhead guard or the counterweight. Severe injury may result and the truck can be damaged.**

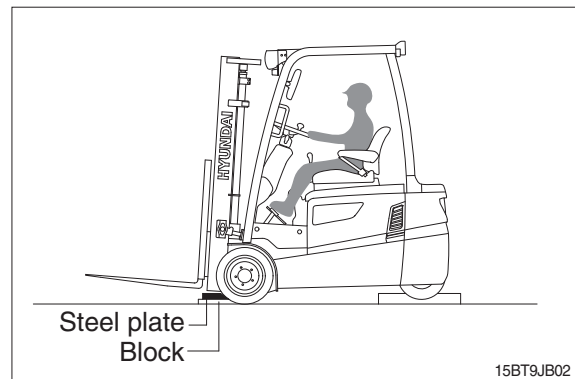


### 3) RAISING DRIVE WHEELS OFF FLOOR

This procedure uses the mast as a lever to lift the drive wheels off the floor and prevent accidents due to inadvertent powering of the drive wheels.

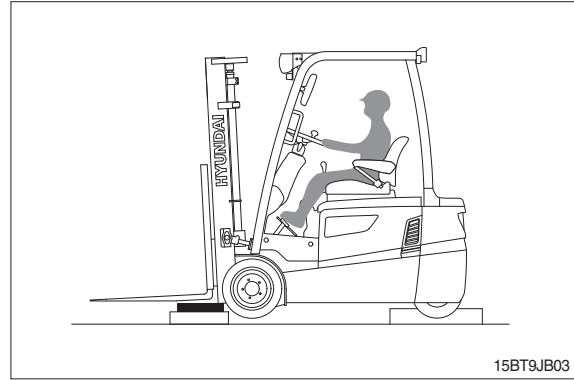
- (1) Park truck safely as described in "Safe Parking". Block rear steer wheels.

- (2) Turn the key switch ON. Tilt the mast fully back. Adjust upright height as necessary to put blocking underneath the lower end of the mast.
- (3) Put a solid 100 mm (4.4 in) hardwood block under the front section of each mast rail. Put a 3-6 mm (1.25~2.50 in) steel plate on top of each block.



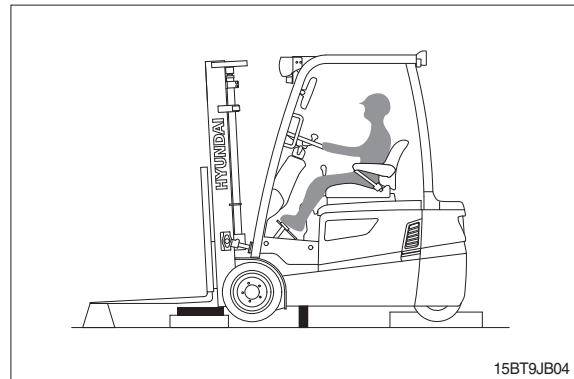


- (5) Tilt mast fully forward. This raises the drive wheels off the floor. Release the tilt control lever and turn engine OFF.



- (6) Insert blocking under the frame behind the drive wheels or slip wheel cradles under the drive wheels. If using blocking, check for safe clearance between drive wheels and floor and blocks.

※ **When forks are raised as in illustration above, use shop rags, paper, or bright tape on fork tips to signal the danger of tripping.**



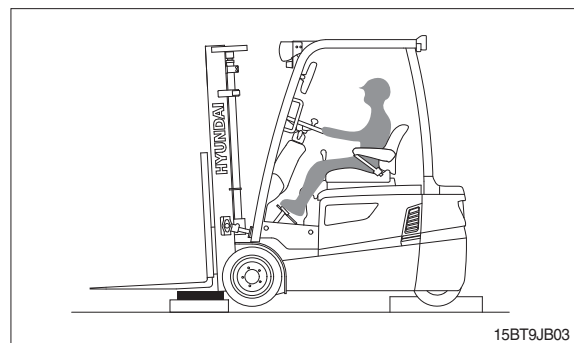
- (7) Check for stable condition of the truck. Be sure that the blocks are located securely under the truck frame before operating the drive or working on truck.
- (8) Lower the drive wheels to the floor and remove the blocks by reversing the above procedure.

#### 4) RAISING TRUCK WITH A HOIST

When suitable equipment is available, the front of the truck may be raised by means of a hoist, with wheel cradles placed under the wheels or blocking placed under the frame.

△ **When lifting the front of the truck, watch truck for signs of lateral instability. It may tip sideways. You may have to support or guide the side of the truck or overhead guard to prevent tipping.**

- (1) Park truck safely as described in "Safe Parking". Block rear steer wheels.
- (2) To raise the front of the truck using the mast, spread two chains on the outer rail tiebar the mast.
- ▲ **Chain and hoist used to lift truck should be checked to make sure they are of safe lifting capacity. See the truck data plate for information.**
- (3) Slowly lift truck and lower drive wheels onto the cradles or place blocking under frame prop points.
- (4) When maintenance work is completed, lower the truck to the floor by reversing the lifting procedure. Check to be sure no tools or equipment are under the truck or wheels.



## 5) BLOCKING THE MAST IN RAISED POSITION

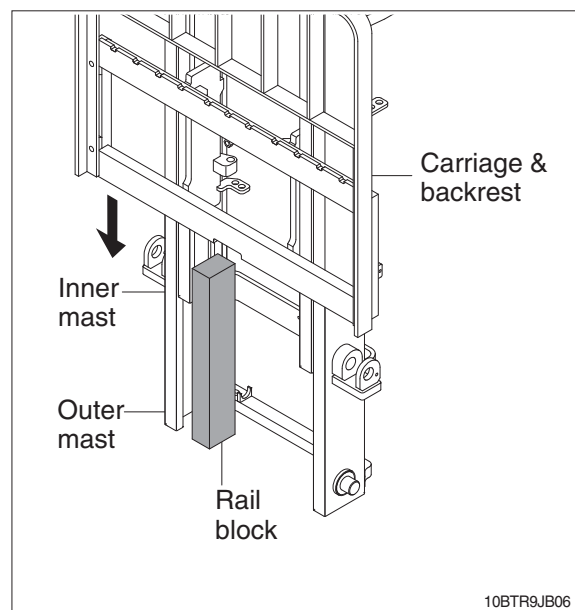
This procedure is used to safely provide clearance for access from the front of truck to components on or near the drive axle. Illustrations show mast with forks removal, however, fork removal is not necessary.

- (1) Park truck safely as described in "Safe Parking".
- (2) Put blocks in front of and behind drive wheels.
- (3) Put wooden support blocks conveniently near mast rails before raising the mast. Use two 1118 mm (44 in) hardwood blocks or equal, of about 305 mm (12 in) and 610 mm (24 in) length.

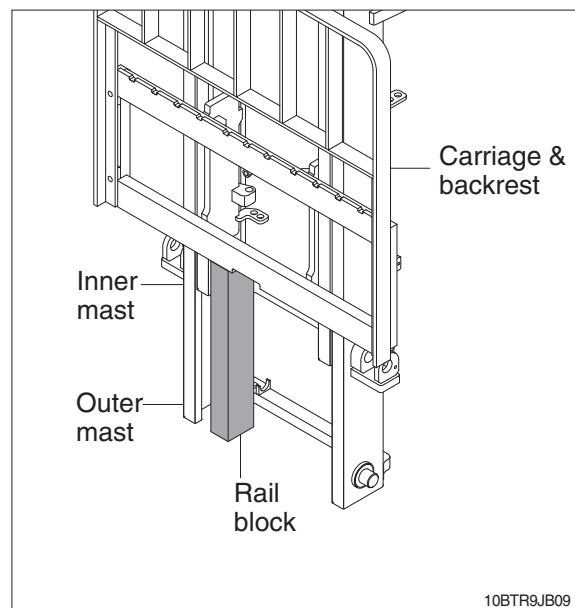
※ For standard masts, block may need length cut to suit. For triple stage masts the carriage may be blocked up, as shown.

- (4) Start truck and raise the mast carriage.

- (5) Hold the taller block against inner rail and lower the mast until carriage rests on block.



- (6) Hold the shorter block against the outer rail and lower the mast until inner rail rests on the block.
- (7) Reverse the procedure to remove blocking.



## 6) RAISING REAR OF TRUCK

The truck may be raised at the rear by jacking and blocking under the center of the frame member at either the front or rear steer axle mounting, or under the center section of the steering axle.

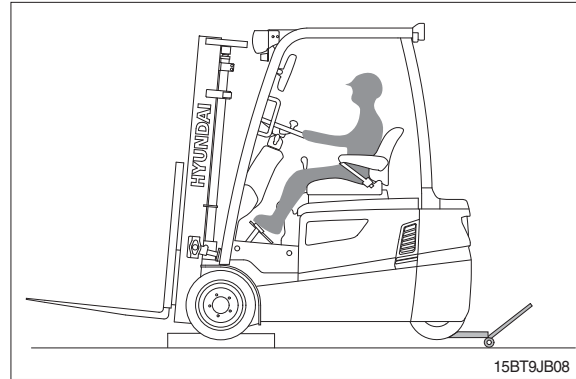
Refer to truck data plate for truck weights.

(1) Park truck safely as described in "Safe Parking". Put blocks at front and rear or drive wheels.

(2) Put a floor jack under the steering axle mounting frame member, centered between the two wheels.

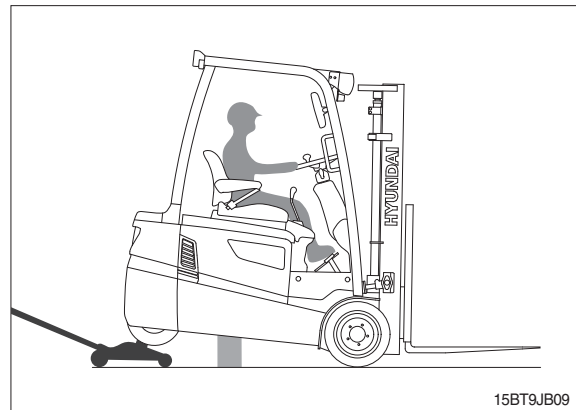
※ **If there is insufficient clearance under frame for your jack, the truck may first be driven onto shims, to increase the ground clearance.**

(3) Raise the truck only as high as necessary to perform the maintenance work.



(4) Put blocks at both sides of the truck, fully under the frame main side structure. Put the blocks in front of butt close to the counterweight and rear wheels for the best truck stability.

(5) Put an equal amount of blocks under each side of the truck to provide a level working position. Lower the truck onto the blocks and remove the jack.



△ **Before performing any maintenance work, check the truck for stable condition on the blocking.**

(6) When maintenance work is completed, lower the rear side of the truck to the floor by reversing the above procedure and lowering each side of the truck 50 mm (2 in) at a time :

- Put jack under frame and raise truck.
- Carefully remove blocks and lower truck.
- Remove jack and blocks from drive wheels.

## 7) RAISING ENTIRE TRUCK

Refer to truck data plate for truck weights.

(1) Park truck safely as described in "Safe Parking". Lower mast fully.

(2) If necessary, drive truck onto boards to increase ground clearance.

▲ **LATERAL TIP OVER.** When jacking side of truck, be sure mast is lowered fully and do not raise one side of the truck more than about 50 mm (2 in) higher than the other, to avoid tipping truck over laterally.

LONGITUDINAL TIP OVER. If the mast and the transaxle are removed while the truck is blocked up, the truck will tip backwards due to the heavy counterweight. Both mast and counterweight must be removed before attempting to raise the truck for transaxle removal. The back of the truck must be supported by blocking under the steer axle to prevent movement.

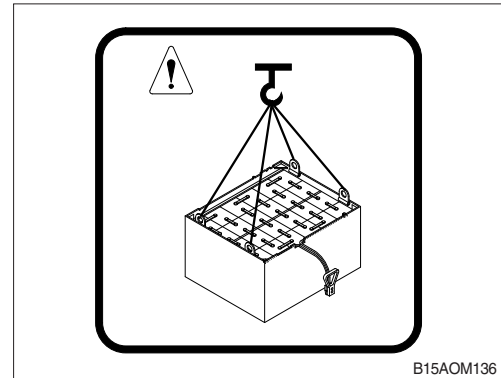
The reverse is also true. If the counterweight is removed while the truck is up on blocks, the weight of the mast and transaxle will cause the truck to tip on the front blocks and forward.



## 15. LOADING AND UNLOADING BY CRANE

1) Check the specification of the truck when you are going to hoist the truck.

**⚠ Before loading the truck, battery must be removed. Refer to page 7-21 for a safe battery removal.**



2) Use long wire rope and stay to keep the distance with the machine as it should avoid touching with the truck body.

3) Put a rubber plate where the wire rope contact with the truck's body to prevent damage.

4) Place crane on the proper place.

5) Install the wire rope and stay like the illustration.

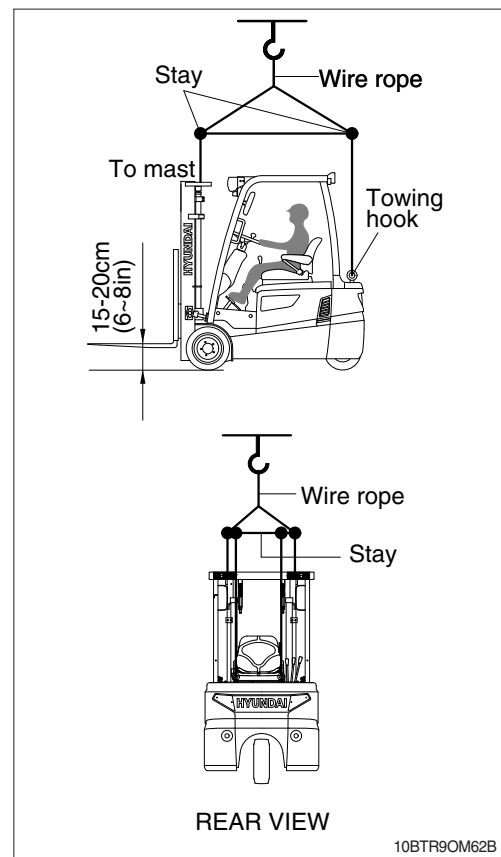
**⚠ Make sure wire rope is proper size.**

**⚠ The wrong hoisting method or installation of wire rope can cause damage to driver and truck.**

**⚠ Do not load abruptly.**

**⚠ Keep area clear of personnel.**

**⚠ Recommend to manufacture the stays separately as per lifting conditions.**



**⚠ Do not install the wire to unsafe position such as forks, carriage, head guard, counterweight, lifting hole or towing pin, etc.. It can cause serious damage to driver and truck.**

**⚠ If there is any problem to lift a truck, please contact your dealer.**

**⚠ Perform the lifting service with skilled service man.**

