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HANDLE WITH CARE

For Class I-V Trucks

OPERATING MANUAL

This manual is generic and must not be considered as the complete and only source of information regarding the operation of your particular truck. It is important that you know and understand the specific operating manual for your truck before operating it.

TABLE OF CONTENTS

INTRODUCTION

OSHA requires that operators of powered industrial trucks be trained, evaluated, and have the competency and skills necessary to operate a powered industrial truck properly and do so safely as demonstrated by workplace evaluation.

This Operator's Manual is only one part of a complete lift truck operator training program developed and distributed by Yale Materials Handling Corporation to help owners of lift trucks meet the requirements of the OSHA regulations.

This manual is intended to be used for training of operators of counterbalanced sit/drive trucks, but many of the warnings, cautions, and basic operating techniques are applicable to other powered industrial trucks. ***The manual is generic and must not be considered as the complete and only source of information.***

Because of the wide variety of lift trucks that are available, it is not possible to cover all the componentry and specific operating procedures an operator can encounter on lift trucks of different manufacturers. It will be necessary to supplement your operator training effort with information from the Operating Manual for the specific truck that will be operated.

WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE SERIOUS INJURY OR DEATH!
AUTHORIZED, TRAINED OPERATOR ONLY!

KNOW THE EQUIPMENT:

- ALWAYS use 3 points of contact when getting on and off the truck.
- KNOW operating, inspection, and maintenance instructions in **Operating Manual**.
- **DO NOT** operate or repair truck unless trained and authorized.
- INSPECT truck before use.
- **DO NOT** operate if truck needs repair. Tag truck and remove key. Repair truck before use. Always use **Yale Approved** parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- USE auxiliary equipment (attachments) for intended purpose only.
- VERIFY truck is equipped with overhead guard and load backrest adequate for the load.

LOOK WHERE YOU ARE GOING:

- IF YOU CAN'T SEE, DON'T GO.
- TRAVEL in reverse if load blocks forward vision.
- MAKE SURE tail swing area is clear.
- SOUND horn at intersections or where vision is blocked.
- WATCH clearances, especially overhead.

KNOW YOUR LOADS:

- HANDLE only stable loads within specified weight and load center. See Nameplate on truck.
- DO NOT handle loose loads higher than load backrest.
- SPACE forks as far apart as load allows and center load between forks. Keep load against load backrest.

USE COMMON SENSE:

- DO NOT use truck to lift people unless there is no other practical option. Then, use only a securely attached special work platform. Follow instructions in this Operating Manual.
- OBEY traffic rules. Yield right-of-way to pedestrians.
- BE in complete control at all times.
- ALLOW NO ONE under or near lift mechanism or load.
- OPERATE truck only from operator's seat.
- KEEP arms, legs, and head inside operator's compartment.
- DO NOT move truck if anyone is between truck and stationary object.
- BEFORE DISMOUNTING, neutralize travel control, lower carriage, and set brake.
- WHEN PARKING, also shut off power, close LPG fuel valve, block wheels on inclines.

KNOW THE AREA:

- NEVER enter a trailer or railroad car unless its wheels are blocked.
- CONFIRM floor strength.
- FILL fuel tank or charge battery only in designated area.
- TURN OFF engine when fueling.
- AVOID sparks or open flame. Provide ventilation.
- DO NOT start if fuel is leaking.
- KEEP vent caps clear when charging battery.
- DISCONNECT battery during servicing.
- CHECK dockboard width, capacity, and security.

WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE SERIOUS INJURY OR DEATH!
AUTHORIZED, TRAINED OPERATOR ONLY!

PROTECT YOURSELF FASTEN YOUR SEAT BELT!

- AVOID bumps, holes, and loose materials.
- AVOID sudden starts or stops.
- NEVER turn on or angle across an incline.
- TRAVEL on inclines with load uphill or when unloaded with lift mechanism downhill.
- TILT mast slowly and smoothly. LIFT or LOWER with upright vertical or tilted slightly back. Use minimum tilt when stacking elevated loads.
- TRAVEL with carriage as low as possible and tilted back.
- SLOW DOWN before turning, especially without load.

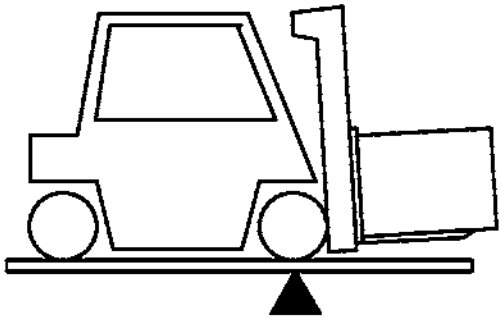
FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE THE LIFT TRUCK TO TIP.

DO NOT JUMP off if the truck tips over. HOLD steering wheel firmly. BRACE your feet. LEAN FORWARD and AWAY from point of impact.

Know Your Lift Truck

The fork lift truck is designed to pick up, move, and tier materials. The basic lift truck has a lift mechanism and forks on the front to engage the load. The lift mechanism lifts the load so that it can be moved and stacked.

In order to understand how the fork lift truck can pick up a load, you must first know some basic things about the lift truck.

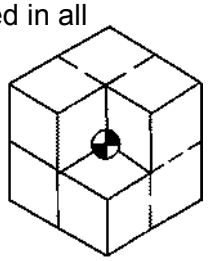


The lift truck is based on the principle of two weights balanced on opposite sides of a pivot (fulcrum). This is the same principle used for a see-saw. In order for this principle to work for a lift truck, the load on the forks must be balanced by the weight of the lift truck. The location of the center of gravity of both the truck and the load is also a factor.

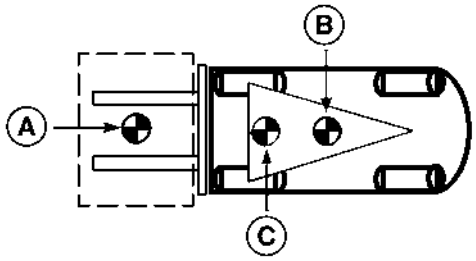
This basic principle is used for picking up a load. The ability of the lift truck to handle a load is discussed in terms of center of gravity and both forward and side stability.

Stability and Center of Gravity

The center of gravity (CG) of any object is the single point about which the object is balanced in all directions.



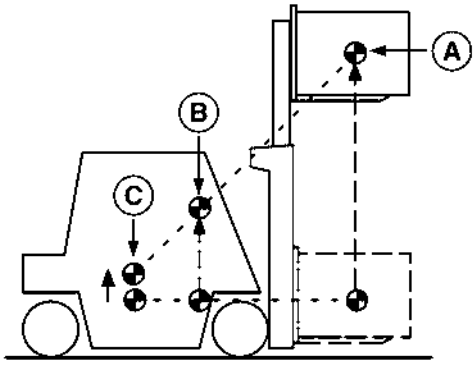
Every object has a CG. When the lift truck picks up a load, the truck and load have a new combined CG.



A. CG LOAD B. CG TRUCK C. COMBINED CG

The stability of the lift truck is determined by the location of its CG, or if the truck is loaded, the combined CG.

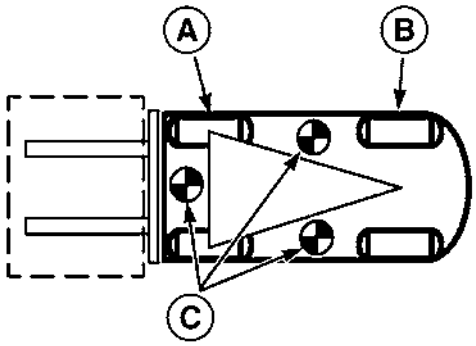
The lift truck has moving parts and therefore has a CG that moves. The CG moves forward and back as the mast is tilted forward and back. The CG moves up and down as the mast moves up and down.



A. *CG LOAD* **B.** *COMBINED CG* **C.** *CG TRUCK*

The center of gravity, and therefore the stability of the loaded lift truck, is affected by a number of factors such as size, weight, shape, and position of the load; the height to which the load is raised; the amount of forward and backward tilt; tire pressure and the dynamic forces created when the truck is moving. These dynamic forces are caused by things like acceleration, braking, turning, and operating on uneven surfaces or on an incline. These factors must be considered when traveling with an unloaded truck, as well, because **an unloaded truck will tip over to the side easier** than a loaded truck with its load in the lowered position.

In order for the lift truck to be stable (not tip over forward or to the side), the CG must stay within the area of the lift truck represented by a triangle drawn between the drive axle and the pivot of the steering axle.

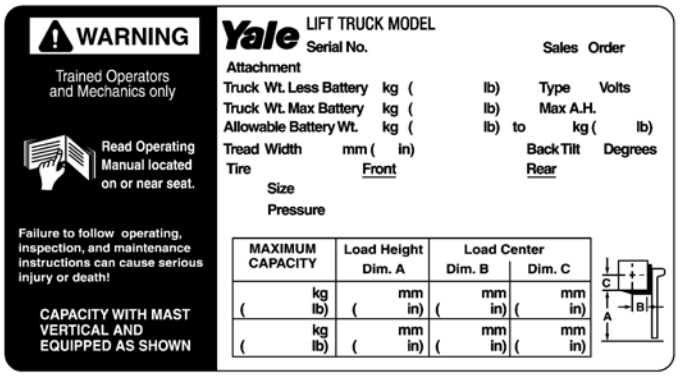


A. DRIVE AXLE B. STEERING AXLE C. TRUCK WILL TIP OVER

If the CG moves forward of the drive axle, the lift truck will tip forward. If the CG moves outside of the line represented by the lines drawn between the drive wheels and the steering axle pivot, the lift truck will tip to that side.

Capacity (Weight and Load Center)

The capacity of the lift truck is shown on the Nameplate. The capacity is listed in terms of weight and load center. The weight is specified in kilograms and pounds. The load center is specified in millimeters and inches. The capacity is the maximum load that the lift truck can handle, with the mast vertical, for the load condition shown on the Nameplate.



The load center of a load is determined by the location of its center of gravity. The load center is measured from the front face of the forks, or the load face of an attachment, to the center of gravity of the load. Both the vertical and horizontal load centers are specified on the Nameplate.

Loads should be transported while centered on the centerline of the lift truck. The operator must know whether or not a load is within the maximum capacity of the lift truck before the load is handled.

WARNING

Report damage or faulty operation immediately. Do not operate a lift truck that needs repair. A lift truck will only do its job when it is in proper working order. If repairs are required, install a tag in the operator's area stating "DO NOT OPERATE" and remove the key from the key switch if truck is equipped with key switch option.

Checks With the Engine Stopped

Inspect the lift truck before use and every eight hours or daily as described in the **Maintenance** section of this **Operating Manual**. Inspect more frequently if used in severe operating conditions.

Before using the lift truck, make the following checks:

- Condition of forks, carriage, chains, header hoses, mast, attachment, and overhead guard.
- Condition of wheels and tires.
- Seat belt fastens correctly.
- Seat is correctly fastened to its mounts. Hood is correctly latched.
- Condition of the engine compartment. Ensure all surfaces are free of oils, lubricants, fuel, and organic dusts or fibers (paper, wood, cotton, agricultural grass/grain, etc). Remove all foreign materials.
- Coolant level in the cooling system and condition of the drive belts.
- Condition of the radiator and screen. Clean if necessary.
- Fuel level.
- Oil level in the engine.
- Oil level in the hydraulic tank.
- Leaks from the engine, transmission, hydraulic system, and fuel system.
- Loose or missing hardware.
- Check transmission oil level.

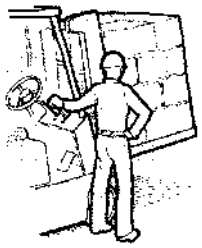
Mounting and Dismounting

WARNING

To avoid serious injury when entering or exiting the lift truck, ALWAYS USE 3 POINTS OF CONTACT. Maintain contact simultaneously with two hands and one foot or with two feet and one hand while climbing on or off the lift truck.

Place feet carefully. Always face the lift truck when climbing on or off. Use added care when surfaces are slippery. Keep hands free of any obstacles such as food, beverages, or tools.

Starting Procedures



Do not start or operate the lift truck, including any of its functions or attachments, from any place other than the designated operator's position.

Starting Procedures, Trucks With Key Switch

WARNING

LPG is very flammable. An odor of LPG fuel can indicate a leak in the fuel system. DO NOT start the engine until the fuel leak is repaired and the atmosphere is free of LPG.

1. If the lift truck uses LPG fuel, open the fuel valve on the LPG tank.

2. Make sure the parking brake is applied or push on the inching/brake pedal.

3. If equipped, put the direction control lever for the transmission in the **NEUTRAL (N)** position.

4. Make sure lift truck hood is closed.

5. Turn the key to the **ON** position. If lift truck is equipped with a diesel engine and engine is cold, the cold start indicator light will illuminate and the cold start circuit will be energized.

6. If the truck is equipped with Operator Password feature, enter correct operator, supervisor, or service password.

7. On lift trucks equipped with a gas or LPG engine or with a diesel engine, where cold start delay is not required, turn the key to the **START** position to engage the starter. The word “Cranking” and a 15-second countdown timer will appear on the LCD screen when the key is in the **START** position.

On lift trucks equipped with a diesel engine, if cold start delay is required, the cold start indicator will be illuminated and a countdown time of ten seconds is displayed. When countdown reaches 0, turn the key to the **START** position to engage the starter. A 30-second countdown timer will appear on the LCD screen when the key is in the **START** position.

Checks With the Engine Running

WARNING

FASTEN SEAT BELT

If Lift Truck Tips Over

- **Do Not Jump—Stay On Truck**
- **Hold Firmly To Steering Wheel—Brace Feet—Lean Forward And Away From Impact**

The seat belt is installed to help the operator stay on the truck if the lift truck tips over. IT CAN ONLY HELP IF IT IS FASTENED.

The operator must be aware that the lift truck can tip over. There is a great risk that the operator or someone else can be killed or injured if trapped or hit by the truck as it tips over. The risk of injury can be reduced if the operator stays on the truck. **If the truck tips over, do not jump off!**

THE SEAT BELT AND HIP RESTRAINT bracket provides a means to help the operator keep the head and torso substantially within the confines of the truck frame and overhead guard if a tipover occurs. This protection system is intended to reduce the risk of the head and torso being trapped between the truck and the ground, but it cannot protect the operator against all possible injury in a tipover.

Make sure that the area around the lift truck is clear before starting the engine or making any operational checks. Be careful when making the checks. If the lift truck is stationary during a check, apply the parking brake and make sure the direction control is in **NEUTRAL**. Proceed carefully.

Check the operation of the following functions as described in the **Maintenance** section:

- Check the operation of the horn, gauges, and indicator lights.
- Operate the **LIFT**, **TILT**, and auxiliary functions to check for correct operation of the mast, carriage, and attachments.
- Check the operation of the Foot Directional Control pedal or the optional direction control lever and accelerator pedal.
- Check the operation of the service brakes and parking brake.
- Check the operation of the steering system.
- Check the oil level in the powershift transmission when the oil is at operating temperature 50 °C (120 °F). Turn the truck off and wait one minute. Then check the transmission oil level.

WARNING

Before operating the lift truck, FASTEN YOUR SEAT BELT.

There are a number of operations, if not performed carefully, that can cause the lift truck to tip. If you have not read the WARNING page in the front of this Operating Manual, do so NOW. As you study the following information about how to properly operate a lift truck, remember the WARNINGS.

NOTE: Lift trucks produced after November 1, 2005 are equipped with the Emergency Locking Retractor (ELR) style seat belt. When the ELR seat belt is properly buckled across the operator, the belt will permit slight operator repositioning without activating the locking mechanism. If the truck tips, travels off a dock, or comes to a sudden stop, the locking mechanism will be activated and hold the operator's lower torso in the seat.

Basic Operating Procedures

Many people make the mistake of thinking that operating a lift truck is the same as driving an automobile. This is not true. A lift truck is a special machine designed to do a much different job than an automobile. Because of the close areas in which a lift truck operates and its other operating characteristics (like rear wheel steering and tail swing), every operator must receive additional training, even if they have a license to drive an automobile.

The following discussion lists basic procedures applicable to lift truck operation.

1. AUTHORIZED AND TRAINED OPERATOR ONLY. This means the operator must be trained (see 29 CFR 1910.178 section I) to drive the lift truck and it means that the operator must thoroughly understand the procedures for lift truck operation. It also means that a qualified person experienced in lift truck operation must guide the operator through several driving and load handling operations before the operator attempts to operate the lift truck alone. A basic education in proper driving and load handling techniques is absolutely necessary to prepare the new operator for proper defensive driving and to expect the unexpected.

WARNING

This lift truck is designed for handling materials. A lift truck is not designed to lift people. Do not use a lift truck to lift people unless it has been determined that there is no other practical option (scaffolds, elevated work platforms, aerial baskets, etc.) to perform the needed work.

If a lift truck is used to elevate a worker, a safety platform must be attached to the forks and carriage. The platform must be specially built to meet or exceed the requirements of ANSI/ITSDF B56.1. It must have a solid floor with a surface to prevent the feet of the worker from slipping, hand rail, toe board, and a screen or shield at least 2 m (7 ft) high between the people on the platform and the lift mechanism.

The combined weight of the platform, load, and personnel is not to exceed one-half of the capacity as indicated on the nameplate of the truck on which the platform is used.

Before anyone is allowed in the platform, lift and lower the mast slowly with the platform in place to make sure the mast functions properly. Apply the parking brake. Do not travel with people in the platform. The operator must remain at the controls. Watch for overhead obstructions.

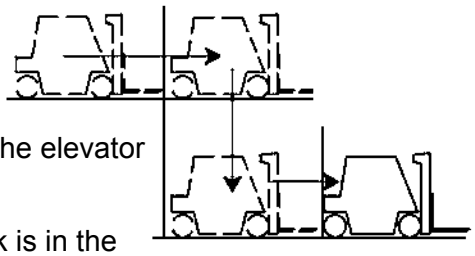
2. NO RIDERS. A lift truck is built for only one person—the operator. It is dangerous for anyone to ride on the forks or anywhere else on the lift truck.

3. ADJUST SEAT

Seat Position Adjustment (Standard Seat)

- Fore and aft adjustment—it is recommended that the seat be adjusted so that the thigh is horizontal to the ground so that the best ergonomic position is achieved.

4. Do not drive a lift truck into an elevator unless authorized to do so. Approach the elevator slowly. After the elevator is properly leveled, the lift truck must be centered so that the elevator is balanced.



When the lift truck is in the proper position in the elevator, set the brakes, put the controls in **NEUTRAL** and shut off the power. It is advisable that all other personnel leave the elevator before the lift truck enters or leaves.

5. Drive carefully, observe traffic rules, and be in full control of the lift truck at all times. Be completely familiar with all the driving and load handling techniques contained in this **Operating Manual**.

Driving and Direction Changes

General

The lift truck can have either a Foot Directional Control pedal or a Direction Control Lever to control the transmission. The selected direction of travel is shown on the display switch cluster. If the lift truck has a Foot Directional Control pedal, push on the left side of the pedal to go **FORWARD**, or the right side of the pedal to go in **REVERSE**. If the lift truck has a direction control lever, move the lever toward the front of the lift truck to go **FORWARD** and toward the rear of the lift truck to go in **REVERSE**.

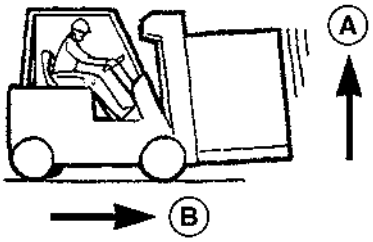
Inching

WARNING

Inching requires coordinated movement of the inching/brake pedal and the accelerator or the Foot Directional Control pedal. New operators must practice this procedure before attempting to handle loads.

Inching is the movement of a lift truck that allows a slow travel speed while keeping the engine speed high for fast operation of the lift mechanism.

The inching/brake pedal is used to control the inching operation. When the inching/brake pedal is initially applied, the clutch in the transmission is partially disengaged and the movement of the truck is slow. When the inching/brake pedal is fully applied, the transmission is completely disengaged and the brakes are applied. Use the accelerator pedal or Foot Directional Control pedal to keep the engine speed high while inching.

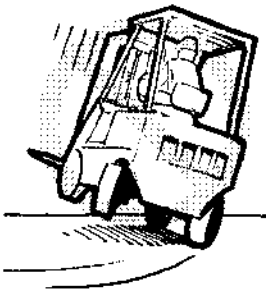


A. FAST B. SLOW

Steering (Turning)

WARNING

TRAVEL SLOWLY WHEN TURNING. Lift trucks can tip over even at very slow speeds. The combination of speed and the sharpness of a turn can cause a tipover. A lift truck is less stable when the forks are elevated, with or without a load.



WARNING

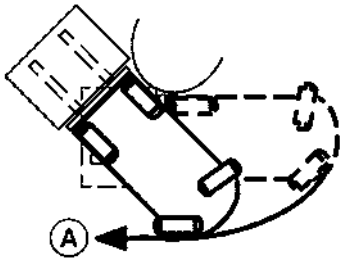
IF THE LIFT TRUCK TIPS OVER, DO NOT JUMP OFF! HOLD FIRMLY TO STEERING WHEEL, BRACE YOUR FEET, AND LEAN FORWARD AND AWAY FROM THE POINT OF IMPACT.

Most operators can understand the need to be careful when handling loads. But some operators do not realize that a tipover can occur with an empty lift truck because similar dynamic forces are present. In fact, the lift truck will actually tip over easier when empty, than when loaded with the load lowered. Mast tilt, off-center loads, and uneven ground will aggravate these conditions and cause the forklift to become unstable.

Load Handling

WARNING

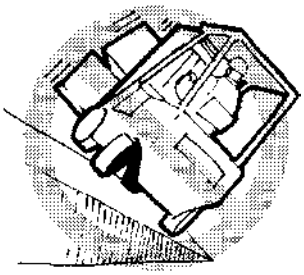
Failure to observe the tail swing area when making a turn can injure or kill someone.



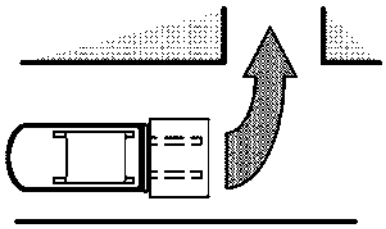
A. TAIL SWING

Because lift trucks are designed to work in a relatively small space, they can turn sharper than some other vehicles. Most lift trucks are steered by the rear wheels and the rear of the lift truck can move to the side very fast during a turn. This movement is called “tail swing”. An operator must be aware of tail swing and always check to make sure the tail swing area is clear before turning. Failure to observe the tail swing area when making a turn can lead to injury or death.

Do not turn on an incline. To reduce the possibility of a tipover, a lift truck must not be driven across an incline.



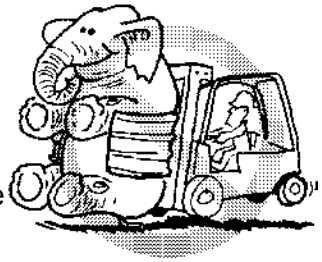
When possible, keep both hands on the steering wheel. During most loading or unloading operations, the operator steers with the left hand. The right hand is used to operate the lift, tilt, and attachment controls.



When turning the lift truck from a wide aisle into a narrow aisle, start the turn as close to the opposite stock pile as tail swing will permit. This action permits the lift truck to enter the narrow aisle going straight ahead.

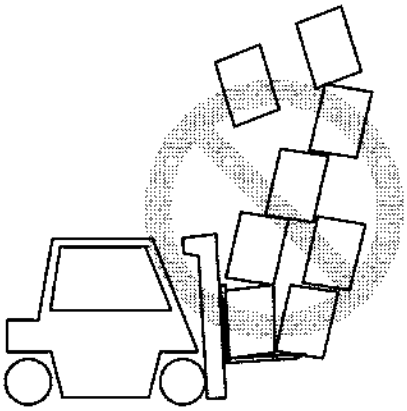
Load Handling, General

1. The capacity is the maximum load that the lift truck can handle for the load condition shown on the Nameplate. The operator must know whether or not a load is within the maximum capacity of the lift truck before the load is handled.



However, factors such as weak floors or uneven terrain, loads with a high center of gravity, unevenly distributed loads, or tire condition can mean that the safe working load is less than the capacity shown on the Nameplate. When such conditions exist, the operator must reduce the load so the lift truck will remain stable.

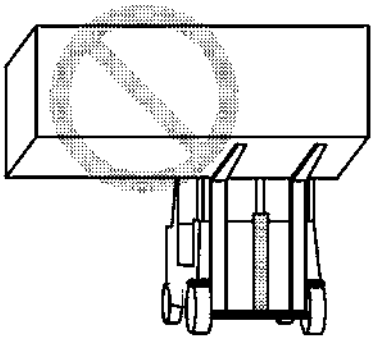
2. Handle only stable loads. A load can have unstable items that can easily shift and fall on someone.



WARNING

Do not handle a load if any loose part of it is above the load backrest or any part of the load is likely to fail.

3. Position each fork the same distance from the center of the carriage. This action will help center the load on the carriage. Set the forks as far apart as possible for maximum support of the load. Center the weight of the load between the forks.



If the weight of the load is not centered between the forks, the load can fall from the forks when you turn a corner or hit a bump. An offcenter load will increase the possibility of the truck tipping over to the side. Make sure the pins that keep the forks in position are engaged so that the forks cannot move.

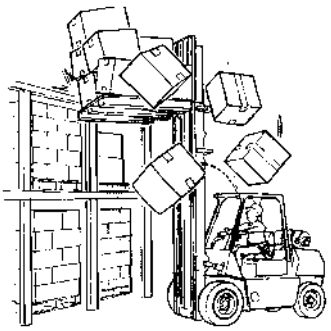
4. Check the condition of the driving surface. Make sure the floor will support the weight of the lift truck and the load.

Load Handling, Lifting, Lowering, and Tilting

The **LIFT** and **TILT** functions are controlled by separate levers or by moving the joystick in different directions. See the **Operator Controls** section in the **Model Description** section for the correct operation.

The speed of the hydraulic functions is controlled by the position of the control levers or the position of the joystick. The farther the hand lever or joystick is moved from the **NEUTRAL** position, the faster the speed of the hydraulic function.

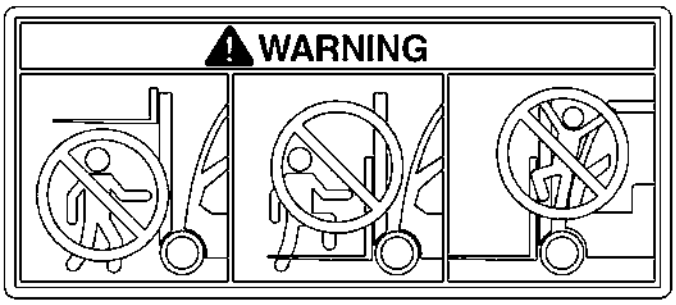
Do not lift or hit anything that can fall on the operator or a bystander. Remember, a lift truck equipped with a **Yale** overhead guard and load backrest extension provides reasonable protection to the operator from falling objects, but cannot protect against every possible impact.



A lift truck without an overhead guard provides no such protection and other personnel have no overhead protection. Avoid hitting objects such as stacked material that could become dislodged and fall.

The operator must exercise care while working near such objects. Whether the lift truck is loaded or empty, do not travel with the load or carriage in a raised position.

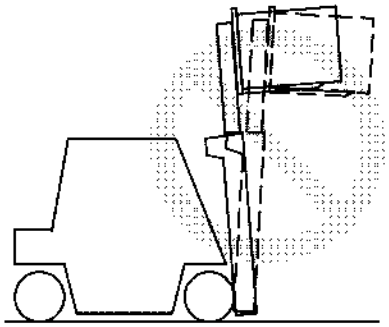
WARNING



Keep yourself and all others clear of the lift mechanism. Never allow anyone under or on the forks.

WARNING

NEVER put hands, arms, head, or legs through the mast or near the carriage or lift chains. This warning applies not only to the operator but also a helper. A helper must not be near the load or lift mechanism while the operator is attempting to handle a load. The lift mechanism has moving parts with close clearances that can cause serious injury.

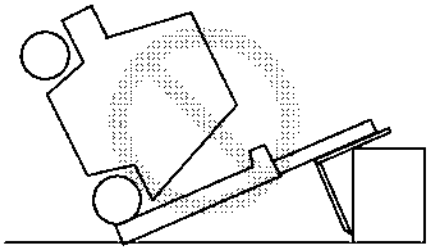


Lift and lower with the mast vertical or tilted slightly backward from vertical. Tilt elevated loads forward only when directly over the unloading place.

WARNING

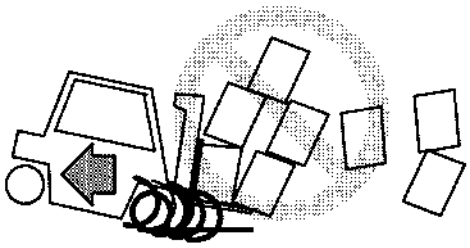
The lift truck can tip over forward when the load is raised. Forward tipping is even more likely when tilting forward, braking when traveling forward, or accelerating in reverse.

If the lift mechanism is raised to pick up or deposit a load, keep the tilt angle in either direction to a minimum. Backward and forward tilt are helpful, but they affect side and forward stability. Do not tilt in either direction more than necessary when handling a load that is raised. The lift truck can tip forward if the mast is tilted forward with a load in the raised position.



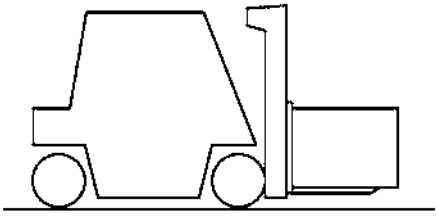
IF THE LIFT TRUCK TIPS OVER, DO NOT JUMP OFF! HOLD FIRMLY TO STEERING WHEEL, BRACE YOUR FEET, AND LEAN FORWARD AND AWAY FROM POINT OF IMPACT.

Load Handling, How to Engage and Disengage a Load



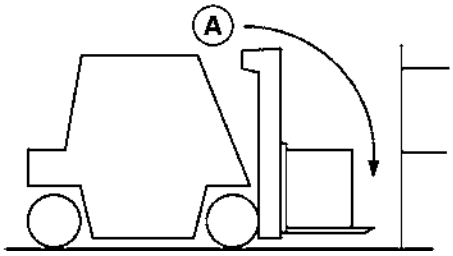
1. Avoid fast starts. Sudden movement can cause the lift truck to tip. People can be hurt or killed and material can be damaged.

Approach the load carefully. Make sure that the truck is perpendicular to the load. Raise the forks to the proper height for engaging the load.



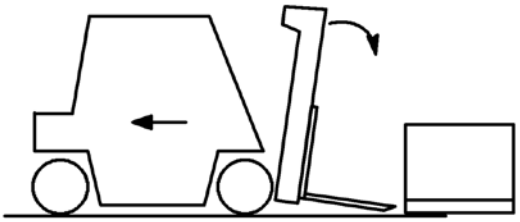
2. Move forward slowly until the forks are in position under the load. The forks must support at least two-thirds (2/3) of the length of the load.

Make sure that the load is centered between the forks. Make sure that the forks do not extend past the load so that loads or equipment that are behind the load being lifted are not damaged. Lift the load a small distance from the floor to make sure the lift truck has the capacity to lift the load.

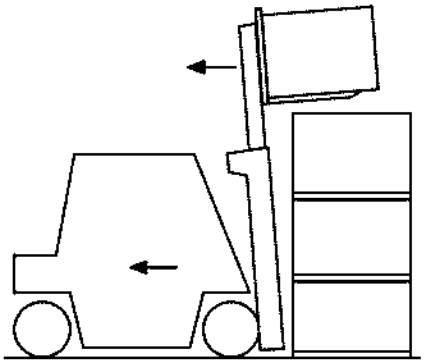


A. BE CAREFUL OF FORKS BEYOND THE LOAD

If the forks are longer than the load, move the forks under the load so that the tips of the forks do not extend beyond the load. Lift the load from the surface. Move backward a few inches, then lower the load onto the surface and inch forward to engage the load against the carriage. Tilt the mast backward just far enough to lift the load from the surface.



3. When a load is put on the floor, tilt the mast forward to a vertical position and lower the load. Tilt the mast forward to permit smooth removal of the forks. Carefully move the lift truck backward to remove the forks from under the load.

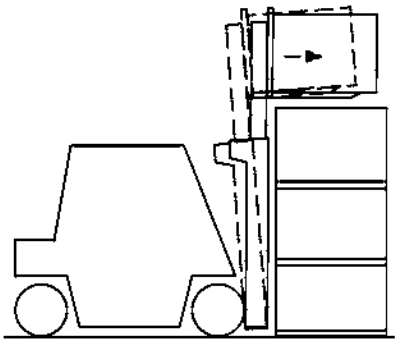


4. If the load is being removed from a stack, slowly move the lift truck away from the stack. When the load is clear of the stack, lower the load for traveling. Always travel with the load as low as possible and tilted backward. Lowering speed is controlled by the position of the control lever. Lower slowly and smoothly. Slowly return the control lever to the neutral position so that the load is not dropped or that the lift truck is not tipped over due to the rapid stop of the load.

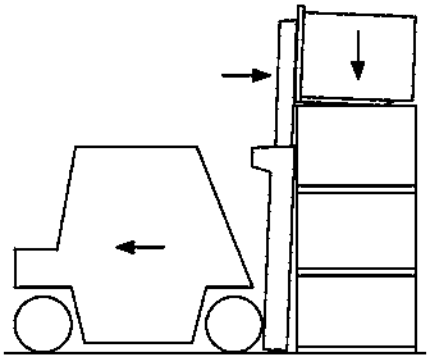
WARNING

Move carefully and smoothly when the load is raised over a stack. When the load is elevated the center of gravity of the lift truck and the load is much higher. The lift truck can tip over when the load is raised.

5. To put the load on a stack, align the lift truck with the stack. Raise the load higher than the point where it will be placed. Do not raise the load to a point below where the load is to be placed and “jog” the load up into position. This operation uses added energy. Be careful not to damage or move adjacent loads.



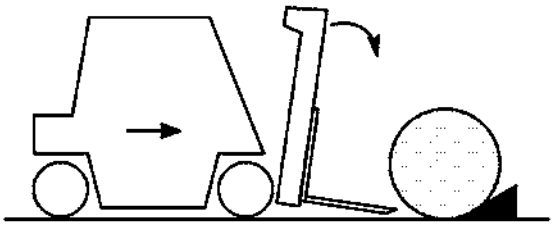
IF THE LIFT TRUCK TIPS OVER EITHER TO THE SIDE OR FORWARD, DO NOT JUMP OFF! HOLD FIRMLY TO STEERING WHEEL, BRACE YOUR FEET, AND LEAN FORWARD AND AWAY FROM THE POINT OF IMPACT.

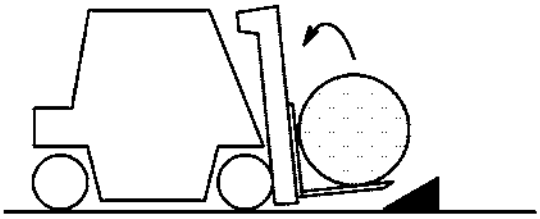


Move forward slowly. When the load is in position, lower the load on to the stack or the rack. Lower the forks just enough to remove them from under the load. Do not lower the forks so that they will drag on the surface under the load. Tilt the mast forward just enough to permit smooth removal of the forks from under the load. Carefully move the lift truck backward to remove the forks from under the load. Lower the forks when traveling.

NOTE: Not every load can be lifted using only the forks of a lift truck. Some loads will require a special attachment.

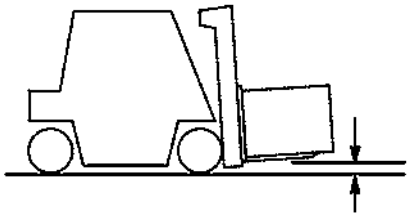
6. When lifting round objects, use a block behind the object. Tilt the mast forward so that the forks can slide along the floor under the object to be lifted. Tilt the mast fully backward to help keep the load on the forks.





Load Handling, Traveling

1. When traveling with the load lowered, keep the load against the carriage and the mast tilted fully backward. This action will help keep the load on the forks and provide good forward and side stability.



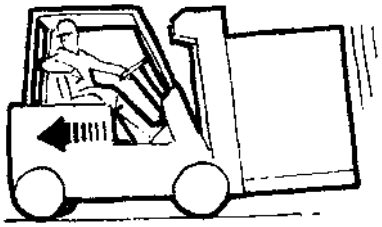
2. Travel with the lift mechanism raised only enough to clear the ground or obstacles.

When the mast, carriage, or load is in a raised position, the stability of the lift truck is reduced. This is also critical when the lift truck is not carrying a load. The ability of the lift truck to resist side tipping can be less on a lift truck without a load than it is on a lift truck with a load in the lowered (travel) position. Therefore, a lift truck without a load is more likely to tip sideways, especially in a turn, than a lift truck with a load carried in the lowered position.

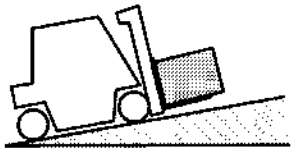
WARNING

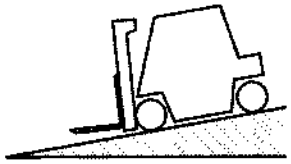
Some lift trucks have mirrors for viewing along the side to observe the tail swing area. These mirrors are an aid to the driver, but are NOT driving mirrors and must NOT be used as such when operating in reverse. Always look in the direction of travel to avoid damage to something or injury to someone.

3. For better visibility with large loads, travel with the load trailing, but always keep a proper lookout in the direction of travel. Normally, direction of travel is determined by the best visibility available to the operator. If the lift truck must travel in a direction where visibility is obstructed, a lookout helper is required. Never drive when visibility is obstructed.



4. When traveling up or down grades in excess of 5% with a **heavily loaded** lift truck, keep the load upgrade to maintain control.

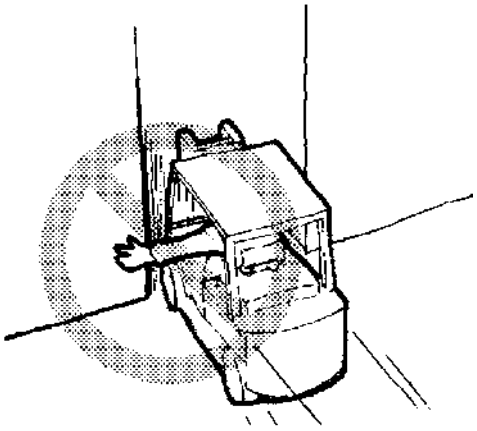




When operating an **unloaded** lift truck on a grade in excess of 5%, keep the counterweight upgrade.

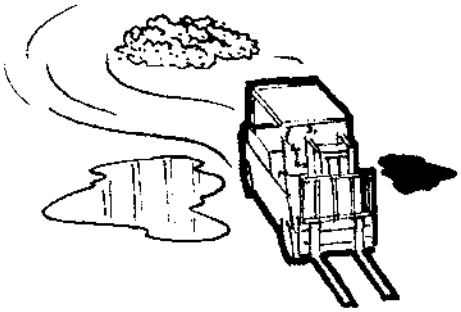
5. Watch out for pedestrians at all times. Do not drive up to anyone standing in front of an object. Use extra care at crossaisles, doorways, and other locations where pedestrians can step into the path of travel of the lift truck.

Slow down when approaching blind intersections or turns and sound the horn. The horn is to warn pedestrians that there is a vehicle in the area and to be alert to possible danger.



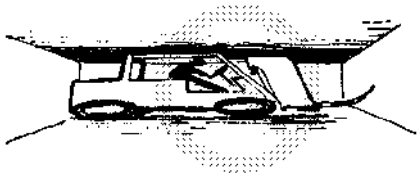
6. Anytime the lift truck is moving keep arms, legs, etc., inside the operator's compartment. Arms and legs outside the machine can be injured when passing obstructions.

7. Avoid bumps, holes, mud, slick spots, and loose materials that may cause the lift truck to swerve or tip. If unavoidable, slow down.

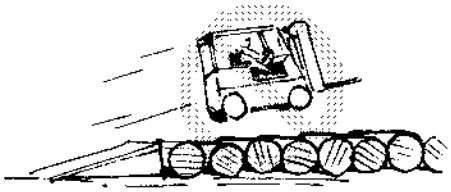


Different models of lift trucks are designed to operate under different conditions. Solid rubber tire models are designed to operate on relatively smooth, firm surfaces. Lift trucks with pneumatic tires can adapt to more uneven ground. Always make sure you pick the smoothest route for your lift truck.

8. Watch clearances, especially forks, mast, overhead guard, and tail swing. A lift truck is designed to perform a wide variety of functions within limited space.

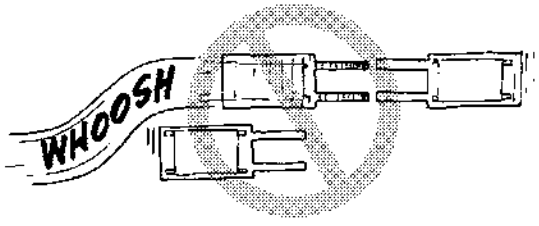


The operator must be aware that the forks can sometimes extend beyond the front of the load. If the forks extend beyond the load, the operator can hit an object or lift another load. Serious accidents can be caused by mast and overhead guards hitting pipes and beams near the ceiling.

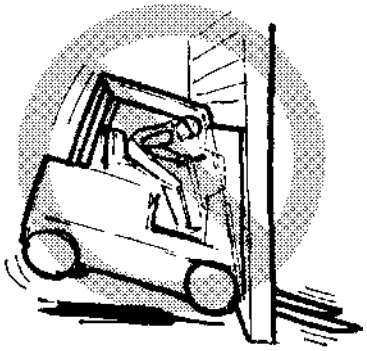


9. Do not indulge in stunt driving or horseplay.

10. Do not pass another lift truck traveling in the same direction at intersections, blind spots, or at other dangerous locations.



11. Stay away from the edge of the road. Keep the wheels of the lift truck on the roadway. If the wheels are allowed to run off the edge of the travel surface onto soft ground, the lift truck can tip over.

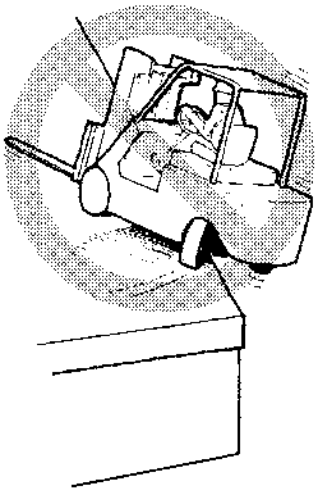


12. Under all travel conditions, operate the lift truck at a speed that will permit it to be brought to a stop in a safe manner.

Highway Trucks, Rail Cars, and Docks

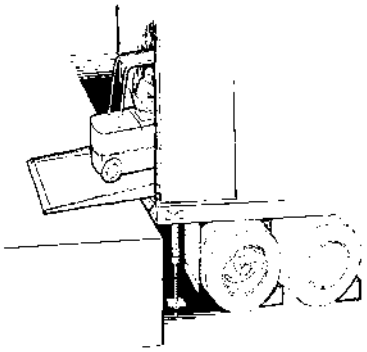
WARNING

Maintain a safe distance from the edge of docks, ramps, platforms and other similar working surfaces. Watch the "tail swing." Remember when traveling in the forward direction and the steering wheel is turned to move the lift truck away from the edge of the dock, the rear will swing toward the edge. This action can cause the lift truck to fall off the dock.



IF THE LIFT TRUCK FALLS OFF THE DOCK, DO NOT JUMP OFF! HOLD FIRMLY TO STEERING WHEEL, BRACE YOUR FEET, AND LEAN FORWARD AND AWAY FROM THE POINT OF IMPACT.

Before operating in a highway truck or rail car, observe the following:



- DO NOT use a lift truck to move a rail car.
- DO NOT use a lift truck to open or close the door on a rail car unless the lift truck has an attachment that is specifically designed for opening and closing rail car doors and the operator is trained in its use.
- Check to make sure that the brakes on the highway truck are set and that wheel blocks have been placed on both sides of the rear wheels (unless a dock locking mechanism is engaged). Fixed jacks may be necessary to support the front and rear of a highway truck trailer to prevent it from moving or tipping during loading or unloading.
- Make sure that the rail car brakes are set and the wheels are blocked while loading or unloading. Do this check so that the rail car will not move due to the movement of the lift truck in and out of the rail car.
- Check the condition of the driving surface. Make sure the floor will support the weight of the lift truck and the load.
- Make sure the dock board is secured, in good condition, and of the proper capacity.
- When entering a rail car, the operator can enter at an angle (if the dock plate or bridge is wide enough). This will reduce the turning required after entering.
- Never leave a parked truck on a dock plate.

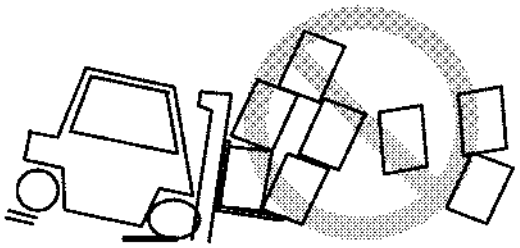
Attachments

NOTE: Make sure the Nameplate is correct if an attachment has been installed.

If an attachment is installed on the lift truck, make sure the operating instructions are available and understood before operating the attachment.

Attachments must be removed or installed by trained personnel only.

Stopping



Stop the lift truck as gradually as possible. Hard braking and wheel sliding can cause the forklift to tip or the load to fall off of the forks and damage the load or hurt someone.

Parking

The operator must never leave a lift truck in a condition so that it can cause damage and injury. When parking the lift truck, do the following operations:

1. Stop the lift truck and apply the parking brake. Applying the parking brake puts the transmission in **NEUTRAL** when the lift truck has a Foot Directional Control pedal.

2. Fully lower the forks or carriage. Tilt mast forward until the tips of the forks touch the ground.

3. If equipped, move the Direction Control Lever to the **NEUTRAL** position.