Powered Industrial Trucks
Kentucky Employers’ Mutual Insurance
By: Eli Roberts
Powered Industrial Trucks

- There are approximately 1.3 million forklift operators in the United States.
- Approximately 117,000 fork truck accidents occur each year.
- 20% of forklift fatalities are pedestrians.
- Approximately 90-120 fatalities occur annually and approximately 39,200 serious injuries annually.
An employee was using a forklift to move materials from the warehouse so it could be loaded on to a truck when he turned too wide on the loading dock and his back wheels came off of the dock causing him to fall 4 feet to the pavement below. The employee was not wearing his seatbelt and was seriously injured when he was pinned between the forklift and the pavement. The employee had not been properly trained and was not certified to operate the forklift.
A forklift operator was unloading a bundle of steel rods when the load shifted and fell off of the forks and onto a nearby employee. The nearby employee was crushed by the load. The employee was not using the proper forklift attachment to handle the load safely and had not been properly trained to unload that type of material.
Powered Industrial Truck Safety

- Types of Powered Industrial Trucks
- Parts, Instruments, and Controls of Powered Industrial Trucks
- Operating the Forklift
- Load Handling
- Understanding the Workplace
Types of Powered Industrial Trucks

- Electric
- LP Gas
- Diesel
- Gasoline
Types of Powered Industrial Trucks
Parts of a Powered Industrial Truck

- Mast
- Lift Chain
- Lift Cylinder
- Backrest
- Extension
- Forks
- Overhead Guard
- Head Light
- Assist Grip
- Fuel Tank
- Counterweight
- Tilt Cylinder
- Engine Hood

![Diagram of Parts of a Powered Industrial Truck](image)
Parts of a Powered Industrial Truck

![Image of a label with technical specifications for a powered industrial truck.](image-url)

**WARNING**

**MODEL**

**TYPE**

**CAPACITY OF STANDARD TRUCK WITH SIMPLEX MAST AND FORKS**

**MAXIMUM HEIGHT OF 130 IN. RATED CAPACITY WITH OPTIONAL MAST AND/OR ATTACHMENT LISTED BELOW.**

**ATTACH/MODEL MEETS DESIGN SPECS ANSI B56.1**

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<tr>
<th>A</th>
<th>B</th>
<th>FORKS ONLY</th>
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Instruments of a Powered Industrial Truck

- Engine oil pressure and battery charge warning signals
- Fuel Level
- Engine temperature
- Transmission temperature
Controls of a Powered Industrial Truck

- **Forward/Reverse Directional Controls**
  The directional control allows the operator to move the forklift forwards or backwards. Directional controls can be column mounted (mounted on the steering column) or foot operated (controlled by shifting the accelerator pedal side to side).

- **Hydraulic Lift Controls**
  Forklifts have hydraulic lift controls to raise and lower the forks and to tilt the forks. Visually inspect the hydraulic controls before each use and test that they are working properly.
Controls of a Powered Industrial Truck

- **Pedals**
  Forklifts have accelerator and brake pedals that operate similarly to the pedals in other vehicles. Some forklifts also have a clutch, which allows shifting into higher forward gears. The inching pedal gives the operator more control of the forklift in tight places.

- **Parking Brake**
  Forklifts are equipped with a parking brake. Be sure to set the parking brake when leaving a forklift and block the wheels if the forklift is parked on an incline.
Operating the Forklift: (Pre-Operation Inspection)

- Forklifts need to be examined daily or at the beginning of each shift if your company has multiple shifts.
- Before starting your vehicle, conduct a pre-operation (or pre-start) inspection that checks a variety of items, including but not limited to:
  - Fluid levels -- oil, water, and hydraulic fluid.
  - Leaks, cracks or any other visible defect including hydraulic hoses and mast chains. NOTE: Operators should not place their hands inside the mast. Use a stick or other device to check chain tension.
  - Tire condition and pressure including cuts and gouges.
Operating the Forklift: (Pre-Operation Inspection)

- Condition of the forks, including the top clip, retaining pin, and heel.
- Load backrest extension.
- Finger guards.
- Safety decals and nameplates. Ensure all warning decals and plates are in place and legible. Operator manual on truck and legible.
- Operator compartment. Check for grease and debris.
- All safety devices are working properly including the seat belt.
Operating the Forklift: Pre-Operation Inspection

- Also check additional items depending on the forklift type (electric or internal combustion, including liquid propane) such as:
  - Electric Forklifts
    - Cables and connectors for frayed or exposed wires
    - Battery restraints
    - Electrolyte levels
    - Hood latch
  - Liquid Propane Forklifts
    - Properly mounted tank
    - Pressure relief valve pointing up
    - Hose and connectors
    - Tank restraint brackets
    - Tank for dents and cracks
    - Tank fits within profile of truck
    - Leaks
Operating the Forklift: Operational Inspection

After completing the pre-operation inspection, operators should conduct an operational inspection with the engine running. This inspection includes:

- Accelerator linkage
- Inch control (if equipped)
- Brakes
- Steering
- Drive control: forward and reverse
- Tilt control: forward and back
- Hoist and lowering control
- Attachment control
- Horn
- Lights
- Back-up alarm (if equipped)
- Hour meter

NOTE: Unusual noises or vibrations should be reported immediately.
Operating the Forklift: Traveling and Maneuvering

- Mounting and Dismounting
  - Be sure that your hands are clean and dry to prevent slipping when grabbing handhold.
  - Check your shoes for grease before entering the vehicle.
  - Grasp handhold and get a good grip. Never grab the steering wheel because it could cause you to lose balance if it moves.
  - Always be careful with your footing when mounting and dismounting vehicle.
  - Pull or lower your body carefully into or out of cab. Dismounting is the opposite of mounting -- do not jump.
  - Wear appropriate footwear to prevent skids.
Operating the Forklift: Starting/Stopping

- **Starting**
  - Ensure that your way is clear. Sound your horn in warning or use a spotter if your view is obstructed.
  - Proceed cautiously down the travel path watching for dangerous blind spots.

- **Stopping**
  - Select an area to park. Do not park in an unauthorized area. Do not block an aisle or exits. Follow your company's parking procedures.
  - Apply brake slowly and stop.
  - Neutralize the controls.
  - Set the parking brake.
  - Turn off the ignition.
  - If the truck is parked on an incline, block the wheels.
Operating the Forklift: Operating at Speed

- Be aware of the travel conditions along your planned route:
  - Under all travel conditions the truck must operate at a speed that will permit it to be brought to a stop in a safe manner.
  - The driver must slow down for wet and slippery floors.
  - The driver must look in the direction of, and keep a clear view of, the path of travel.
  - The driver must slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.
  - While negotiating turns, speed shall be reduced to a safe level by turning the steering wheel in a smooth, sweeping motion.
  - Grades shall be ascended or descended slowly.
  - When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.
  - Running over loose objects on the roadway surface shall be avoided.
Operating the Forklift: Steering, Turning, and Changing Direction

- Changing Direction
  - Come to a complete stop before changing directions.
  - Use a horn or warning light to warn pedestrians when reversing.
Operating the Forklift: Steering, Turning, and Changing Direction

- Reversing
  - Keep a clear view.
  - Look in the direction of travel. When reversing, look behind.
  - Be aware of limited visibility, and use extreme caution when driving in reverse.
  - Consider the use of ground guides, rear-view mirrors, spotters, or other aids to increase visibility.
  - Consider the noise level in your workplace. Do not assume pedestrians or bystanders are able to hear a back-up alarm.
  - Allow plenty of room for pedestrians. You cannot anticipate what people will do. Many have no idea how quickly forklifts accelerate and how sharply they turn.
  - Never assume pedestrians or bystanders are aware of the presence of heavy equipment and the intended direction of travel.
  - Do not grab the overhead guard when traveling in reverse. This could expose the operator’s finger to serious injury.
Operating the Forklift: Steering, Turning, and Changing Direction

- Turning and Steering
  - When turning, reduce speed to a safe level.
  - Proceed with caution when making turns, especially when working in confined areas or narrow aisles. When the lift truck turns a corner, the rear of the lift truck swings in the opposite direction of the turn.
  - Anticipate the rear-end swing and start the turn as close to the inside corner as possible. Plan your route and anticipate turns.
  - Never turn with forks elevated.
  - Never turn on a grade. The forklift may tip over laterally on even a very small grade.
Operating the Forklift: Traveling on Inclines

- Traveling on Inclines
  - Drive loaded trucks forward going up a ramp with the load upgrade and drive in reverse going down a ramp with the load upgrade.
  - Always drive unloaded trucks with the forks downgrade.
  - Never drive with the load downgrade.
  - Never turn a forklift on a grade.
Operating the Forklift: Parking

- Parking
  - A powered industrial truck is considered "unattended": When the operator is 25 ft. or more away from the vehicle even if it remains in his view, or whenever the operator leaves the vehicle and it is not in his view.
  - When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline. Select a hard, level surface.
Operating the Forklift: Parking

- **Parking**
  - Do not park on a grade, unless wheels are blocked.
  - Park in authorized areas only, unless the forklift is disabled. Park a safe distance from fire aisles, stairways or fire equipment. Do not block traffic.
  - Fully engage the parking brake.
  - Lower the load engaging means (lifting mechanism) fully.
  - Neutralize the controls:
    - Set the direction lever in neutral, and lock the mechanism (if available).
  - Tilt the mast forward slightly and lower the forks to the floor until the fork tips touch the floor.
  - If the forklift is disabled, and the forks cannot be lowered to the floor, follow proper lockout/tagout procedures. Do not allow anyone to stand or pass under the forks.
  - Turn the key to OFF, and stop the engine. Remove the key.
  - Get off the forklift without jumping.
- Note: When the operator of an industrial truck is dismounted and within 25 ft. of the truck still in his view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement. It is not required that the power be shut off.
Operating the Forklift: Safe Travel Practices

- Safe Travel Practices
  - Always look in all directions before proceeding.
  - Always look in the direction of travel. If the load blocks your view, travel in reverse. Keep a clear view.
  - Observe all traffic regulations, including authorized plant speed limits. Maintain a safe distance, approximately three truck lengths from the truck ahead, and keep the truck under control at all times.
  - Yield the right of way to ambulances, fire trucks, or other vehicles in emergency situations.
Operating the Forklift: Safe Travel Practices

- Do not pass other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations.
- Cross railroad tracks diagonally wherever possible. Do not park closer than 8 feet from the center of railroad tracks.
- Operate at a speed that will permit the truck to be brought to a stop in a safe manner under all travel conditions.
- Do not engage in stunt driving and horseplay.
- Slow down for wet and slippery floors.
- Properly secure the dock board or bridge plates before driving over them. Drive over them carefully and slowly and never exceed their stated capacity.
Operating the Forklift: Safe Travel Practices

- Approach elevators slowly and enter squarely after the elevator car is properly leveled. Once on the elevator, neutralize the controls, shut off the power, and set the brakes.
- Separate forklift and pedestrian traffic as much as possible. Use established pedestrian walkways with guard rails and strictly enforce their use.
- Never carry passengers.
- Keep arms or legs inside the confines of your vehicle.
- Watch for surface obstructions; even a small bump can cause a load to fall off elevated forks.
- Never drive up to anyone who is in front of a bench or any other fixed object.
- Do not travel into a position that, if the forklift jumped forward, the brakes failed, or the wrong lever was pushed, a coworker could be pinned between the forklift and another object.
Operating the Forklift: Visibility

- Visibility
  - Keep a clear view.
  - Look in the direction of travel. When reversing, look behind.
  - Use spotters, rear view mirrors, or other aids to increase visibility.
  - Where available, use concave mirrors when entering buildings or aisles.
  - Equip forklifts with headlights where general lighting is less than two lumens per square foot. In general, forklifts should have headlights if working at night, outdoors, or in any area where additional lighting would improve quality.
Operating the Forklift: Visibility

- Drive slowly into and out of warehouses or other buildings. Going from bright daylight into a darkened warehouse may blind drivers just long enough to hit another worker, vehicle or object.
- Be especially careful on loading docks; stay away from the edge.
- Add physical barriers such as ramps, raised concrete staging areas and heavy-gauge safety chains in front of dock openings. Use protective guard rails.
- Add a "warning track" of yellow paint on the floor near dock openings.
- Slow down and sound the horn at cross aisles and other locations where vision is obstructed.
Load Handling: Safe Handling Preparation

- Safe Handling Preparation
  - Secure the load so it is safely arranged and stable. Do not carry damaged merchandise unless it has been secured by wrapping or banding.
  - Center the load as nearly as possible. Use caution when handling off-center loads that cannot be centered. Distribute the heaviest part of the load nearest the front wheels of the forklift.
  - Do not overload. Know the stated capacity of your forklift and do not exceed it. Only by keeping within the weight limit can you operate the forklift safely.
  - A forklift’s capacity is rated for a specified load center. If the load is off-center, improperly distributed, or oversized, it may exceed capacity and unbalance the forklift.
  - Use the load extension backrest.
Load Handling: Approaching

- Approaching
  - Approach the load slowly and carefully.
    - Stop 20 to 30 cm (8 to 12 inches) in front of the load.
    - Be certain that the truck is placed squarely in front of
      the load and that the forks are at the correct height.
  - Set the direction control to neutral
  - Do not raise or lower the forks unless the forklift is stopped
    and the brake is set.
  - Prior to raising the load, ensure there is adequate
    overhead clearance. Vision is obstructed after the load
    is elevated.
  - Use the inching pedal to creep the load to the stack.
Load Handling: Mast Position

- Mast Position
  - Use extreme care when tilting loads. Do not tilt forward with forks elevated except when picking up or depositing a load. When stacking or tiering, tilt backward only enough to stabilize the load.
  - Use extra caution when handling loads that approach the truck's maximum rated capacity:
    - Tilt the mast back and position the heaviest part of the load against the carriage.
    - Travel with the mast tilted back to keep the load stable.
  - Tilt the mast forward cautiously when positioning the load onto the stack.
  - Never travel with the load tilted forward. Tilting the load forward increases the load distance and makes the load less stable.
Load Handling: Fork Position

- Forklift Position
  - Level the forks before inserting them into the pallet.
  - The forks must be placed under the load as far as possible.
  - Slide the forks into the pallet until they are fully under the load. The forks should be at least two-thirds the length of the load.
  - Be careful that the forks do not go through to the other side where pallets are closely stacked.
  - Center the weight of the load between the forks. Adjust the forks to distribute the weight evenly. Note that forks are adjustable either manually or with a fork positioner.
  - Tilt the mast back carefully to stabilize the load.
  - Pick up an off-center load carefully. There is a greater danger of a tip over.
Load Handling: Lifting the Load

- Lifting the Load
  - Check that there is adequate overhead clearance before raising the load. This is especially true when high tiering or in a confined space like a truck trailer. There must be sufficient headroom under overhead installations, lights, pipes, sprinkler systems, etc.
  - Carefully lift the load up above the lower stack about 10 cm (4 inches).
  - Lift the load clear and then tilt the mast back slightly to rest the load against the load backrest extension.
  - Ensure that the load does not catch on any obstructions.
  - Slowly return the lift control lever to the neutral position.
Load Handling: Lowering the Load

- Lowering the Load
  - The mast must be carefully tilted backward to stabilize the load.
    - Ensure the load is secured before moving.
    - Carefully tilt the mast backward to stabilize the load.
    - Slowly move the truck to 20 to 30 cm (8 to 12 inches) away from the stack.
    - Stop the truck.
    - Return the mast to the vertical position before lowering the load.
  - Lower the load so that its lowest point is 15 to 20 cm (6 to 8 inches) from the floor.
  - While traveling, keep the load at a safe travel height.
Load Handling: Truck Trailers and Railroad Cars

- Truck Trailers and Railroad Cars
  - The OSHA Powered Industrial Trucks standard lists a number of situations in which special procedures must be followed before starting entry:
    - The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.
    - Wheel stops or other recognized positive protection shall be provided to prevent railroad cars from moving during loading or unloading operations.
Load Handling:
Truck Trailers and Railroad Cars

- Fixed jacks may be necessary to support a semitrailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.
- Positive protection shall be provided to prevent railroad cars from being moved while dock boards or bridge plates are in position.
- The OSHA Walking-Working Surfaces standard contains requirements for dock boards (bridge plates). Portable and powered dock boards shall be strong enough to carry the load imposed on them. Portable dock boards shall be secured in position, either by being anchored or equipped with devices which will prevent their slipping.
Load Handling: Truck Trailers and Railroad Cars

- Powered dock boards shall be designed and constructed in accordance with Commercial Standard CS202-56 (1961) "Industrial Lifts and Hinged Loading Ramps" published by the U.S. Department of Commerce, which is incorporated by reference as specified in Sec. 1910.6.

- Handholds, or other effective means, shall be provided on portable dock boards to permit safe handling.

- Positive protection shall be provided to prevent railroad cars from being moved while dock boards or bridge plates are in position.
Load Handling: Truck Trailers and Railroad Cars

- Additional Trailer Loading and Unloading Procedures:
  - Inspect the floor of the trailer to be sure that it will support the forklift and load.
  - Ensure that the height of the entry door is adequate to clear the height of your vehicle, taking into consideration the height of the loading platform.
  - Drive straight across the bridge plates when entering or exiting the truck trailer or railroad car.
  - Use dock lights and headlights when working in a dark trailer.
  - Sound the horn when entering or exiting the trailer.
  - In determining the capacity of the trailer floor to support a forklift, consider various factors, including floor thickness and cross-member spacing or unsupported floor area. In general, the larger the unsupported area, the lower the forklift capacity the trailer will have for the same floor thickness.
  - Never use the forklift to open railroad car doors unless:
    - It has a device designed for that purpose.
    - The operator is trained in the use of the device.
    - All other employees stand clear.
Load Handling: Load Composition

- Load Composition
  - Do not exceed the capacity of the forklift that appears on the forklift's data plate (sometimes called the "nameplate"). If the load is oversized, irregularly shaped, or loaded incorrectly, the actual load center distance could exceed the stated load center distance, causing the truck's capacity to be exceeded.
  - Always minimize the distance from the front wheels to the load center. Load a large rectangular box widthwise across the forks of the truck. Placing a large rectangular load lengthwise causes the load center to shift forward further away from the front wheels, exceeding the truck's capacity and lifting the rear wheels off the ground.
  - Load as close to the front wheels as possible to minimize the load center distance. Load the heaviest part toward the mast.
  - Position the load in a way that will shorten the load center distance.
Load Handling: Load Composition

- Stability Triangle: The triangle formed between the three support points (A, B, & C) on the underside of the truck.
Load Handling: 
Load Composition

- Center of Gravity- The point within a lift truck where there is equal weight all around it. The forklift will not tip over as long as the Combined Center of Gravity of the truck and load system remains within the Stability Triangle.
Load Handling: Load Composition

- If the Center of Gravity shifts outside the boundaries of the stability triangle, the truck will tip over.
Load Handling: Load Composition

- Fulcrum Point: The point on the truck between which balances the weight of the truck and the weight of the load being carried.
Load Handling: Load Composition

- The center of gravity within a lift truck can be moved by:
  - Traveling with an elevated load;
  - Trying to carry too heavy a load;
  - Trying to turn the lift truck while it is moving too fast;
  - Operating the lift truck on a hill or incline;
  - Starting or stopping too fast;
  - The jerky operation of the hydraulic system.
Understanding the Workplace: Physical Conditions

- Slippery Conditions
  - Avoid hazardous surfaces when feasible.
  - Spread absorbent material on slick areas that you cannot avoid.
  - Cross the slippery area slowly and cautiously.
  - Report the area to prevent others from slipping.
  - Post a sign or warning cones until the area can be cleaned.
  - Drive slowly!
  - Maintain contact with the ground by crossing uneven areas at an angle.
  - Clean up the oil or grease spill before proceeding. Driving over an oil or grease spot will enlarge the hazardous area.
Understanding the Workplace: Physical Conditions

- Obstructions and Uneven Surfaces
  - Keep all aisles clear.
  - Watch out for overhead obstructions.
  - Avoid the obstruction or get off the forklift and remove the obstruction.
  - Never drive straight across speed bumps or railroad tracks. Cross slowly at a 45 degree angle.
  - Maintain steering control by keeping contact with the ground at all times.
  - If an area is cluttered, walk the route first to spot problems.
Understanding the Workplace: Physical Conditions

- **Floor Loading Limits**
  - Observe posted floor loading limits.
  - Inspect the condition of the floor. Look for holes or weakened flooring, loose objects or obstructions, protruding nails or boards.
  - Inform supervisor immediately if flooring is defective.
  - Do not travel over surface that cannot support the weight of the lift truck, its load and its operator.
  - Do not enter a box car or semi-van without inspecting its floor and knowing its load limits.
Understanding the Workplace: Physical Conditions

- Overhead Clearance
  - Be aware of the height of fixtures.
  - Do not travel with loads elevated.
Understanding the Workplace: Pedestrian Traffic

- Pedestrian Traffic
  - Yield right of way to pedestrians.
  - When a person or group of people walks across your planned route:
    - Stop.
    - Wait until the pedestrians pass by.
    - Proceed cautiously through any congested area.
  - If an area is cluttered, walk the route first to spot problems.
    - Check for situations that require a spotter and use one when traveling.
    - Warn pedestrians, by asking them to move, if there is not sufficient safe clearance.
  - Sound the horn at blind corners, doorways and aisles.
  - Sound the horn or other alarm when you back up.
Understanding the Workplace: Pedestrian Traffic

- Reminders for the Drivers
  - Slow down, stop and sound horn at intersections, corners, and wherever your vision is obstructed.
  - When provided, use flashing warning light or backup alarms when traveling in reverse.
  - Do not move the truck if you do not have a clear view of travel.
  - Use a spotter for blind spots.
  - Always look in the direction of travel.
  - Keep a clear view.
  - Start, stop, travel, steer and brake smoothly.
  - Signal to pedestrians to stand clear.
  - Do not allow anyone to stand or pass under the load or lifting mechanism.
  - When possible, make eye contact with pedestrians or other forklift operators.
Understanding the Workplace: Pedestrian Traffic

- Reminders for the Pedestrians
  - Be aware that lift trucks cannot stop suddenly. They are designed to stop slowly to minimize load damage and maintain stability.
  - Stand clear of lift trucks in operation.
  - Avoid a run-in. The driver’s visibility may be limited due to blind spots.
  - Be aware of the wide rear swing radius.
  - Use pedestrian walkways, or stay to one side of the equipment aisle.
  - Never ride on a forklift, unless authorized and the forklift is designed for riders.
  - Never pass under an elevated load.
Understanding the Workplace: Pedestrian Traffic

- Moving Personnel
  - The OSHA standard states that unauthorized personnel are prohibited from riding on a forklift. If riders are authorized, a safe place must be provided.
  - Unless authorized, never carry passengers.
  - NO RIDERS.
  - Use only specialized equipment designed to raise personnel.
  - Never transport employees on a platform.
  - Employees can only be hoisted up and down.
  - Never transport employees on the forks.
Understanding the Workplace: Ramps and Grades

- Traveling on Ramps and Grades
  - Always look in the direction of travel.
  - Never turn on a ramp or incline. Turn prior to the ramp or incline to place forks in proper direction.
  - Keep a safe distance from the edge of a ramp.
  - Do not travel on ramps with slopes or other conditions that exceed the manufacturer's recommendation.
Understanding the Workplace: Ramps and Grades

- Traveling with Load (Forks Upgrade)
  - When traveling with a load, the load should point up the incline, regardless of direction of travel.
  - Going up the incline:
    - Drive forward.
    - Forks pointed upgrade.
    - Use a spotter if load blocks the driver's view.
  - Going down the incline:
    - Drive in reverse.
    - Turn head and face downgrade.
    - Forks pointed up the grade.
Understanding the Workplace: Ramps and Grades

- Traveling Empty (Forks Downgrade)
  - When traveling without a load, the forks should point downgrade, regardless of direction of travel.

- Going up the incline:
  - Drive in reverse.
  - Turn head and face upgrade.
  - Forks pointed downgrade.

- Going down the incline:
  - Drive forward.
  - Forks pointed downgrade.
Loading Docks

- Maintain a safe distance from the edge of loading dock.
- Watch out for tail swing.
- Keep working surfaces clear and clean.
- Paint the edges of the loading dock to improve visibility.
Understanding the Workplace: Elevators

- Elevators
  - Ensure the elevator has a rated capacity to safely lift the combined weight of the load and the truck.
  - Approach elevators slowly and enter squarely after the elevator car is properly leveled. Once on the elevator, neutralize the controls, shut off the power, and set the brakes.
  - Ensure adequate overhead clearance for truck and space in elevator for the truck and operator.
Understanding the Workplace: Enclosed and Hazardous Areas

- Enclosed or Confined Spaces
  - Do not operate a gasoline/propane/diesel engine for long periods of time in a confined area, such as a truck trailer.
  - Shut the engine off when staying inside a small confined area like a trailer.
  - Do not operate a combustion engine within a warehouse, plant or onboard ship without adequate ventilation.
  - Be careful in cold weather. Doors and windows which are normally open may be closed and exhaust and other gases may concentrate.
Understanding the Workplace: Enclosed and Hazardous Areas

- Be careful in small rooms or blocked off areas where gases may accumulate.
- Drive sensibly. Avoid racing the engine or idling for long periods of time.
- Properly maintain engines and do not operate an engine requiring servicing.
- Consider switching to battery-powered forklifts, if much of the work is in poorly ventilated spaces or operators may be over-exposed to exhaust byproducts.
- Consider upgrading the ventilation system.
- Install CO monitors to detect levels.