OUT OF SERVICE until the appropriate repairs are made.

Federal law requires all forklifts to be inspected at least once per shift. Any truck not passing the safety inspection must be reported to your supervisor and be performing a pre-operation inspection.

PRE-OPERATION INSPECTION

The heavy hunk of metal in the back of the truck is the counterweight. It does just what it is called and counterbalances the weight of the load.

All forklifts steer with the steer tires in the rear of the truck. This allows the truck to turn in tight places; it also makes it easier to position loads.

Systems can help keep you safe during a rollover accident.

According to government statistics, most fatalities and serious injuries occur during rollover type accidents. Speed is the primary contributing factor. Restraint systems can help keep you safe during a rollover accident.

The seat is equipped with an operator restraint system. The operator restraint system is designed to keep you in the truck in the event of a roll over.

The drive tires provide both the power and braking action on the truck.

Other components include the mast or upright, the lift cylinders and the tilt cylinders. The tilt cylinders tilt the mast or upright.

The inching pedal is only found on internal combustion trucks and never on electric forklifts. See your supervisor for more specific training on how to properly use the inching pedal.

On some forklifts there are two brake pedals. The one next to the accelerator pedal is the actual brake pedal; the one on the far left is called an inching pedal.

The vehicle also has a steering wheel, and we also have the brake pedal and accelerator pedal.

The inching pedal is only found on internal combustion trucks and never on electric forklifts. See your supervisor for more specific training on how to properly use the inching pedal.

The forks are the most common way to handle material. There are actually many ways to handle loads; forks are the most common way.

So we call it a forklift; however, it is classified as an industrial truck and it must follow all the laws and standards governing industrial trucks. These vary by state and you must know the laws for your state.

It is important to make sure the fork pins or locks secure the forks in place. If the load could shift when turning or lifting, it could cause the truck to tip over.

The forks and any other type of material handling equipment are attached to the carriage. The carriage is what does the actual lifting of the load.

The load back rest is there to support the load when transporting and lifting loads.

The drive tires provide both the power and braking action on the truck.

This is the Drivers Overhead Guard. It is a FOPS, or Falling Object Protection Structure. By law, it has to withstand a minimum of 8,000 foot-pounds; this means we can take 8,000 pounds, hold it 12 inches above the guard and drop it.

The FOPS cannot bend or buckle when the weight is dropped. Remember, the FOPS is designed to do one thing only and that is protect you in the event of a falling object. As the capacity of the truck increases, the rating on the FOPS must increase also.

The vehicle also has a steering wheel, and we also have the brake pedal and accelerator pedal.

On some forklifts there are two brake pedals. The one next to the accelerator pedal is the actual brake pedal; the one on the far left is called an inching pedal.

The inching pedal is only found on internal combustion trucks and never on electric forklifts. See your supervisor for more specific training on how to properly use the inching pedal.

The seat is equipped with an operator restraint system. The operator restraint system is designed to keep you in the truck in the event of a roll over.

According to government statistics, most fatalities and serious injuries occur during rollover type accidents. Speed is the primary contributing factor. Restraint systems can help keep you safe during a rollover accident.

All forklifts steer with the steer tires in the rear of the truck. This allows the truck to turn in tight places; it also makes it easier to position loads.

The heavy hunk of metal in the back of the truck is the counterweight. It does just what it is called and counterbalances the weight of the load.

It is important that your equipment is in proper operating condition and the components we mentioned are in place and functioning properly. You do this by performing a pre-operation inspection.

Federal law requires all forklifts to be inspected at least once per shift. Any truck not passing the safety inspection must be reported to your supervisor and be tagged “out of service” until the appropriate repairs are made.
ENGINEERING PRINCIPLES OF THE EQUIPMENT

- Perhaps one of the most important yet misunderstood parts of any forklift training program is the engineering principles of the equipment. You should learn these basic principles and if you are unclear or have any questions, please ask your supervisor or trainer to explain them more fully and answer your questions.
- Forklift engineers have designed forklifts on a three-point suspension system, even if the forklift has three or four wheels.
- A pivot pin in the center of the axle supports the forklift's rear end. The pivot point and the front tires make up the three-point suspension system.
- The truck’s steer axle is attached to the truck by a pivot pin in the axle’s center. This three-point suspension system forms an imaginary triangle called the stability triangle.
- The technical definition of the stability triangle is when the vehicle's center of gravity falls within the stability triangle, the vehicle is stable and will not tip over; however, when the vehicle's center of gravity falls outside the stability triangle, the vehicle is unstable and may tip over.
- When the combined center of gravity of the truck and load move outside the lines of this triangle, the forklift will overturn. There are many situations in which this can occur: fast, sharp turns can cause the center of gravity to shift outside the triangle; lifting a heavy load and tilting the mast forward or backward while moving.
- Let's begin with the lever principle, specifically the fulcrum principle. Simply stated, you have two weights balanced on a fulcrum, like a playground see-saw. The fulcrum point in this case is the front tires of the forklift.
- On one side is the weight of the forklift and the heavy counterweight. The other side is the weight of the load you're carrying. The forklift and the counterweight balance the load, and the front tires act as the fulcrum point.
- The combined weight of the forklift and the counterweight compensates for loads and lifting heights. These together determine the proper safe lifting capacities.
- Never add a different or additional counterweight to any forklift without the manufacturer's written approval. Anytime you modify the forklift, you may have significantly changed a variety of important engineering principles, such as center of gravity, safe lifting capacity, maximum load height and other unsafe conditions.
- These are just two of the many engineering principles involved in the design of industrial trucks. The stability triangle and the fulcrum principle are also the most crucial to safe operation of your equipment. This is why you need to know how they work and affect your operation of the truck.

STEERING CHARACTERISTICS

- When you drive your car, there are rules and expectations designed to keep you and pedestrians safe. The same goes for forklifts, but there are differences between a car and a forklift, probably the most noticeable is the steering.
- Forklifts steer with the rear wheels and it feels different and turns differently than your car, which is why you need training and experience to understand the differences between a forklift and a car.
- When you're turning a forklift, you need to look to the rear in the opposite direction you are turning to watch the rear end swing of the truck. Much of the damage you see caused by forklifts is from not watching the rear end swing when turning.

TRAINING FOR SPECIFIC TYPE & MODEL TO BE OPERATED

- There are certain expectations and assumptions required as a professional lift truck operator too. Laws and mandated standards require you to be formally trained and certified for the specific types and models of forklifts you operate.
- You need to be familiar with their weight capacity, where the data plate is located and what information about the capacity it provides, the controls, functions and operating characteristics of each truck you operate.

INCIDENT PREVENTION

- A key in incident prevention is recognizing and respecting potential hazards. You may have been operating a forklift for 10 years, but conditions change in the work environment.
- Doorways, overhead pipes and sprinkler systems usually remain the same, but surface conditions, aisles, pedestrians, maintenance work and the presence of equipment can pose a temporary hazard. Continuously assess potential hazards in the areas you operate.
- Many incidents occur while working on loading docks. Observe all posted warnings. Some facilities have warnings to let you know it is not safe to enter the trailer or truck.
- Prior to loading or unloading a vehicle, make sure its wheels are chocked and/or dock locks are properly engaged. Make sure the dock plate is properly secured.
- Inspect the interior of the railcar or trailer to ensure it can support the weight of the forklift and the load and make sure there is adequate lighting. If the truck is not attached to the trailer, make sure proper jacks are in place.
- Hazard assessment is a key element of incident prevention. Be aware of what is happening in your operating environment. That includes in front of you, behind you, to the sides, above and below.

SAFE DRIVING PRECAUTIONS

- Forklifts should be operated at a walking speed any time there's pedestrian traffic in the workplace.
- The faster you are traveling, the less time you have to respond to unexpected situations. This often causes a sudden reaction which increases the odds of the truck’s center of gravity moving outside the stability triangle, but even at a walking pace, a forklift can take up to nine feet to come to a complete stop.
- Be aware of your driving environment at all times and adjust your speed to the conditions. Slow down on wet surfaces.
- Leave enough space between you and other vehicles to allow yourself enough time to safely react in any situation. Under all travel conditions, the truck needs to be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Extra precaution or avoidance should be exercised in areas of known high pedestrian traffic. These usually can be found near time clocks, break areas and main entrances or exits.
- Follow other vehicles at a safe distance, usually a minimum of three truck-lengths or three seconds passing the same point. Do not pass another lift truck traveling in the same direction at intersections, blind spots or other dangerous locations.
- On ramps or inclines greater than 10 percent, operate the drive wheels upgrade whether going down or up. The drive wheels are the wheels with brakes and must be kept on the uphill side. Make sure you know where the drive wheels are on your specific truck.
- Remember to be aware of what is happening in your operating environment at all times. Keep a clear view; look in the direction you are traveling. If the load obstructs your view, travel in reverse.

EFFECTIVE COMMUNICATION

- Communication is an effective preventative measure. It can clearly state your intentions.
- Sound your horn or warning device when backing up. Slow down and sound your horn when approaching intersections, cross aisles and locations where your vision is obstructed.
• Make eye contact and acknowledge pedestrians. Remember, just because you can see them, doesn’t mean they see you. Make sure they are clear and free of any danger before proceeding.

OTHER SAFE WORK PRACTICES
• Many co-workers are injured each year by falling loads. As a professional operator, you are responsible to make sure each load you lift is properly secured. If the load is unsafe, do not lift it.
• When lifting or placing a load, make sure any co-workers in the area are properly positioned so they will not be struck if the load falls.
• If at any time during operation the lift truck is found to be in need of repair, defective or in any way unsafe, report it to your supervisor.
• The truck must be tagged “out of service” until it has been restored to safe operating condition. Never continue to operate a forklift that may place you or your co-workers in danger.
• As an experienced operator, you have gotten on and off forklifts thousands of times. In a five-year government study, almost a third of all forklift injuries involved slips, trips and falls while getting on and off the truck.
• Never jump from the lift truck. Maintain three points of contact when getting on and off. Check the surface conditions for slip and trip hazards before disembarking.
• If your company policies require it, take the keys with you.

SAFE OPERATION IS A SERIOUS RESPONSIBILITY
• Operating a forklift is a serious responsibility; it requires your dedication, skill, teamwork, communication and attention to detail to prevent forklift incidents from occurring. Professional operators leave nothing to chance.
• Be familiar with the lift trucks you operate. Know their capabilities and operating characteristics. Inspect your forklift before each shift.
• Make safety a part of every action you perform. Give operating the forklift your complete attention.
• Recognize and respect known and potential hazards in your work environment. Be aware of what is happening around you. Obey all speed limits and follow established company procedures and policies.
• Expect the unexpected. Leave enough room to safely stop your forklift.
• A safe and healthy work environment is a top priority. In a competitive global marketplace, it is the best way to conduct business.
• Operating a forklift is a serious responsibility. Safety must be a part of every task you perform.
• There are no positive elements associated with an accident or injury. They have an adverse impact on both the individual and the company.
• According to government statistics, powered industrial truck accidents happen every 15 minutes.
• A serious injury can have major implications and affect the injured person’s quality of life, financial situation, and relationships with family and friends. Even if you, the operator, are not hurt, you must live with the mental and emotional aspect of causing a co-worker serious injury or death.
• Not only is safety the right thing to do, it is a condition of your employment. In addition to the direct costs, accidents and injuries affect productivity, quality, employee morale, public image, viability and more; our goal is an accident free work environment.
• As a professional operator you have full responsibility for the safe and proper operation of your forklift: your safety and the safety of your co-workers depend on it. Professionals don’t leave safety to chance.