

FORKLIFT SAFETY LESSONS FOR THE SAFE OPERATOR

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation. Featured are:

INTRODUCTION: A brief description of the program and the subject that it addresses.

PROGRAM OUTLINE: Summarizes the program content. If the program outline is discussed before the video is presented, the entire program will be more meaningful and successful.

PREPARING FOR AND CONDUCTING THE PRESENTATION: These sections will help you set up the training environment, help you relate the program to site-specific incidents, and provide program objectives for focusing your presentation.

REVIEW QUESTIONS AND ANSWERS: Questions may be copied and given to participants to document how well they understood the information that was presented. Answers to the review questions are provided separately.

INTRODUCTION

Powered industrial trucks, commonly called forklifts, can be very dangerous as each year, nearly 100 workers are killed and another 20,000 seriously injured in forklift-related accidents. Forklift operators play a vital role in preventing these incidents. By using the training they have received, staying alert to the hazards around them and working safely with pedestrians, loads can be moved securely, each and every time. That's the purpose of this program—to show operators the safe work practices they must follow to avoid injuries and property damage.

Topics include training and qualification, pre-operational inspection, mounting and exiting forklifts safely, the stability triangle, preparing for hazards before traveling, traveling with a load and safe operation around pedestrians. Use of maintenance platforms, types and classes of forklifts and sloped surfaces are other issues addressed in the video.

PROGRAM OUTLINE

IMPORTANCE OF FORKLIFT SAFETY

- People and forklifts—they work as a team. While forklifts do the heavy lifting, people are responsible for the planning. They're the brains behind the brawn.
- Whether on or off the powered industrial truck, safety needs to be job number one.
- Powered industrial trucks, commonly called forklifts, can be very dangerous, both for operators and pedestrians. Each year nearly 100 workers are killed and another 20,000 seriously injured in forklift-related accidents.
- To stay safe, operators must go through specific training and take refresher courses.

OPERATOR TRAINING

- Becoming a safe forklift operator starts with training. This training will include the general principles of safe powered industrial truck operation, what types of trucks are being used in the workplace and the hazards created in the workplace by using the vehicle.
- Each operator will receive formal training and practical training before becoming an actual certified operator.
- “I was excited the day I finally got authorized to drive a forklift. It represented time and effort. It took a while to learn the controls and show that I could operate my vehicle safely. I guess it was kind of like getting my license to drive a car,” explains a forklift operator.
- However, a forklift maneuvers very differently than a car.

- It's much heavier and although it may have a steering wheel and tires, it steers from the rear instead of the front. This helps them to fit into tight spaces, but affects the rear end, giving it a wide swing. For instance, while turning left, the rear end will swing right.
- A forklift's stability can also change drastically, depending on the load that it's carrying and the height to which that load needs to be raised. Loaded or unloaded, forklifts take longer to stop than an automobile.
- Besides these points, one of the first things an operator learns in training is what each control does on the forklift. Trying to operate without this knowledge can be disastrous.

UNQUALIFIED WORKER ON FORKLIFT STRIKES & KILLS COWORKER

- "I'm pretty sure Mark had not been qualified to operate the forklift," says Wendy, an employee at a manufacturing facility.
- "When I saw Mark, he was frustrated. The forklift had been left right in front of the toolbox," she adds. "Now granted, that was not the right place for it, but trying to operate a powerful piece of equipment without knowing how to, is not the way to fix the situation."
- "Mark got in and after trying out the controls for a bit, he looked like he was confident that he could move it. Before I could say anything, the forklift jumped forward," says Wendy.
- "He had raised the forks too high and I guess he thought he could lower them as he drove," she continues, "But instead of stopping to do it, he kept going forward."
- "Each forklift is different and you've got to be trained before operating them; otherwise, you could be sorry," Wendy concludes.

INSTRUMENTS & CONTROLS

- Each forklift is different, but they all have an area with instruments and controls. During your training, you'll learn what each control does for the machine you intend to operate, functions such as the accelerator and brake, the mast control, forward and reverse and the use of the horn and lights.
- The most detailed information should be found in the owner's manual. This will describe the care and use of the specific type of truck you're using.

PRE-OPERATIONAL INSPECTION

- Once you understand how the truck operates, you need to perform a pre-operational inspection.
- Look for leaks such as fuel or hydraulic oil. Check the tires for damage.
- Visually verify that the forks and their pins are in good condition.
- Hydraulic hoses, mast chains and cables should not be kinked or overly worn.
- The name plate should be readable and all guarding in place.
- "The pre-op inspection is very important," states a worker. "The other day I noticed fluid on the ground near the back of my truck. I could have just overlooked it, assumed it came from another vehicle, but I took the extra time and I really looked at my forklift for the leak. And sure enough, I found it. Now, without that inspection, I might have started to use the truck and ended up with an even bigger mess on the plant floor."
- Many organizations provide a checklist specific to each type of vehicle that will be operated. These checklists may need to be completed daily or before each shift.

- In addition to visually inspecting the truck, an operational inspection will demonstrate that all the controls are working properly.
- If any problems are noticed during this inspection, the vehicle should be tagged out of service and the problem reported.

MOUNTING & EXITING FORKLIFTS SAFELY

- In order to test the functions you usually need to be on the vehicle. Some have a driver's seat; others require you to stand.
- When mounting the vehicle, do so using three points of contact. Keep your feet, arms and other body parts inside the vehicle while operating and never jump off the machine when dismounting.
- “At first we thought it was funny,” recalls an operator. “A buddy of mine used to see how fast he could get off his stand-up forklift, by jumping off and running for the time clock; thought it was a race. But after this one jump, he landed wrong and twisted his ankle really bad. He was hopping around on crutches for a couple of weeks. The look of pain on his face reminded me to take my time getting on and off my forklift.”
- When entering and exiting the vehicle, take notice of the ground. Look for slippery substances or uneven surfaces.
- Keep steps and handles on the vehicle as clean as possible to prevent slips.
- If your vehicle has a driver's seat with a seat belt, wear it. While seat belts can feel like a nuisance at times, they can be a life saver in the event of a tip over.

THE STABILITY TRIANGLE

- After making sure the truck is safe to operate, it's time to think about the load. Every lift truck has a load capacity printed on the manufacturer's plate.
- This is the maximum amount that the truck can safely lift. In order to lift it and move about safely, the load must balance within the triangle of stability.
- The stability triangle works on the principle of balance. When the vehicle is stable, it is supported at three points.
- The center of gravity is located near the middle of the truck. When a load is added, the center of gravity shifts forward.
- As long as this new center of gravity doesn't shift too far forward, it stays within the stability triangle and the vehicle remains stable.
- If it shifts too far forward or moves to the left or right, in the case of a sharp turn, it goes outside the stability triangle and the vehicle will tip over.

PREPARING FOR HAZARDS BEFORE TRAVELING

- After the truck has been inspected, the load secure and within the load limit, and plans are made to keep it in the stability triangle, the next step before the actual lift is to take a moment to look at the surroundings.
- Be familiar with the area. Look at surface conditions, pedestrian traffic and any other hazards that affect your travel.

- Being prepared ahead of time avoids a dangerous surprise later.

TRAVELING WITH THE LOAD

- Once the load is engaged, keep it as low as safely possible to the ground. This will improve stability and lower the chances of tipping.
- Make any height or mast adjustments to the load before you start moving.
- As you travel along your route, look toward the travel path and keep a clear view of it.
- Obey all signs, such as stop signs and the posted speed limit.
- Operate the forklift at a speed that will permit it to be stopped safely.

SAFE OPERATION AROUND PEDESTRIANS

- A frequent and moving hazard that can be found most anywhere is pedestrians. Sound your horn frequently, especially near pedestrians, and at all crosswalks and intersections, even if no pedestrians are in sight.
- Around pedestrian areas, it is a good practice to limit forklift speed to match a walking speed.
- “You’ve got to look out for pedestrians,” notes an experienced worker. “At times it seems like they appear out of nowhere. Now, where I work, we use our horns, a lot: blind intersections, corners, pedestrian crossings, aisle ways, wherever a pedestrian might be. And when we’re on the move, we keep it low and slow. That’s safer for everybody.”
- Backup alarms and warning lights are also vital when working around pedestrians and other workers. When backing up, or driving forward, do not drive your vehicle directly towards a person standing in front of a fixed object; it’s too easy for something to go wrong and then they could be trapped.
- The operator is responsible for making certain no one is allowed to walk or work beneath a raised load. In the event of a hydraulic failure or the load becomes unstable, gravity will pull it to earth quickly.
- Pedestrians sometimes see forklifts as a quick ride or a personal elevator. Never allow extra riders unless the truck is designed for that and never raise personnel on the forks alone.

WAREHOUSE WORKER SERIOUSLY INJURED IN FALL FROM FORKS

- “It was only going to take a second,” says Scott, a warehouse worker in a hurry to retrieve a box the top of a shelf.
- “We needed the top box. The boxes are not incredibly heavy, so we figured we could just get it and bring it right down,” he continues. “We looked around for a ladder, but of course there wasn’t one close, so what was our next brilliant idea? A nearby forklift.”
- “Ryan thought it would be quicker to just raise him up and get the box. It didn’t seem too hard to do. I told him to hang on. I raised him up and he got the box,” Scott adds.
- “Just as he was getting the box positioned on the forks, he must have lost his balance,” says Scott.
- “As it turns out, trying to save time got Ryan really hurt. Now I know, never ride the forks,” he concludes.
- “I saw a guy fall from riding the forks,” remarks an employee. “I guess he felt it was a quick way to raise him up there. Well, it may have been a quick way to get up there, but it was even quicker when he fell. When you see something like that, you never forget this lesson: never ride the forks.”

USE OF MAINTENANCE WORK PLATFORMS

- If the workers need to be lifted, use a maintenance work platform that is securely attached to the vehicle.
- All required PPE should be worn by those inside the platform.
- The guard rails should be in place to prevent falls.

TYPES & CLASSES OF FORKLIFTS

- All powered industrial trucks are grouped by type and class based on the type of work they are designed for.
- Forklifts are also grouped by type of power, such as diesel, electric, gasoline or propane. Each class and type are to be used in specific areas.
- You must know the type of vehicle you are qualified to operate and in which areas it's safe to use it.

SLOPED SURFACES & GOOD LIGHTING

- Inclined surfaces present a real hazard to forklifts because they can shift the truck's center of gravity.
- When traveling up or down a grade, keep the load uphill. Avoid turning on a grade as this will increase your chances of tipping over.
- Watch out for sudden drop offs at the edges of the incline as well as potholes and dips in the road surface.
- When coming indoors or entering a trailer, give your eyes a moment to adjust. Good lighting in these areas should help.
- The better illuminated an area is, the better chance you have of seeing hazards.

PARKING YOUR FORKILFT PROPERLY

- When you are finished with your vehicle, make sure it is secure. Never leave a forklift running unattended.
- Lower the forks, set the parking brake and remove the key. It may also be necessary to chock the wheels.
- “I remember my trainer telling us ‘take the key with you,’” recalls a worker. “And that makes sense. When I have the key, I have control of my truck. It’s my responsibility. I’d hate for someone to get hurt because I didn’t secure my vehicle.”

PREPARE FOR THE SAFETY MEETING

Review each section of this Leader's Guide as well as the program. Here are a few suggestions for using the program:

Make everyone aware of the importance the company places on health and safety and how each person must be an active member of the safety team.

Introduce the program. Play it without interruption. Review the program content by presenting the information in the program outline.

Copy the review questions included in this Leader's Guide and ask each participant to complete them.

Make an attendance record and have each participant sign the form. Maintain the attendance record and each participant's test paper as written documentation of the training performed.

Here are some suggestions for preparing your video equipment and the room or area you use:

Check the room or area for quietness, adequate ventilation and temperature, lighting and unobstructed access.

Check the seating arrangement and the audiovisual equipment to ensure that all participants will be able to see and hear the program.

CONDUCTING THE PRESENTATION

Begin the meeting by welcoming the participants. Introduce yourself and give each person the opportunity to become acquainted if there are new people joining the training session.

Explain that the primary purpose of the program is show viewers the precautions they can take as forklift operators to avoid property damage and injuries to themselves and pedestrians.

Introduce the program. Play it without interruption. Review the program content by presenting the information in the program outline.

Lead discussions about specific hazards that pose risks for forklift operators at your facility and what must be done to prevent these hazards from contributing to injuries and property damage.

After watching the program, the viewer will be able to explain the following:

- Why a forklift operator must be formally trained and qualified;
- What to look for when conducting a pre-operational inspection;
- Why a forklift's center of gravity must remain within the stability triangle;
- How to safely travel with a load;
- What precautions to take when working near pedestrians;
- Why workers must only be lifted on the forks of a vehicle in approved work platforms.

FORKLIFT SAFETY LESSONS FOR THE SAFE OPERATOR
REVIEW QUIZ

Name _____ Date _____

The following questions are provided to check how well you understand the information presented during this program.

1. How many people are seriously injured in forklift-related accidents each year?
 - a. 2,000
 - b. 10,000
 - c. 20,000

2. A forklift steers from the rear instead of the front.
 - a. true
 - b. false

3. An unloaded forklift takes less time to stop than an automobile.
 - a. true
 - b. false

4. The most detailed information about the instruments and controls of a specific model of forklift should be found in the owner's manual.
 - a. true
 - b. false

5. What should you do if you notice any problems during a pre-operational inspection?
 - a. tag the vehicle out of service
 - b. report the problem
 - c. both answers a and b
 - d. neither answer a or b

6. When entering or exiting the vehicle, you should use _____ points of contact.
 - a. two
 - b. four
 - c. three

7. When a load is placed and lifted on a forklift, its center of balance shifts backward.
 - a. true
 - b. false

8. Who is responsible for making sure a pedestrian doesn't walk or work beneath a raised load?
 - a. the pedestrian
 - b. the forklift operator
 - c. management

9. Personnel should never ride or be raised on the forks of a lift truck without the use of a maintenance work platform.
 - a. true
 - b. false

10. When traveling up or down a grade, keep the load _____.
 - a. uphill
 - b. downhill

ANSWERS TO THE REVIEW QUESTIONS

1. c

2. a

3. b

4. a

5. c

6. c

7. b

8. b

9. a

10. a