

OPERATING REACH TRUCKS SAFELY

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

Reach trucks are a critical part of many material handling operations, as they can move loads of material smoothly and efficiently in areas too tight for traditional forklifts. As useful, powerful and critical as they have become, reach trucks can also be dangerous when operated in an unsafe manner. Operators must have a good safety attitude and commitment to responsible operation to prevent injuries and property damage. This program discusses common hazards presented by the operation of reach trucks and how to control those hazards through safe operating techniques.

Topics include reach truck stability and handling characteristics, pre-operational inspection, lifting and moving loads safely, avoiding tip-overs, and traveling on sloped surfaces. Safe driving techniques, preventing injuries to pedestrians, lifting personnel safely, parking the truck and working in and around trailers and railcars are other addressed issues.

PROGRAM OUTLINE

OPERATOR TRAINING

- As with all powered industrial trucks, reach truck operators must be properly trained and authorized by their employer before use.
- There are many makes and models of reach trucks. While the specific controls and operating characteristics of these vehicles may vary from manufacturer to manufacturer, their function, just like their hazards, are almost always the same.
- Your company will provide operator training on the type of reach truck you will be operating.
- This training will include learning the proper operation of all material handling controls as well as the driving controls of the truck, an understanding of the important information contained on the vehicle's data plate and how that information is used to safely operate the reach truck.
- You will also receive hands-on training so you may become familiar with the handling characteristics of the specific reach truck you will be operating.
- A thorough understanding of the operator's manual and all warning labels is considered an integral part of your training. The operator's manual must remain with the vehicle at all times so it may be referred to when needed.

OPERATOR COMMITMENT TO SAFETY

- Keep in mind that improper operation is the most common cause of reach truck injuries and property damage. As operators, we must stay vigilant and avoid committing unsafe actions such as horseplay and stunt driving that can quickly lead to an incident.
- Just as dangerous is falling victim to complacency and letting your guard down after endless hours of incident-free operation.

- Remember, all it takes is one moment of carelessness to cause a serious incident.

STABILITY CHARACTERISTICS

- While reach trucks perform the same work and function of a traditional forklift, they are a completely different machine. One of the most important differences between a reach truck and a forklift is its stability characteristics.
- Reach trucks are designed with a narrow wheel base and have front wheels that extend forward of the mast. This allows the load's "center of gravity," commonly called the load center, to remain within the wheel base in most cases.
- A traditional forklift has front wheels behind the mast, requiring a large counterweight to balance the load.
- The center of gravity for a properly loaded reach truck falls between the front wheels and the center of the rear axle of the truck. This area is known as the "stability triangle."
- Lifting a load or reaching out with a load will cause the center of gravity to shift forward; traveling sideways on an incline or turning can cause the center of gravity to turn sideways.
- When reaching with a load, the load center is extended beyond the front wheels. In this instance, the reach truck becomes a counterbalanced truck, but without the benefit of a large counterweight.
- When reaching, the truck depends solely on the weight of the vehicle to counterbalance the weight of the load. This is why a reach truck's rated capacity is significantly reduced when the load is extended away from the truck.
- Should the center of gravity of the combined truck and load shift outside the stability triangle, the truck will turn over. This is why understanding your truck's capacity and knowing how to read the data plate information is so important.

HANDLING CHARACTERISTICS

- New operators are sometimes surprised how differently a reach truck handles compared to an automobile. An automobile has a wide wheel base and front-wheel steering to provide smooth, stable turns with minimal rear end swing.
- A reach truck has a narrow wheel base, requiring slow, careful turns to ensure stability and features rear-wheel steering that allows a very small turning radius.
- This allows maneuvering in and out of tight aisle ways and around corners, but also creates a wide-swinging rear end that must be controlled to prevent collisions.

PRE-OPERATIONAL INSPECTION

- As with all powered industrial trucks, the reach truck operator must perform a pre-operational inspection before use. This will alert you to potential problems before you begin operation.
- While performing your inspection, verify that all covers, guards and safety devices are installed and functioning properly. Check around the vehicle for fluid leaks.
- Inspect the vehicle for signs of structural damage, such as bent or cracked forks.
- Check for any damage or excessive wear on the drive and load wheels.
- The lights should be in good working order and all safety decals and warning labels in place and legible.
- Inspect the battery area for signs of leaks and be sure the gate is fastened securely in position.

- Test each control mechanism to ensure proper operation, including the lift, reach and lower functions, the directional controls for both forward and reverse, the steering controls, horn, and dead man pedal.
- The dead man pedal must remain pressed for the truck to operate and will stop when released.
- Should you find any problems during your inspection, remove the vehicle from service and report the situation to your supervisor.

SAFETY TIPS FOR OPERATORS

- As a reach truck operator, you must understand which areas of the facility are approved for reach truck operation and any specific hazards in these areas that must be avoided.
- Your reach truck must always be operated from the operator's platform. Keep your feet, hands and other body parts inside the designated operator's area.
- Be especially cautious of your feet when operating a stand-up reach truck. Many operators suffer needless injuries when they ignore this simple safety rule.
- Under no circumstance should you place your hand or fingers through the mast of a reach truck. The moving parts of the mast create dangerous pinch points.
- The operator is responsible for ensuring that each load lifted is within the capacity stated on the vehicle's data plate. If you intend to extend a load with the reach mechanism, check the data plate for the truck's reduced capacity.
- If you are unsure of an object's weight, don't hesitate to ask for assistance.

LIFTING & MOVING LOADS SAFELY

- Before lifting a load, make sure the forks are spread as wide as possible for the load being lifted. Lifting a wide pallet with the forks narrowly spaced can create an unstable load.
- Before lifting or moving a load, make sure the forks are completely under the load and that the load is seated against the back of the mast. Placing the load against the back of the mast helps keep the center of gravity inside the stability triangle.
- Be aware that loosely stacked or unstable loads can shift and fall, causing injury and property damage. Before moving a load make sure it is stable and centered on the pallet; some loads may need to be secured before moving.
- Collisions with fixed objects occur all too often. Inspect your path of travel before proceeding to ensure it is free of obstructions, holes, drop-offs or other hazards.
- Make sure you are familiar with all racks, walls, machinery or other objects which must be avoided.
- Don't limit your inspection to eye level. Many reach truck collisions occur overhead when the mast or the load comes in contact with overhead obstructions such as pipes, sprinkler systems, overhead beams, lights or similar items.
- Stay alert for these items, especially when placing the load on a top rack. Maintain adequate clearance to avoid extensive property damage or injury.

AVOIDING TIP-OVERS

- Never travel with a raised load. A raised load brings the center of gravity toward the front of the stability triangle and the added forces of turning and braking may lead to a tip-over.
- Also do not travel while lifting, lowering, reaching or retracting a load. Stop the truck before operating these controls and always ensure the reach mechanism is fully retracted before moving.

- Always remember that extending a load away from the truck moves the load center outside the wheel base, turning your reach truck into a counterbalanced truck and reducing its stability. Make sure you understand your truck's reduced capacity before reaching.

TRAVEL ON SLOPED SURFACES

- When navigating an incline, travel at a slow, safe speed, making sure the truck is traveling straight up or down. Never travel at an angle on an incline.
- Avoid turning while on the incline. Make sure your vehicle has reached a flat surface before turning.
- When carrying a load up or down a slope, you should always face the load uphill. This improves the stability and helps the load from falling.
- When your truck is empty, however, most manufacturers recommend traveling with the forks facing downhill.
- Check your truck's operator manual for the maximum grade on which your truck is designed to travel.

DRIVING THE REACH TRUCK SAFELY

- The tight turning radius, combined with a narrow wheel base, can easily tip even an unloaded truck when traveling too fast.
- Operators should handle their vehicles at a safe rate of speed at all times. Operators should be able to stop or turn safely at any time the need should arise.
- Remember that your vehicle is not the only thing moving about your facility. Always follow your company's specific traffic regulations to avoid pedestrians, other vehicles and equipment.
- Intersections and blind corners should always be treated with caution. Come to a complete stop and sound your horn before proceeding cautiously into the intersection; this will alert pedestrians and other vehicle operators of your presence.
- If your facility has mirrors mounted at intersections, be sure to use them before proceeding.
- When traveling behind other vehicles, maintain a safe following distance. A good rule of thumb is to maintain three truck-lengths distance between your truck and another.
- Use extra care when overtaking other vehicles and do not pass at intersections, blind spots or heavy traffic areas.

PREVENTING INJURIES TO PEDESTRIANS

- Reach trucks pose obvious hazards to pedestrians. Your co-workers may not be familiar with the tight turning radius or the wide-swinging rear end of your vehicle.
- Pedestrians may stand too close or approach the truck while in operation. As a reach truck operator, it is your responsibility to keep the safety of pedestrians in mind at all times.
- Always allow pedestrians the right of way and make sure all personnel are a safe distance away from your truck before moving.
- Never drive your truck directly towards personnel, especially if they are standing next to solid objects such as machines, racks or walls. Pedestrians can be easily crushed when operators ignore this important rule.
- The pinch points created by the moving parts of the mast are also hazardous to pedestrians. Make sure the mast area stays clear of personnel.

- Never allow anyone to ride on your vehicle. Pedestrians just don't realize the dangers and often want a ride; it's up to you to say no.

LIFTING PERSONNEL

- Besides material handling, reach trucks may also be used to lift personnel, but only when proper procedures are followed.
- To lift personnel, an approved lifting device with proper guardrails must be used. This platform must be secured to the truck with chains or pins to ensure it does not slide off the forks.
- The personnel on the platform must wear proper fall restraint devices and be sure to keep their hands away from the moving parts of the mast.
- Do not move the reach truck while the platform is raised. The platform must be lowered and the personnel must exit the platform before positioning the lift.
- Never use pallets, boards or bare forks as a lifting platform. This is extremely dangerous and has been the cause of needless injuries and fatalities.

PARKING THE TRUCK

- When parking your truck, even for a moment, you must lower the forks, place the truck in neutral and set the parking brake.
- When leaving the truck unattended, which is defined as being more than 25 feet away from the truck or out of plain view, you must also shut off the truck and remove the key to prevent unauthorized use.
- If parking at a charging station and you are properly trained and authorized, be sure to connect the charger.
- Never park the truck in areas that are not approved by your company. This includes areas with sloped surfaces, in front of stairways, blocking emergency equipment or blocking exits.

TRAILERS & RAILCARS

- When reach trucks are used to load and unload materials from trailers or railcars, caution must be used to maintain safety.
- First and foremost, be aware that reach trucks have low clearance and small wheels. They may bottom out or become stuck on small obstacles that a standard fork truck would clear with ease.
- This may include the edges of dock plates leading into trailers or railcars. When using a reach truck to load trailers, be aware of this hazard and proceed slowly and cautiously.
- Do not force the reach truck over obstacles it cannot safely clear.
- Before entering any trailer or railcar with any type of powered industrial truck, make sure the trailer brakes are set and the wheels chocked. This will prevent the trailer from moving or slipping away from the dock while the heavy reach truck travels in and out.
- Be aware that cab-less trailers must be supported by a jack stand before being entered by any powered industrial truck.
- Also, be sure that dock boards and bridge plates are secured and are rated for the capacity of your truck and load.
- The flooring of trailers and railcars should be inspected before entering. Look for any cracks, holes or rotten wood that may indicate a faulty floor system.

PREPARE FOR THE SAFETY MEETING OR TRAINING SESSION

Review each section of this Leader's Guide as well as the videotape. 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 videotape program. Play the videotape 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 videotape 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 videotape program.

Place or secure extension cords to prevent them from becoming a tripping hazard.

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 to discuss common reach truck hazards and how to control those hazards through safe operating techniques.

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

Lead discussions about specific hazards at your facility that reach truck operators must be able to recognize and control to avoid injuries and property damage.

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

- How the stability and handling characteristics of a reach truck differ from those of forklifts and automobiles;
- What to look for during a pre-operational inspection;
- How to lift and move loads safely;
- How to properly travel on sloped surfaces;
- How to protect pedestrians from being injured by the truck;
- How to properly lift personnel with approved lifting devices;
- What precautions must be taken when working in trailers and railcars.

OPERATING REACH TRUCKS SAFELY
REVIEW QUIZ

Name _____ Date _____

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

1. What is the most common cause of reach truck injuries and property damage?
 - a. reach truck malfunction
 - b. pedestrians working too closely to reach trucks
 - c. improper operation

2. Reach trucks use a counterweight to balance loads that are extended away from the truck.
 - a. true
 - b. false

3. A reach truck must always be operated from the operator's platform.
 - a. true
 - b. false

4. Who is responsible for ensuring that each load lifted is within the capacity of the reach truck?
 - a. the person who stacked the load
 - b. the reach truck operator
 - c. the reach truck operator's supervisor

5. Loads should always face uphill regardless of whether you are going up or down a slope.
 - a. true
 - b. false

6. You should only allow qualified reach truck operators to ride on your truck with you.
 - a. true
 - b. false

7. Reach trucks must never be used to lift personnel.
 - a. true
 - b. false

8. If a trailer you intend to enter with a reach truck is not supported by a cab, a jack stand must be used for support.
 - a. true
 - b. false

OPERATING REACH TRUCKS SAFELY
ANSWERS TO THE REVIEW QUIZ

1. c

2. b

3. a

4. b

5. a

6. b

7. b

8. a