

Safe forklift operation

By Arne Larson



Survey the workplace to determine what types of forklifts are used in your facility. This information may be useful later to answer specific questions during this presentation. Cover the following points that describe a forklift and explain why it is different from other vehicles.

Explain that forklifts are used by many organizations to move and lift materials in a safe, efficient manner. The Occupational Safety and Health Administration (OSHA) regulation 1910.178 requires that all forklift operators be properly trained before operating a forklift. Refresher training is required at least every three years. However, individuals may need additional training to maintain forklift driving skills and operations knowledge.

Share these examples of how forklifts differ from other vehicles.

- Steer with rear wheels
 - Forklifts can turn sharply.
- Watch out for rear-end swing clearance.
- Designed for one person
 - There is no extra seat for passengers.
 - Riders not allowed.
- Smaller but usually heavier
 - The building or truck floor must be capable of bearing the weight of the forklift, the operator and the load.

- Lifts and carries heavy loads
 - The manufacturer's rated capacity is on the attached data plate.
 - Never exceed the stated lifting capacity.
- Changing center of gravity
 - As the load gets heavier and higher or tilted forward, the vehicle's center of gravity changes.
 - The forklift can tip over if the center of gravity gets outside of the stability triangle.
- Daily inspection required
 - OSHA requires a daily inspection of critical components before use.

Ask employees to provide other features of how forklifts differ from other vehicles. Use a flip chart to list employees' suggestions. Discuss the stability triangle and how the center of gravity changes when lifting a load (most good forklift safety videos explain this). Dropping a load or tipping over a forklift can seriously injure operators or bystanders.

Ask attendees to list other important do's and don'ts of forklift driving. Discuss any specific hazards unique to your forklift operations. Review the recommended guidelines below and talk about why they are important.

Share these safe operating guidelines.

- Document the daily inspection of horn, lights, brakes, tires, hydraulics, lift controls, steering, fuel system and any other important components.
- Shut off the engine, set the parking brake and lower the forks to the floor when leaving a forklift unattended.
- Fasten the seatbelt (if the forklift has one).
- Follow the 'rules of the road' — obey all traffic signs and markings.
- Carry the load low, with the forks tilted back slightly.
- Drive slowly and carefully — watch out for pedestrians and other vehicles.
- Prevent others from passing or working under a raised load.
- Turn and drive in reverse if a load obstructs forward view.
- Do not allow passengers on a forklift.
- Use only approved personnel platforms to elevate another worker.
- Keep the load pointed uphill when going up or down an incline.
- Observe the lifting capacity marked on the data plate.

Conclude by reviewing the safety tips below, and ask the group if they can think of any others specific to their workplace.

- Yield to pedestrians in shared work areas.
 - Some facilities mark forklift traffic lanes and pedestrian walkways.
- Sound the horn when entering blind intersections or doorways.
 - Forklift drivers should warn others of their approach.
- Use dome or convex mirrors, where available, for better visibility at intersections and blind corners.
- Ensure adequate ventilation — avoid carbon monoxide (CO) buildup.
 - Gas- and propane-powered forklifts emit CO in the exhaust.
 - Use CO monitors to check the area (the average concentration should be less than 25 parts per million).
- Maintain back-up alarms — never disable any safety device.
 - Drivers must always look in the direction of travel.
- Prohibit stunt driving and horseplay with any vehicle.
 - Prevent forklift accidents by driving safely at all times.
- Secure the load and drive slowly to prevent falling loads.
 - Watch out for unstable loads, especially when turning corners.

- Refuel forklifts in a safe place away from flammables and combustibles.
 - Do not permit smoking, sparks or open flames near refueling sites.
 - Use a ground strap if filling with gasoline from a can.

References

Publications

- ANSI/ITSDF B56.1, Safety Standard for Low Lift and High Lift Trucks, Industrial Trucks Standards Development Foundation.

Web sites

- Powered Industrial Trucks (Occupational Safety and Health Administration): www.osha.gov/SLTC/powerindustrialtrucks/index.html
- Training and Reference Materials Library, Powered Industrial Trucks (Occupational Safety and Health Administration): www.osha.gov/dte/library/materials_library.html#poweredindustrialtrucks
- Industrial Truck Operator Training Guide (Oregon OSHA): www.cbs.state.or.us/external/osha/pdf/pubs/forklift.pdf
- Forklift Trucks (Canadian Centre for Occupational Health and Safety): www.ccohs.ca/oshanswers/safety_haz/forklift/
- Forklift Operation & Safety Course Menu (Instructional Designs Inc.): www.free-training.com/osha/forklift/forkmenu.htm

Videos

BWC's Division of Safety & Hygiene's video library has a number of videos on forklift safety. These are available for loan to Ohio employers. Order a catalog by calling 1-800-OHIOWC (ask for the video library), or visit our Web site, ohiobwc.com.

Arne Larson is a safety specialist with the Lubrizol Corporation's research and testing facility in Wickliffe, Ohio. He has 15 years of experience in safety and industrial hygiene.

We always strive to improve the *Safety Leader's Discussion Guide*. Your feedback can help. Please e-mail your comments to Safety@ohiobwc.com.