FORKLIFT SAFETY PROGRAM

Rose-Hulman Institute of Technology
Table of Contents

SECTION
1.0 Purpose
2.0 Regulatory Reference
3.0 Scope
4.0 Responsibility
5.0 Definitions
6.0 Training and Recordkeeping
7.0 Procedures
FORKLIFT SAFETY PROGRAM

1.0 Purpose

The purpose of this program is to:

- Ensure all Rose-Hulman employees understand the hazards associated with powered industrial trucks (Forklifts)
- Ensure all Rose-Hulman employees who operate forklifts are familiar with the safe operation of the specific forklift they will operate.

2.0 Regulatory Reference

OSHA 29 CFR 1910.178

3.0 Scope

This program is applicable to all employees of Rose-Hulman, including contractors and subcontractors.

4.0 Responsibility

The Rose-Hulman Office of Environmental Health & Safety (EH&S) is responsible for the establishment, implementation, and review of this program. EH&S is responsible for developing and updating this program as appropriate, makes the written program available in written format and on the EH&S website. EH&S will provide employee training to meet the requirements of the program as necessary. EH&S maintains records for all training.

It is the responsibility of the employee to operate forklifts in the safest possible manner and adhering to this policy.

5.0 Definitions

Center of Gravity: the point on an object at which all of the object’s weight is concentrated. For symmetric loads, the center of gravity of the load is the middle of the load.

Counterweight: the weight that is built into the forklift’s basic structure and is used to offset the weight of the load, and to maximize the stability of the loaded forklift.

Fulcrum: the forklift’s axis of rotation when it tips over.

Grade: the slope of a surface, which is usually measured as the number of feet of rise or fall over a hundred foot horizontal distance, expressed as percent.

Lateral Stability: a forklift’s resistance to overturning sideways.

Line of Action: an imaginary vertical line through an object’s center of gravity.
Load Center: the horizontal distance from the load’s edge to the line of action through the load’s center of gravity

Longitudinal Stability: the forklift’s resistance to overturning forward or backward.

Moment: the product of the object’s weight times the distance form a fixed point (usually the fulcrum). In the case of the forklift, the distance is measured from the point at which the truck will tip over to the object’s line of action. The distance is always measured perpendicular to the line of action.

Stability Triangle: A three-point suspension system, including the vehicle’s steer-axle center and the rear wheels.

Track: the distance between the wheels on the same axle of the truck

Wheelbase: is the distance between the centerline of the vehicle’s front and rear wheels

6.0 Training and Recordkeeping

Forklift operators must be trained prior to operating a forklift without supervision, and retrained every three years. Training includes formal instruction, demonstrations of operations, and an evaluation of the trainee’s operation of the forklift. Successful completion of all aspects of the training results in certification.

Refresher training is also required if the operator has been observed operating the forklift in an unsafe manner, has been involved in an accident or near-miss, if workplace conditions change, or if a different forklift is to be driven.

Training must be performed by a competent person, certified as a forklift safety trainer. Employee will be trained in the operation of the forklift by a certified forklift operator, who is in attendance at all times during the trainee’s operation of the forklift. The certified forklift operator is fully responsible for safety issues during this training.

Training must include:
- Operating instructions, warnings, and precautions
- Forklift controls and instrumentation
- Engine or motor operations
- Steering and maneuvering
- Visibility and visibility restrictions due to loads
- Fork and attachment operation
- Vehicle load capacity
- Vehicle stability
- Maintenance and inspection to be performed by the operator
- Refueling and /or battery charging
- Operating limitations of the vehicle
- Familiarization of all physical aspects of the work area
- Load composition, stability, manipulation, etc.
- Environmental issues

Training records will be maintained by EH&S.
7.0 Procedures

The following are key regulations regarding the operation of forklifts. All operators are responsible for knowing and practicing these regulations.

General
- Modifications cannot be made to the forklift in any manner without written approval from the manufacturer.
- The name plate with the vehicle's load capacity must be visible at all times. The load capacity cannot be exceeded.
- Forklifts shall not be operated in areas containing hazardous gases or vapors of flammable liquids or gases, unless specifically designated by OSHA for those locations.

Training
- All operators must be trained to safely operate the forklift.
- Operators must be trained on the specific model of forklift they will be operating.
- Operators will attend refresher training and must pass recertification every three years or when conditions change.

Forklift Operations
- Forklift must be inspected prior to use. This inspection is to be done by each individual operator prior to their use of the equipment.
- Forklifts shall not be driven up to anyone standing in front of any fixed objects.
- No one is allowed to stand or walk under elevated forks, whether loaded or empty.
- No one is allowed to ride on the forks at any time.
- No body part is to be extended outside the operator's cage.
- When leaving a forklift unattended, the forks must be fully lowered, fork tips down, controls in neutral, power off, and brakes set. Unattended is defined as greater than 20 feet from the forklift.
- Caution must be used when entering trailers. Flooring must be intact and capable of supporting the forklift's weight. A visual inspection of the trailer floor must be done prior to entering.
- Engine must be shut-off prior to refueling.
- Any maintenance concerns or needed repairs must be reported immediately and the forklift taken out of service until the forklift is restored to safe operating conditions.

Travel
- All traffic regulations are to be followed.
- Maintain a minimum distance of 3 vehicle lengths at all times.
- The forklift operator must maintain vehicle control at all times.
- The forklift operator must yield right-of-way to pedestrians and emergency vehicles.
- All operators will slow down and sound horn at locations where visibility is obstructed.
- Reduce forklift speed when driving on wet or slippery surfaces.
- If the load obstructs the operator's forward view, travel with the load trailing.
- On any grade over 10%, the load must be positioned upgrade.
- When making turns reduce speed to prevent tipping vehicle.
- The load should be tilted back and raised only as far as necessary to clear travel surface.
Loading

- No load is to exceed the forklift’s weight rating.
- Center the load and place forks as far under the load as possible.
- Always tilt the load backward to stabilize the load and forklift.