

Forklift Safety



29 CFR 1910.178

Authorized Operators

- Must be trained and certified
- Must drive only the types of trucks for which they've received certification



Differences Between Forklifts and Automobiles

Forklifts:

- Often weigh more than a car
- Have reduced visibility
- Often use rear-wheel steering
- Operate in a more complex traffic environment
- Can ride less smoothly due to tire types
- Are more sensitive to shifts in center of gravity

Hazards of Forklift Operation

Vehicle Operations

- Load capacity
- Lift Height
- Load stability
- Visibility
- Steering
- Speed
- Turning
- Refueling
- Maintenance

Work Environment

- Floors/Surfaces
- Pedestrians
- Obstacles
- Blind spots
- Narrow aisles
- Intersections
- Docks & trailers

[Warehouse Video](#)

Lift Truck Accidents & Causes

- 680,400 accidents and 90,000 injuries each year to workers due to:
 - Tip-overs: 25.3%
 - Hit by forklift: 18.8%
 - Hit by falling load: 14.4%
 - Use of lift as elevator: 12.2%
 - Lift falls off dock: 7%
 - Improper maintenance: 6.1%

Causes of Forklift Fatalities

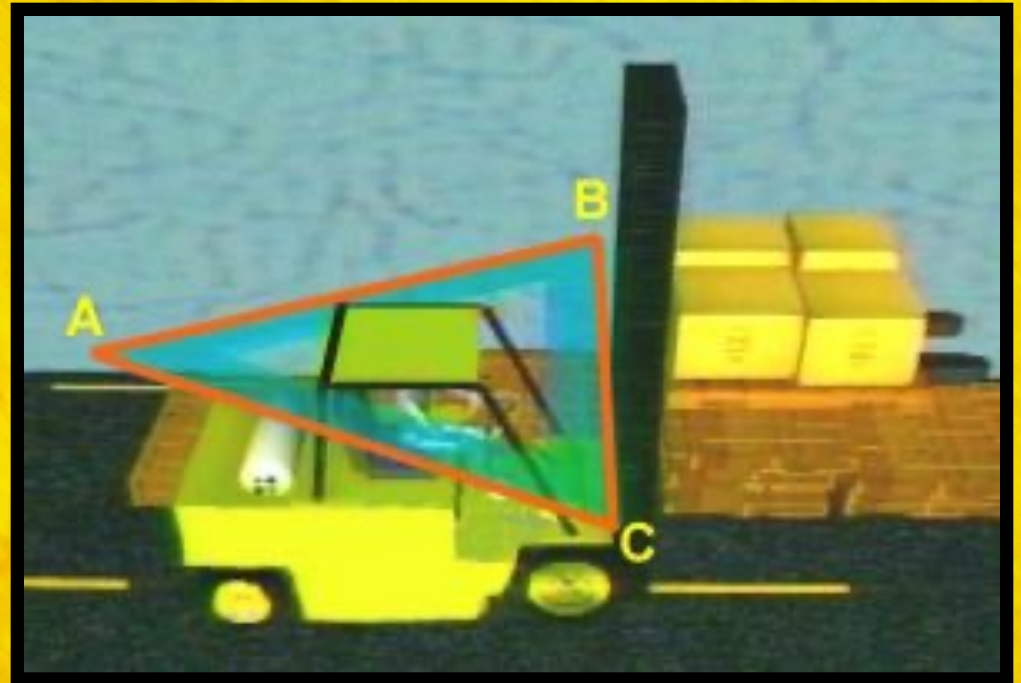
- Forklift overturned: 24%
- Struck by falling loads: 17%
- Struck by other truck: 14%
- Fall from forklift: 14%
- Crushed by forklift: 11%
- Ran off loading dock: 8%
- Worker making repairs on forklift: 6%

Forklift Safety

- Stability and center of gravity
- Load capacity & centering
- Driving do's and don'ts
- Rules of the road
- Parking
- Inspection
- Refueling

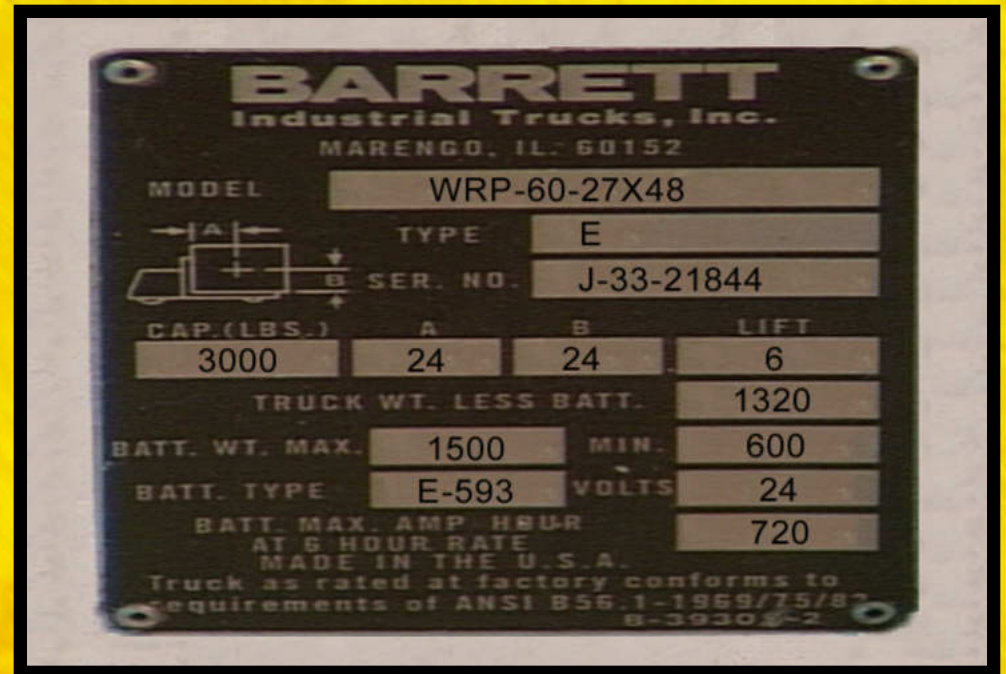
The Stability Triangle

- Support points A, B & C form stability triangle
- Center of gravity is the point at which load is concentrated
 - If center of gravity remains inside the triangle, the truck won't tip



Load Capacity

- Check name plate
- Don't exceed maximum:
 - Load capacity
 - Load center
 - Lift height
- Changing the load center changes the load capacity



Load Centering & Positioning

- Place heaviest load against back of forks
- Ensure loads are neatly stacked, stable, evenly distributed and secure
- Place forks under the load as far as possible
- Adjust forks to widest possible setting
- Tilt forks back for added stability

Safe Driving

- Match speed to load and conditions
 - Decrease speed at all corners and sound horn
 - Watch for pedestrians and obey posted traffic signs
- Safe driving
 - Keep forks as low as possible; don't drive with load raised
 - Position forks to tilt back slightly
 - If view is blocked, travel in reverse
 - Watch for overhead obstructions

Other Rules of the Road

- No passengers
- No lifting people
- Use your seat belt
- Keep hands and feet inside of truck
- No standing under forks when raised
- If following, maintain 3 length distance
- No passing at intersections

Ramps and Inclines

- If empty:
 - Drive in reverse up the incline
 - Drive forward down the incline
- If loaded:
 - Drive forward up the incline
 - Drive in reverse down the incline



Driving on Problem Surfaces

- Be aware of: oil spots, wet spots, loose object or holes
- Avoid if possible: ice, mud, gravel, sand and soft dirt
- Make sure area can support the weight of the truck and the load

Loading Docks & Trailers

- Be aware of the edges of loading docks
- Set brakes on trucks/trailers and chock wheels
- Inspect interiors
- Ensure that dock plate & interior surfaces can support weight
- Watch clearance

Parking

- Set forks flat on floor
- Place controls in neutral
- Shut off engines
- Set brakes
- Block wheels if on an incline
- Do not block emergency areas

If a Tip Over Occurs

- Don't jump
- Stay in your seat
- Grip wheel securely
- Brace yourself with your feet
- Go with the truck



Attachments

- Operate as if partially loaded
- May shift load center
- Be trained on specific attachments



Pre-Operation Inspection: Visual Circle Check

- Hydraulics
- Uprights
- Forks
- Attachments
- Leaks
- Tires/wheels
- Report problems to Transportation



Pre-Operation Inspection: In-seat check

- Brakes
- Steering
- Controls
- Lights & signals
- Engine
- Horn
- Fluid levels
- Battery
- Hour meter

Report problems to Transportation.

Refueling or Recharging

- Park in designated recharging/refueling area
- Ensure adequate ventilation
- Don't smoke
- No open flames, sparks, or electric arcs nearby
- Have fire extinguisher nearby
- Use proper personal protective equipment
- Always check lines, wires, hoses for leaks

Refueling Gas or Diesel Trucks

- Turn off ignition and lights
- Make contact between spout and fill pipe before pouring
- If a container must be used, make sure it is an approved container
- Check for leaks
- Clean up any spills



Refueling Liquid Propane Trucks

- Shut valve; let engine run until it stalls
- Turn off ignition and lights
- Check for leaks and damage to connections
- Wear protective clothing
- Remove empty tank and store it
- Install new tank securely



Summary

- Ensure load stability to prevent tip-overs
- Follow the rules of the road
- Use extra caution with special situations
- Inspect vehicles and report any problems
- Use care when refueling/recharging

Accident Video

Questions & Quiz