



## SECTION 4

## CHAPTER 5

### OPERATING FORKLIFTS

#### Purpose

Operating forklifts safely will help prevent injuries to personnel and equipment damage.

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#### Scope

This chapter applies to all Company employees who work near or operate forklifts.

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## Training Requirements

**Purpose** This document outlines the training requirements necessary to operate a forklift

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**Policy** To drive a forklift, employees must:

- be authorized by the Yard Manager
- complete the Forklift Training Program to meet OSHA 1910.178 requirements every 3 years
- receive supervised on-the-job training
- be trained to operate multiple types of forklifts when present

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**Supervisor's responsibilities** Each supervisor is responsible for:

- verifying that employees under his/her supervision have:
  - been authorized by the Yard Manager
  - completed the Forklift Training Program
  - assigning a qualified person to train new employees using the Forklift Training Program or ensure training is completed by a qualified third party
- ensuring that training is done properly
- following up with drivers to verify that training is effective

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**Qualifications  
for trainers**

Trainers must:

- have completed the Forklift Training Program, **OR**
  - possess a recognized degree or certificate, **OR**
  - have demonstrated the ability to train and evaluate powered industrial truck operators
  - be competent at operating forklifts
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## Training

Training must include:

- formal instruction
  - lecture
  - discussion
  - videos, power point presentations, and written materials
- practical training, and
- operator evaluation

Additional training or re-training is required when the operator:

- has been observed to operate the vehicle in an unsafe manner
- has been involved in an accident or near-miss incident
- operator has received an evaluation that reveals that the operator is not operating the truck safely
- is assigned to drive a different type of truck, **OR**
- a condition in the workplace changes in a manner that could affect safety operation of the truck

Documentation of training must be filed and will include:

- operator name
- training date
- tests of knowledge and date
- operator evaluation and date
- trainer/evaluator name
- a copy of the material used during training

- the last 3 years of training

## **Training content for truck-related topics**

Forklift operators shall receive initial training in the following topics:

- operating instructions, warnings, and precautions for the types forklifts the operator will be authorized to operate
- differences between the forklift and an automobile
- forklift controls and instrumentation: where they are located, what they do, and how they work
- engine or motor operation
- steering and maneuvering
- visibility (including restrictions due to loading)
- fork and attachment adaptation, operation, and use limitations
- vehicle capacity
- vehicle stability
- any vehicle inspection and maintenance that the operator will be required to perform
- refueling and or charging and recharging of batteries
- operating limitations

Any other operating instructions, warnings, or precautions listed in the operator's manual for the type of vehicle that the employee is being trained to operate.

## **Training content for workplace-related topics**

- Surface conditions where the vehicle will be operated
- Composition of loads to be carried and load stability
- Load manipulation, stacking, and un-stacking



- Pedestrian traffic in areas where the vehicle will be operated
- Narrow aisles and other restricted places where the vehicle will be operated
- Hazardous (classified) locations where the vehicle will be operated
- Ramps and other sloped surfaces that could affect the vehicle's stability
- Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation

## Preparing for Forklift Operations

**Purpose** This document outlines safe work practices in preparing for forklift operations. Forklifts are widely used by the Company.

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**Policy** Before using a forklift, operators must:

- be certified to operate a forklift
- put on the required personal protective equipment
- inspect the vehicle using the shift inspection procedure in “Maintaining a Forklift” in this chapter
- load the forklift according to the guidelines in this document, if loading and transporting forklift is required

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**Personal protective equipment** Standard PPE is required when operating forklifts. This includes:

- hard hats
- steel toed boots
- safety glasses

Gloves are optional.

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## Determining load capacity

Loads are determined by the:

- equipment capacity (on the inspection plate or mast)
- load's center of gravity (CG)

Do **not** load forklifts beyond their rated capacity.

Refer to OSHA 1910.178 for additional guidelines.

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## Choosing fork size

Use long forks for pipe and short forks for compact heavy loads. **IF** you must use a long fork for a heavy load, **THEN** make sure that the weight of the load is as close to the mast as possible.

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## Stacking and securing the load

Properly stack and secure the load according to the following guidelines:

- center forks under all loads
- load all loose material with a pallet
- do **not** use broken pallets, flats, or boxes
- keep flat loads level

**IF** you use a sling to secure materials, **THEN** the sling must have:

- a valid test certificate
  - an SWL (Safe Working Load) tag
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**Loading  
rounded items**

Tilt the mast all the way back to load rounded items, such as pipe. This raises the forks up and pushes everything to the back of the fork.

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## Driving Forklifts

### **Purpose**

This document describes safe work practices governing the operation of forklifts, including:

- authorized personnel
- policies to ensure personal and personnel safety
- general precautions for driving forklifts safely
- additional precautions for driving loaded vehicles
- additional precautions for driving forklifts up and down hills
- safety requirements for using forklifts to transport personnel

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### **Authorized personnel**

Only trained personnel may operate forklifts. See "Training Requirements" in this chapter for more information.

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## Ensuring personal safety

To minimize the risk of serious injury:

- do **not** reach or place any part of your body:
    - outside the running lines of a forklift
    - between or on mast uprights
    - between any other parts of the forklift where sheer or crushing hazards exist
  - do **not** stand, pass, or work under the forks
  - keep all doors and chains closed and in place when operating a forklift (particularly important while the load is elevated)
  - If the forklift must be loaded or unloaded :
    - The trailer must be secured by chocks
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**Ensuring the safety of nearby personnel**

To minimize the risk of serious injury to nearby personnel:

- do **not** allow anyone to ride as a passenger on the forklift or
- do **not** allow personnel to reach or place any part of their bodies:
  - outside the running lines of a forklift
  - between or on mast uprights
  - between any other parts of the forklift where sheer or crushing hazards exist
- do **not** allow anyone to stand, pass, or work under the forks
- ensure that there are no personnel in the path of the forklift or before starting the vehicle
- use the horn to warn others when your vision is blocked or visibility is poor
- ensure the alarm is functional, if equipped, to alert nearby personnel that you are backing up
- sound horn, when not equipped with a backup alarm, to alert nearby personnel that you are backing up

**Starting the engine**

Use an established pre-start-up routine before using the following procedure to start the engine.

Step	Action
1	Listen for unusual vibrations, sounds and noises from the engine or motor area. Shut down the power immediately if you hear or feel anything which may damage the equipment.
2	Check the gauges. They should be reading correct pressures, temperatures, RPMs, and time meter.
3	Use the horn and lights to see if they operate properly.

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<b>4</b>	Operate each gear and control and check for smooth operation. <b>IF</b> it is jerky or sluggish, <b>THEN</b> additional hydraulic fluid or grease may be needed.
<b>5</b>	Always ensure the unit is working properly and correct any deficiencies prior to use.

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## **Driving forklifts safely**

Only drive forklifts where space and terrain allow for safe operation. Look for signs marking unsafe places.

Always look in the direction of travel and on either side to ensure that employees and other obstacles are not in the path.

When approaching intersections, cross aisles, or other areas where visibility is poor, slow down and sound the horn.

Obey the following speed limits unless alternatives are posted:

- 5 MPH indoors
- 10 MPH outdoors.

Stunt driving and horseplay are prohibited.

See the chapter on *Safe Operation of Company Vehicles* for additional general safety regulations.

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## Preventing damage

To prevent damage to the forklift, or work surface, **never** drive the forklift:

- over objects in the road or path
  - on any floor, sidewalk, or platform that will not safely support the loaded vehicle
  - on docks, **unless** there is a sign specifically stating the dock is safe for forklifts
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## Driving in reverse

While driving in reverse, you must:

- check behind you to verify that the path is clear before moving the forklift
  - ensure the back up alarm is functioning properly, if equipped, to alert nearby personnel that you are driving in reverse
  - sound the horn, if not equipped with backup alarm, to alert nearby personnel that you are driving in reverse
  - drive slowly
  - use extreme caution
  - constantly look in the direction of travel and on each side to ensure that other employees and obstacles are not in the path
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## Driving a loaded forklift

Additional precautions need to be taken when driving a loaded forklift to prevent accidents or injury caused by toppling the load or running into obstacles and/or personnel.

Minimize the risk of accidents by:

- driving with the load in front whenever possible
- taking special care when turning corners
- avoiding sudden stops/starts
- raising a load only far enough to permit movement **OR** to place it in its designated location
- avoiding exposed lines (sewer, gas)

**IF** the load blocks your vision, **THEN** drive in reverse.

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## Driving up and down hills

Forklifts may be driven uphill or downhill. When driving on steep grades, operators must:

- drive slowly—5 MPH
- raise the forks only as far as necessary to clear the road surface

**IF** you are driving a forklift up a steep hill, **THEN** drive with the load facing uphill to prevent the load from toppling off the forklift into the path. This means that you must drive:

- forward **up** steep hills
  - in reverse **down** steep hills
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## Using forklifts to transport personnel

Passengers are not permitted on:

- forklifts
- the forks
- the load

**IF** operators are using forklifts to hoist personnel, **THEN:**

- use approved personnel baskets
- provide the proper “Fall Protection”
- lift forks slowly, keeping your eyes overhead to avoid crushing personnel into overhead obstacles
- lower forks slowly

Personnel in baskets must **not:**

- jump off the forks
  - put their hands on the mast
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## Parking Forklifts

**Purpose** This document outlines the safe work practices for parking a forklift.

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### Procedure

When...	The operator must...
parking the forklift,	<ol style="list-style-type: none"><li>1. set the brakes</li><li>2. lower the forks completely</li><li>3. bring the mast to vertical position</li><li>4. turn off the motor</li><li>5. chock the wheels when not in use</li><li>6. remove keys</li></ol>

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## Maintaining Forklifts

### Purpose

This document describes safe work practices and safety regulations for:

- avoiding hazards during maintenance and inspection operations
- cleaning forklifts
- repairing forklifts
- performing required inspections

### Safety hazards

While maintaining forklifts, personnel will come in contact with potentially hazardous parts of the vehicle. The following table outlines the most common hazards and precautions to take to prevent them.

To avoid...	Personnel must ...
a hydrogen gas explosion,	<b>not smoke OR bring open flame:</b> <ul style="list-style-type: none"> <li>● near the battery</li> <li>● near the forklift during refueling</li> <li>● near any propane powered forklift</li> </ul>
electric shock,	<b>Do not</b> lay tools or pieces of metal on a battery or its terminals.

**Checking mechanical safety equipment**

All forklifts must have operable:

- fire extinguishers
- backup alarms, if equipped,
- horn

**Cleaning forklifts**

Keep forklifts clean at all times. Be aware of excessive dust in your work area.

**Repairing the forklift**

Have a qualified mechanic complete all forklift repairs.

**Required inspections**

This table outlines the required inspections.

Required Inspections	Frequency	Responsibility
Routine	Daily	Operator
Company inspection	Monthly	Yard Manager or designee

## Performing daily routine inspections

During routine (daily) inspections, check the:

- horn
- back-up alarm, if equipped
- lights
- battery
- tires
- controller
- brakes
- steering mechanism
- cooling system
- lift system:
  - forks
  - chains
  - cable
  - limit switches
- fire extinguishers

While the forklift is running, check the transmission fluid.

**IF** the forklift has:

- fluid leaking from it
- any defects or broken systems

- any other conditions that the operator considers to be unsafe,

**THEN:**

- report these conditions to the supervisor immediately
- remove the forklift from the work area, if possible
- alert all other personnel of the deficiencies
- lockout/tagout the forklift and secure keys
- do **not** use the forklift until it has been repaired

**Performing inspections**

The following checks must be performed during the monthly inspection.

Item	Requirement
Oil level	Read between add and full marks.
Fuel level	Do <b>not</b> fill while the engine is running.
Hydraulic fluid level	At least ½ of the reservoir.
Coolant level gauges	Check condition and readings while forklift is in idle position.
Tires	<ul style="list-style-type: none"> <li>● Solid tires should be free of cuts and pits.</li> <li>● Inflatable tires should be properly inflated. Check with air gauge.</li> </ul>
Belts	<ul style="list-style-type: none"> <li>● Free of oil or grease, cuts, cracks, and damage.</li> <li>● Have proper tension to prevent slippage.</li> </ul>
Fan blades	Check for looseness and damage.

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Item	Requirement
Engine cooling system	Check: hoses, clamps, connections and fittings.
Battery	Check that the fill caps are securely in place, in good condition, and free of foreign matter.
Exhaust system	Check that the piping and muffler are free of rust and holes,

	and properly positioned to carry heat and exhaust away from operator.
Panel doors and under the seat	<p>Check for loose, exposed, or broken:</p> <ul style="list-style-type: none"> <li>● fittings</li> <li>● wires and connections</li> <li>● springs and other parts</li> </ul>
<p>Operating and lifting parts of the truck, including:</p> <ul style="list-style-type: none"> <li>● mast and forks</li> <li>● overhead guard</li> <li>● hydraulic cylinder</li> <li>● frame and backrest</li> </ul>	<p>Check for warping or damage</p>
Metal/Forks	<p>Check for rust, corrosion, damage, or breakage</p>
Leaks	<p>Check under the forklift and around the:</p> <ul style="list-style-type: none"> <li>● surface of motor or engine</li> <li>● filters</li> <li>● tanks and reservoirs</li> <li>● hydraulic lines and cylinders</li> <li>● hoses, tubing, and piping</li> </ul>
Non-slip surfaces	<p>Replace if no longer non-slip</p>
Overall housekeeping	<p>Remove all foreign material, including:</p> <ul style="list-style-type: none"> <li>● rags</li> <li>● paperwork</li> <li>● tools</li> <li>● spare parts</li> </ul> <p>Clean:</p> <ul style="list-style-type: none"> <li>● seat and metal surfaces</li> <li>● oil and grease (especially on step ups and standing surfaces)</li> <li>● spills off floor areas</li> </ul>
Cab	<p>Check: Seatbelts, operating lights, mirrors, horn, steering, emergency brake, backup alarm (if equipped), seat, and seat</p>

	adjustment
Propane system	Ensure: <ul style="list-style-type: none"><li>• the orientation pin is positioned at the base of the bottle which will ensure the relief valve is positioned at the top to release gas to vent instead of liquid</li><li>• the hydro-test dates of the propane bottle are current within a 5 year period</li></ul>