

**California Institute of Technology**

**Forklift and Industrial Lift Truck  
Program**



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## Purpose

The purpose of this Program is to ensure that using a forklift is implemented as a functional process at the Institute for eliminating hazards from the workplace in compliance with Cal/OSHA Title 8, California Code of Regulations (CCR), § 3650. The Program provides employees with information and guidelines which will help them operate the equipment in compliance with safe work practices, regulations, standards, and are properly trained and certified.

## Definitions

**Authorized Forklift Employee** – An employee who has successfully passed a written and in-field skills test for forklift and industrial lift truck certification.

**Data Plate** – Manufacturer’s equipment specification and information data, which includes load rating/lift capacity, lift heights, load center measurements, vehicle weight, and vehicle attachments.

**Electrical Power Jack** – An Electrical Powered Lift that the operator walks behind that is made for carrying palletized material.

**Forklift** - A forklift is a powered industrial truck used to lift and move materials short distances.

**Masts** – Part of the fork carriage assembly that the hydraulic lift cylinders are attached which allows the load to be lifted up and down.

## Responsibilities

### Facilities Management

- Ensure Forklift and Industrial Lift Trucks are not put back into service until necessary repairs have been made and are in safe operating condition.
- Ensure that service and repair to Forklift and/or Industrial Lift Trucks are done in a timely manner.
- Maintain maintenance records for each Forklift and Industrial Lift Trucks for at least a year.
- Ensure that when Forklift and/or Industrial Lift Trucks operate where general lighting is less than 2 foot-candles per square foot, the Forklift and/or Industrial Lift Truck shall be provided with directional lighting.

## Supervisors

- Ensure that all Authorized Forklift Employees are trained in the significance and purpose of this Forklift and Industrial Lift Truck Program;
- Ensure that all Authorized Forklift Employees follow all rules and procedures under the Forklift and Industrial Lift Truck Program;
- Ensure that non-Institute personnel are not allowed to operate Institute Forklift and Industrial Lift Trucks;
- Maintain, for at least one year, pre-operation checklists for Forklift and Industrial Lift Trucks;
- Confirm that an employee has placed an out of service tag on the Forklift and/or Industrial Lift Truck's steering wheel;
- Notify Facilities Management of a Forklift and/or Industrial Lift Truck that has malfunctioned and taken out of service;
- Ensure that Authorized Forklift Employees do not operate Forklift and Industrial Lift Trucks that have malfunctioned and have been taken out of service; and
- Notify Facilities Management of Trucks that have malfunctioned and have been taken out of service.

## Employees

- Be trained and certified in Forklift and Industrial Lift Trucks when using Forklift and Industrial Lift Trucks;
- Perform pre-operation inspections, using the Pre-Operation Checklist (See [Appendix A](#)), prior to commencement of work;
- Place an out of service tag on the Forklift and/or Industrial Lift Truck's steering wheel in the event that it does not pass the Pre-Operation Checklist;
- Notify their Supervisor of a Forklift and/or Industrial Lift Truck that has not passed the Pre-Operation Checklist; and
- Notify their Supervisor of all Forklift and Industrial Lift Truck accidents, incidents, or near misses immediately.

## Environment, Health, and Safety

- Coordinate forklift training and certification for departments; and
- Conduct annual reviews of the Forklift and Industrial Lift Truck Program.

## Program Procedures

### Pre-Operation Inspection

1. Employee shall inspect and complete the Pre-Operation Inspection Checklist (See [Appendix A](#)) and submit it to the appropriate Institute Supervisor or designated employee.

2. If deficiencies are noted during the Pre-Operation Inspection the employee must place an out of service tag on the Forklift and/or Industrial Lift Truck's steering wheel.
3. Any deficiencies noted in the Pre-Operation Inspection Checklist must be reported to their Supervisor.

### Carrying Loads

1. Check that the load does not exceed the Forklift and/or Industrial Lift Truck's rated load capacity as stated on the Forklift or Industrial Lift Truck Data Plate.
2. The loads must be safely arranged, stable, and centered prior to a move.
3. Forks should be spread open and locked into place when moving a load.
4. Loads of excessive width, length, or height shall be balanced, braced, and secured to prevent tipping or falling.
5. When carrying loads downgrade the travel path must be with the load trailing and the load first when going upgrade.

### Operating Procedures

1. Before operating the Forklift or Industrial Lift Truck conduct a Pre-Inspection.
2. The operator must wear a seatbelt at all times.
3. Passengers are not allowed on Forklifts and/or Industrial Lift Trucks.
4. Horseplay is not allowed on or around any Forklift and/or Industrial Lift Truck.
5. The operator must not allow anyone to stand or walk underneath the forks.
6. The operator must not elevate anyone with a Forklift or Industrial Lift Truck.
7. The operator must not drive up to anyone standing in front of a fixed object such that the person could be caught between the Forklift or Industrial Lift Truck and an object.
8. Ensure that a Forklift and/or Industrial Lift Truck is not operated with a leak in its fuel system.
9. The operator must keep all body parts within the confines of the Forklift or Industrial Lift Truck.
10. The operator must not operate the Forklift or Industrial Lift Truck on a floor or surface that will not support the weight of the Forklift or Industrial Lift Truck.
11. If the Forklift or Industrial Lift Truck needs to be left unattended (operator is over 25 feet from or out of sight of the Forklift or Industrial Lift Truck), the operator must set the brakes, the mast brought to the vertical position, and the forks are left in the down position or:
  - i. The power shall be shut off and, when left on an incline, the wheels shall be blocked: or

- ii. The power may remain on provided the wheels are blocked front and rear.
12. If the operator must park on an incline, the wheels of the Forklift or Industrial Lift Truck must be blocked or chocked.

## Traveling

1. When traveling with or without a load, the forks must be retracted back and raised as high as necessary to clear the surface traveling on, but no higher than 6 inches from the surface.
2. Grades shall be ascended or descending slowly.
3. Follow all Institute driving policies. Pedestrians must be given the right of way.
4. Maintain a safe distance, approximately three truck lengths, from a vehicle ahead of you.
5. Do not pass another vehicle traveling in the same direction.
6. Slow down and sound the horn when approaching places where vision is obstructed.
7. If the load obstructs the forward view, the driver shall travel with the load trailing.
8. Never turn sideways on an incline.

## Training

### Supervisors

- Prior to certification a Supervisor may allow an employee to operate a powered Industrial Truck only:
  - (1) Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
  - (2) Where such operation does not endanger the employee or other employees.
  - (3) Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, and written material), practical training (demonstrations performed by the trainer and practical exercises performed by the employee) and evaluation of the operator's performance in the workplace.
  - (4) All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered Industrial Truck operators and evaluate their competence.
- Will coordinate with Environment, Health, and Safety in scheduling initial and reoccurring forklift training for their employees that fall under this Program.

Reoccurring training will be every three years unless factors mandate more frequent refresher training.

- Will coordinate refresher training, in relevant topics, for their employees when:
  - (1) The operator has been observed to operate the vehicle in an unsafe manner;
  - (2) The operator has been involved in an accident or near-miss incident;
  - (3) The operator has received an evaluation that reveals that the operator is not operating the truck safely;
  - (4) The operator is assigned to drive a different type of truck; or
  - (5) A condition in the workplace changes in a manner that could affect safe operation of the truck.



## Appendix A: Forklift Pre-Operation Inspection Checklist

Operator \_\_\_\_\_

Date \_\_\_\_\_

Forklift # \_\_\_\_\_

Hour Meter Reading \_\_\_\_\_

***Operator must perform a pre-operation inspection prior to operating the forklift.***

Before starting the engine check the following:

Visual Inspection	Status		Remarks	Date Corrected
	OK	Service Needed		
Warning decals, capacity plate, etc. are legible				
Forks/locking pins, carriage, mast (physical damage)				
Lift System (hydraulic lines, chains, etc.)				
Wheels, tires, lug nuts				
Fuel Tank (secured, connections, hoses, leaks)				
Engine Oil (level and leaks)				
Transmission ( level and leaks)				
Engine Belts				
Hydraulic Tank (Check for leaks)				
Overhead Guard				
Seatbelt				
Other				
Other				
Other				

After starting the engine check the following:

Visual Inspection	Status		Remarks	Date Corrected
	OK	Service Needed		
Engine (Listen for unusual sounds)				
Check instruments for normal readings				
Exhaust system (excessive smoke)				
Wipers, lights, and signals				
Horn and back up alarms				
Lift system (lift, tilt, and side shift)				
Transmission and clutch				
Brakes				
Steering				
Other				
Other				
Other				

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