



# Forklift Safety

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# Presentation Objectives

- ✓ Define Powered Industrial Trucks (PIT)
  - ✓ Discuss the Benefits of Forklift Training
  - ✓ Discuss the Different Types of Forklifts
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- ✓ Discuss Forklift Training Requirements
  - ✓ Discuss Why is Forklift Training Important

# PIT Definition



- An industrial vehicle that carries, pushes, pulls, stacks or tiers loads.
- Include fork trucks, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines.
- Excludes vehicles that are used for earth-moving or over the road hauling and compressed air or nonflammable compressed gas-operated industrial trucks



# Benefits of Forklift Training:

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## **REDUCES ACCIDENTS**

by teaching correct methods of avoiding accidents

## **REDUCES PRODUCT DAMAGE**

by teaching best load handling techniques

## **REDUCES EQUIPMENT DAMAGE**

by giving instruction in correct operation and handling

## **REDUCES LOST TIME**

by reducing accidents, and unplanned work stoppages

# Benefits of Forklift Training (Cont.):

## **INCREASES OPERATOR CONFIDENCE**

by showing correct methods of operation

## **INCREASE PRODUCTIVITY**

by increasing operator skills

## **INCREASES EMPLOYEE MORALE**

by showing management's concern for employee health

## **INCREASES COMPLIANCE**

by ensuring compliance with the OSHA Forklift Standard, 1910.178





# **Benefits of Forklift Training** (Cont.):

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## **INCREASES EQUIPMENT LIFE**

by ensuring that forklifts are:

- Properly operated
- Properly maintained in accordance with manufacturers recommendations
- Inspected for damage daily and prior to use
- Taken out of service if damaged and until repaired

# Classes of Commonly-Used Powered Industrial Trucks\*

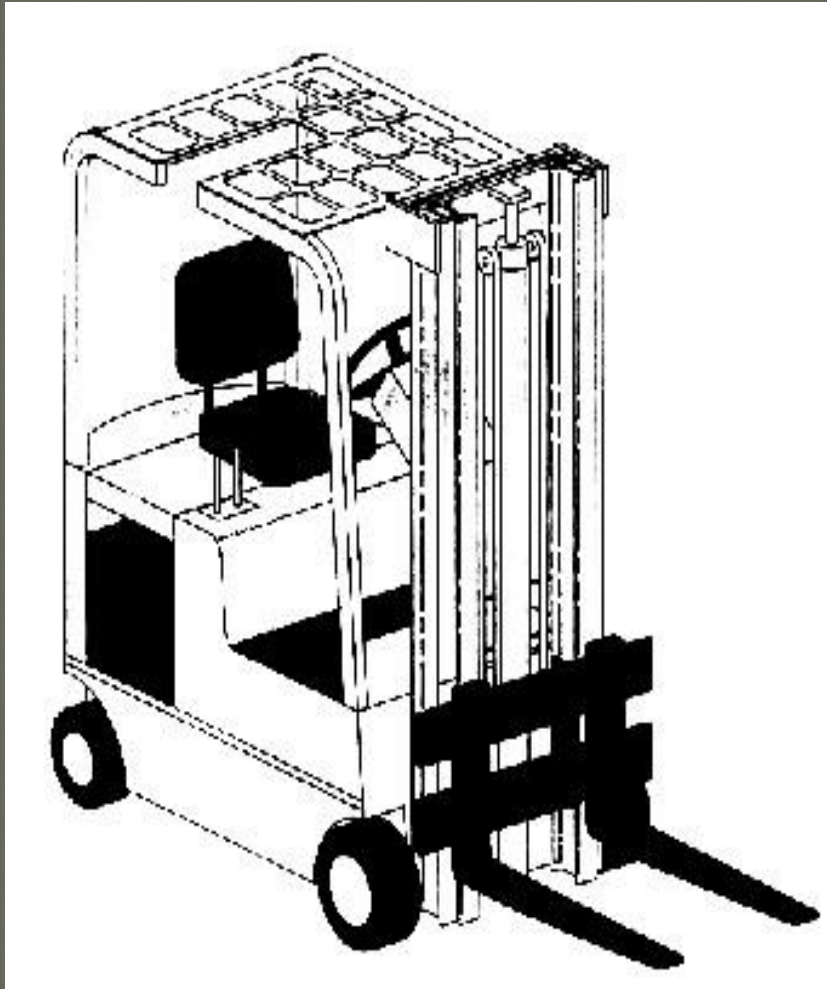
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- The Industrial Truck Association has placed powered industrial trucks into 7 classes.
  - Class I - Electric motor rider trucks
  - Class II - Electric motor narrow aisle trucks
  - Class III - Electric motor hand trucks or hand/rider trucks
  - Class IV - Internal combustion engine trucks (solid/cushion tires)
  - Class V - Internal combustion engine trucks (pneumatic tires)
  - Class VI - Electric and internal combustion engine tractors
  - Class VII - Rough terrain forklift trucks

Note that this classification refers to commonly-used vehicles and does not include all powered industrial trucks covered by the OSHA standard.

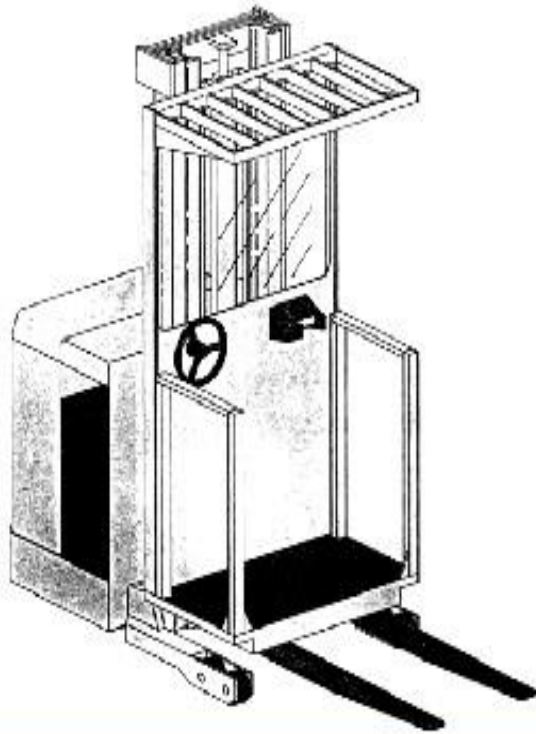


# Class I - Electric Motor Rider Trucks

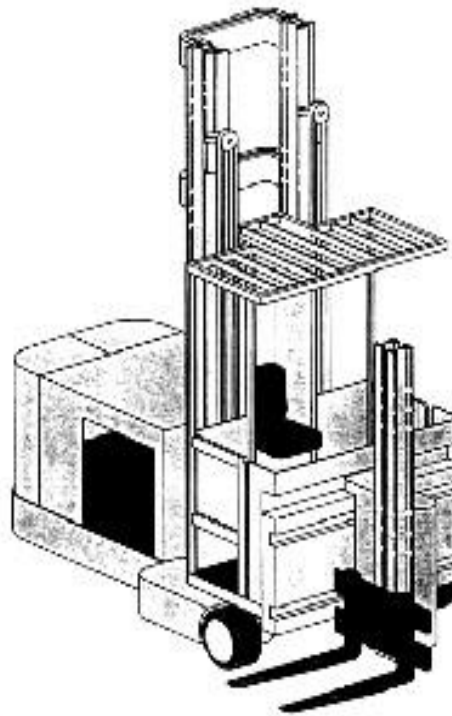


Sit Down Rider - Electric

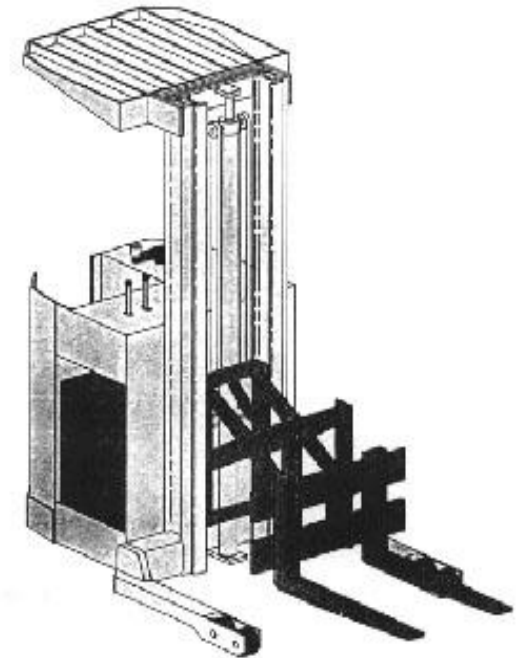
# Class II - Electric Motor Narrow Aisle Trucks



**Order Picker**

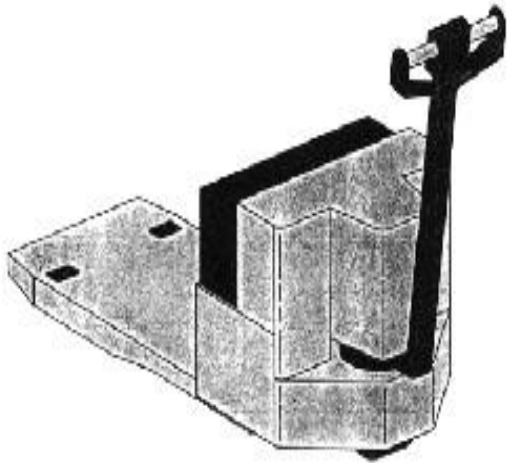


**Turret Truck**

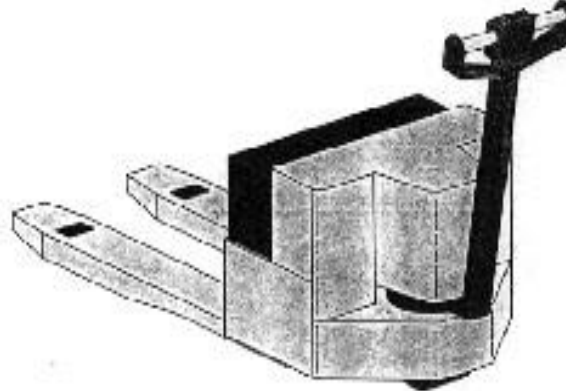


**Reach Type  
Outrigger**

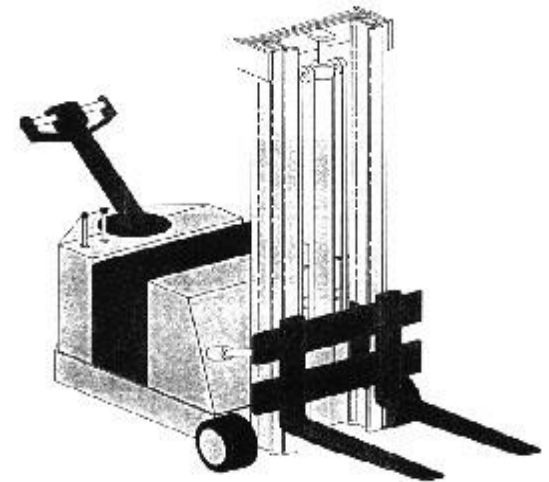
# **Class III - Electric Motor Hand or Hand/Rider Trucks**



**Low Lift Platform**



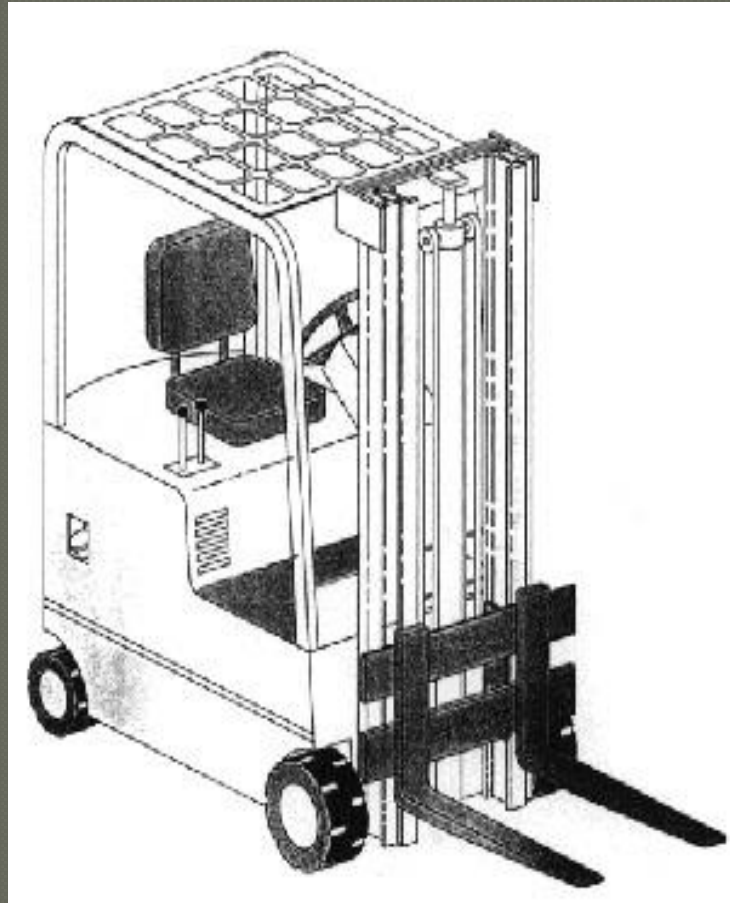
**Low Lift  
Walkie Pallet**



**High Lift  
Counterbalanced**

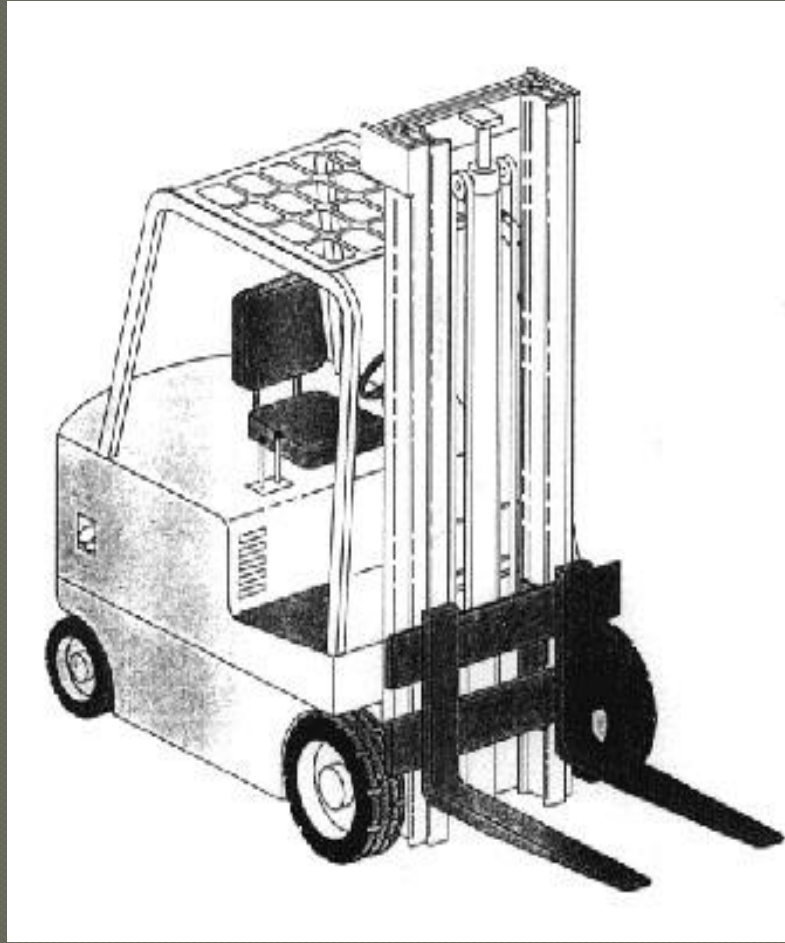


# **Class IV - Internal Combustion Engine Trucks - Cushion (Solid) Tires**



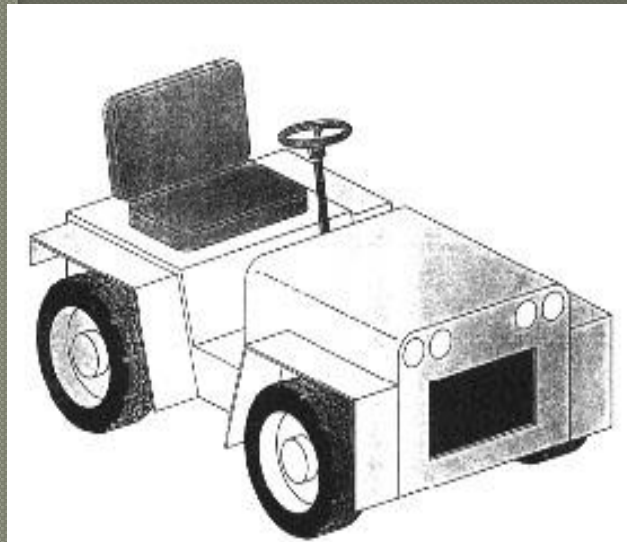
Fork, counterbalanced (cushion/solid tires)

# Class V - Internal Combustion Engine Trucks - Pneumatic Tires



Fork, counterbalanced (pneumatic tires)

# Class VI - Electric & Internal Combustion Engine Tractors



Sit-down rider

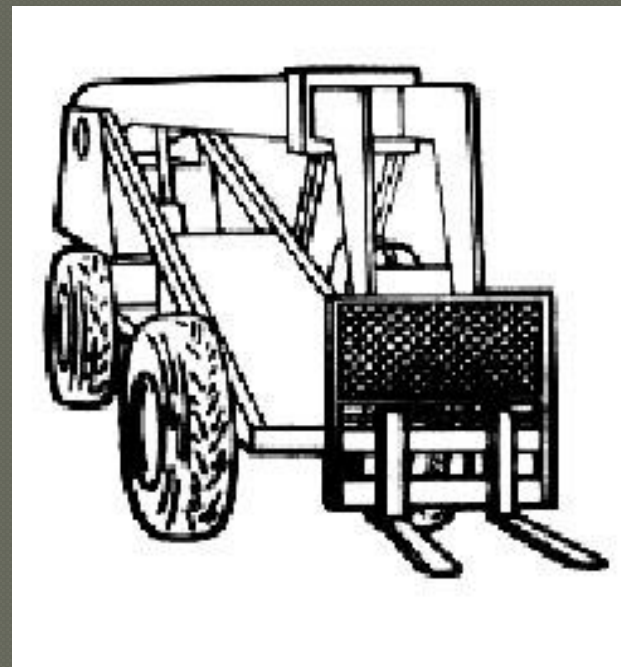


# Class VII - Rough Terrain Forklift Trucks

- Straight-mast



- Extended-reach



# Training Requirements

## Employer & Operator

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## Responsibilities

# Employer Responsibilities

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- Provide employees with training and evaluation once every three years, after a near-miss or an accident, and if an employee has been observed operating a forklift in an unsafe manner (i.e., horseplay)
- Employer is to document and certify that employee has been trained and evaluated on forklift operations. The certification records need to be maintained including a copy of the test, the training provided, and evaluation of the driving.
- Enforce forklift safety rules – does the employer have a disciplinary policy?
- Enforce forklift inspections to check on damage and remove from service until repaired

# Operator Responsibilities

- Operate a forklift in a safe manner
- Inspect PIT for damage prior to use
- Report damage to supervisor & take out of service until repaired
- Know the load capacity for the forklift you are operating
- Use only factory-approved forklift attachments on the forklift
- Never lift employees with your forklift
- Have zero tolerance for horseplay
- Drive within employer-specified speed limits
- Never leave your forklift unattended
- Engage the brakes prior to dismounting
- Honk your horn when in a blind spot
- Never drive with a load blocking your vision
- Know your surroundings & hazards in your work area

# OSHA Code: 29 CFR 1910.178

## Code of Federal Regulations

### **OSHA Final Rule**

**Effective March 1, 1999**

mandates a training program that bases the amount and type of training required on:

- ✓ the operator's prior knowledge and skill,
- ✓ the types of equipment the operator will be operating,
- ✓ the hazards present in the workplace, and
- ✓ the operator's demonstrated ability to operate a forklift safely

**Refresher Training** is required if:

- ✓ the operator is involved in an accident or near-miss,
- ✓ the operator has been observed to be unsafe,
- ✓ evaluation indicates need for additional training,
- ✓ changes in the workplace affect safe forklift operation,
- or
- ✓ the operator is assigned to a different type of truck.

# OSHA Code: 29 CFR 1910.178

## Code of Federal Regulations

**Evaluations of each operator's performance are required:**

as part of the initial and refresher training and at least once every three years.

Training must consist of a combination of:

- 1. Formal Instruction**
- 2. Practical Training**
- 3. Evaluation**





# OSHA Code: 29 CFR 1910.178

## NOTE:

Employers must conduct an evaluation of the effectiveness of the forklift training by conducting an evaluation of the operator's driving performance and/or ability after the in-class and practical training has been conducted.

# Why Is Forklift Training Important?

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Powered industrial truck accidents cause approximately 100 fatalities and 36,340 serious injuries in general industry and construction annually.

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It is estimated that 20 - 25% of the accidents are, at least in part, caused by inadequate training.

Since a large percentage of accidents and fatalities were due to operator inexperience, OSHA mandated that operators must be trained and competent.

# 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



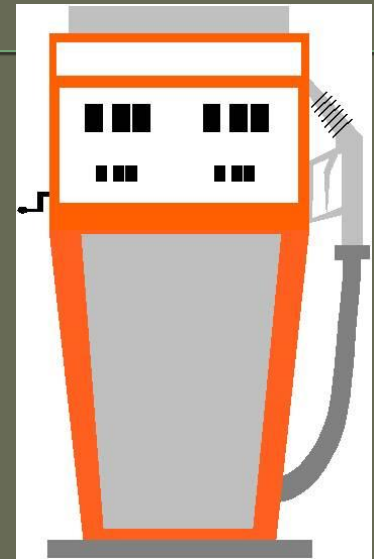
# Recharging Electric Trucks

- ✓ Wear splash proof goggles and protective clothing
- ✓ Check electrolyte level before charging
- ✓ Keep tools and metallic objects away from battery top
- ✓ Do not pour water into acid – add acid to water.
- ✓ Watch for spilled materials
- ✓ Ensure battery is secure



# Refueling Gas or Diesel Trucks

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





# 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





THANK YOU!