

# Forklift Operator Training Program Instructor Manual

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# Forklift & Motorized Pallet Jack Safety

## Purpose

**Material handling is a significant safety concern.** During the movement of products and materials there are numerous opportunities for personal injury and property damage if proper procedures and caution are not used. This chapter applies to all powered industrial trucks, hoists & lifting gear. The information in this chapter shall be used to train prospective industrial truck operators and provide the basis for refresher and annual retraining. OSHA reference for Powered Industrial Trucks is 1910.178.

## Responsibilities

### Management

- Provide adequate training in safe operation of all equipment used to move or access materials
- Provide equipment that is safe to operate
- Implement an "Out of Service" program for damaged equipment
- Not allow modification to equipment except those authorized in writing by the equipment manufacturer
- Establish safe operating rules and procedures

### Supervisors

- Monitor safe operations of material handling equipment
- Ensure all equipment is safety checked daily
- Tag "Out of Service" any damaged equipment

### Employees

- Operate only that equipment for which they have been specifically trained and authorized
- Conduct required daily pre-use inspections
- Report any equipment damage or missing safety gear
- Follow all safety rules and operating procedures

### Hazards

- Falling loads
- Overloading of equipment
- Impact with equipment
- Piercing of containers
- Loading dock roll off
- Chemical contact - battery acid
- Fires during refueling

### Hazard Controls

- Control of equipment keys
- Authorized fueling & recharge areas
- Proper palletizing of material
- Marked travel lanes
- Equipment warning lights
- Seat belts
- Mounted fire extinguishers

## Pre-Qualification

All candidates for Powered Industrial Truck (PIT) operators must meet the following basic requirements prior to starting initial or annual refresher training:

- Must have no adverse vision problems that cannot be corrected by glasses or contacts
- No adverse hearing loss that cannot be corrected with hearing aids
- No physical impairments that would impair safe operation of the PIT
- No neurological disorders that affect balance or consciousness
- Not taking any medication that affects perception, vision, or physical abilities

## Training

**An experienced operator, selected by Management, shall conduct Training for Powered Industrial Truck (PIT) Operators.** All operational training shall be conducted under close supervision. All training and evaluation must be completed before an operator is permitted to use a Powered Industrial Truck (forklift, etc) without continual & close supervision. Training consists of:

### **Trainees may operate a powered industrial truck only:**

- Under the direct supervision of persons, selected by management, who have the knowledge, training, and experience to train operators and evaluate their competence; and
- Where such operation does not endanger the trainee or other employees.

## Training Content

Training consists of a combination of formal instruction, practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

**Initial Training:** Powered industrial truck operators shall receive initial training in the following topics:

### **Truck-related training topics:**

1. Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate
2. Differences between the truck and the automobile
3. Truck controls and instrumentation: where they are located, what they do, and how they work
4. Engine or motor operation
5. Steering and maneuvering
6. Visibility (including restrictions due to loading)
7. Fork and attachment adaptation, operation, and use limitations
8. Vehicle capacity
9. Vehicle stability
10. Any vehicle inspection and maintenance that the operator will be required to perform
11. Refueling and/or charging and recharging of batteries
12. Operating limitations
13. Any other operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

### **Workplace-related topics:**

1. Surface conditions where the vehicle will be operated
2. Composition of loads to be carried and load stability
3. Load manipulation, stacking, and unstacking
4. Pedestrian traffic in areas where the vehicle will be operated
5. Narrow aisles and other restricted places where the vehicle will be operated
6. Hazardous (classified) locations where the vehicle will be operated
7. Ramps and other sloped surfaces that could affect the vehicle's stability
8. Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
9. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation

Refresher training and evaluation: Refresher training, including an evaluation of the effectiveness of that training, shall be conducted to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely. Refresher training in relevant topics shall be provided to the operator 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
5. A condition in the workplace changes in a manner that could affect safe operation of the truck
6. Once every 3 years an evaluation will be conducted of each powered industrial truck operator's performance.

## **General Safe Operating Procedures (SOP) & Rules**

- Only authorized and trained personnel will operate PITs.
- All PITs will be equipped with a headache rack, fire extinguisher, rotating beacon, back-up alarm and seat belts. Seat belts will be worn at all times by the Operator.
- The operator will perform daily pre- and post-trip inspections.
- Any safety defects (such as hydraulic fluid leaks; defective brakes, steering, lights, or horn; and/or missing fire extinguisher, lights, seat belt, or back-up alarm) will be reported for immediate repair or have the PIT taken "Out of Service".
- Operators will follow the proper recharging or refueling safety procedures.
- Loads will be tilted back and carried no more than 6 inches from the ground. Loads that restrict the operator's vision will be transported backwards.
- PITs will travel no faster than 5 mph or faster than a normal walk.
- PIT Operators in high lift areas will wear hard hats. .
- Operator will sound horn and use extreme caution when meeting pedestrians, making turns and cornering.
- Passengers may not ride on any portion of a PIT. Only the operator will ride PITs. "NO PASSENGERS" decals will be affixed on all PITs.
- If PITs are used as a man lift, an appropriate man lift platform (cage with standard rails and toe-boards) will be used.
- Aisle will be maintained free from obstructions, marked and wide enough (six foot minimum) for vehicle operation.
- Lift capacity will be marked on all PITs. Operator will assure load does not exceed rated weight limits.
- When un-attended, PITs will be turned off, forks lowered to the ground and parking brake applied.
- All PITs (with exception of pallet jacks) will be equipped with a multi-purpose dry chemical fire extinguisher. (Minimum rating; 2A: 10B:C)
- Operators are instructed to report all accidents, regardless of fault and severity, to Management. Management will conduct an accident investigation.
- When loading rail cars and trailers, dock plates will be used. Operators will assure dock plates are in good condition and will store on edge when not in use.
- Rail cars and trailers will be parked squarely to the loading area and have wheels chocked in place. Operators will follow established Docking/Un-Docking Procedures.

## **Changing and Charging Storage Batteries**

- Battery charging installations shall be located in areas designated for that purpose.
- Facilities shall be provided for flushing and neutralizing spilled electrolyte for employees as well as equipment. In addition these facilities provide for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.
- A conveyor, overhead hoist, or equivalent material handling equipment shall be provided for handling batteries.
- Reinstalled batteries shall be properly positioned and secured in the truck.
- A carboy tilter or siphon shall be provided for handling electrolyte.
- When charging batteries, acid shall be poured into water; water shall not be poured into acid.
- Trucks shall be properly positioned and brake applied before attempting to change or charge batteries.
- Care shall be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) shall be open to dissipate heat.
- Smoking is prohibited in the charging area.
- Precautions shall be taken to prevent open flames, sparks, or electric arcs in battery charging areas.
- Tools and other metallic objects shall be kept away from the top of uncovered batteries.

## **Trucks and Railroad cars**

- The flooring of trucks, trailers, and railroad cars shall be checked for breaks and weakness before they are driven onto.
- The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded with powered industrial trucks.
- Wheel stops or other recognized positive protection shall be provided to prevent railroad cars from moving during loading or unloading operations.
- Fixed jacks may be necessary to support a semi trailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.
- Positive protection shall be provided to prevent railroad cars from being moved while dockboards or bridge plates are in position.

## **Operations**

- If at any time a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.
- Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- Unauthorized personnel shall not be permitted to ride on powered industrial trucks.
- Arms or Legs shall not be placed between the uprights of the mast or outside the running lines of the truck.
- When a powered industrial truck is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.
- A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.
- There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.

- An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
- Trucks shall not be parked so as to block fire aisles, access to stairways, or fire equipment.

### **Traveling**

- All traffic regulations shall be observed, including authorized speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.
- The right of way shall be yielded to ambulances, fire trucks, or other vehicles in emergency situations.
- Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.
- The driver shall be required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.
- Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.
- The driver shall be required to look in the direction of, and keep a clear view of the path of travel.
- Grades shall be ascended or descended slowly. When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade. On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.
- Under all travel conditions the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Stunt driving and horseplay shall not be permitted.
- The driver shall be required to slow down for wet and slippery floors.
- Dockboards or bridgeplates shall be properly secured before they are driven over. Dockboards or bridgeplates shall be driven over carefully and slowly and their rated capacity never exceeded.
- Running over loose objects on the roadway surface shall be avoided.
- While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

### **Loading**

- Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads that cannot be centered.
- Only loads within the rated capacity of the truck shall be handled.
- The long or high (including multiple-tiered) loads that may affect capacity shall be adjusted.
- Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.
- A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- Extreme care shall be used when tilting the load forward or backward, particularly when high tiering. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

## **Fueling Safety**

- Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
- Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- No truck shall be operated with a leak in the fuel system until the leak has been corrected.
- Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

## **Maintenance of Powered Industrial Trucks**

- Any power-operated industrial truck not in safe operating condition shall be removed from service. Authorized personnel shall make all repairs.
- Those repairs to the fuel and ignition systems of industrial trucks that involve fire hazards shall be conducted only in locations designated for such repairs.
- Trucks in need of repairs to the electrical system shall have the battery disconnected prior to such repairs.
- Only parts equivalent as to safety with those used in the original design shall replace all parts of any such industrial truck requiring replacement.
- Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counter-weighting of fork trucks shall not be done unless approved by the truck manufacturer.
- Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily. Where industrial trucks are used on a round-the-clock basis, they shall be examined prior to use each shift. Defects when found shall be immediately reported and corrected.
- When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100 deg. F.) solvents shall not be used. High flash point (at or above 100 deg. F.) solvents may be used.

## ***Safe Operation Procedure for Charging LPG Tank***

1. No Smoking.
2. Move LPG PIT outside for refueling.
3. Turn off PIT.
4. LPG tanks will be removed in the following order:
  - Shut off service valve
  - Disconnect tank from hose
  - Unbuckle and remove tank from bracket
5. LPG tanks will be replaced in to following order:
  - Place tank in bracket and re-buckle
  - Reconnect hose to tank and tighten firmly
  - Open valve slowly and assure proper seal

**NOTE:** Federal Law Prohibits dispensing an improper fuel type into any Vehicle or into a non-approved fuel container.

### **In Case of LPG Leaks or Tank Rupture**

1. DO NOT start or move the PIT.
2. If fuel hose is leaking, Close valve immediately and place PIT "Out of Service" until repaired.
3. If tank ruptures, warn other, immediately leave the area (at least 50 feet) and notify Management. Do not re-enter the area until cleared by Management.

### ***Powered Industrial Truck Pre-Use Checklist***

A check of the following items (as applicable) is to be conducted by the operator prior to use each shift.

- Seat belts
- Lights
- Horn
- Brakes
- Leaks
- Warning Beacon
- Backup Warning Alarm
- Fire Extinguisher

If any deficiencies are noted, the unit is to be placed OUT OF SERVICE until the problem has been corrected. Additionally, it is the operator's responsibility to notify the immediate supervisor and fill out a maintenance request.



## DAILY CHECKLISTS FOR POWERED INDUSTRIAL TRUCKS

### DAILY INSPECTION CHECKLIST

#### Electric Forklift Truck

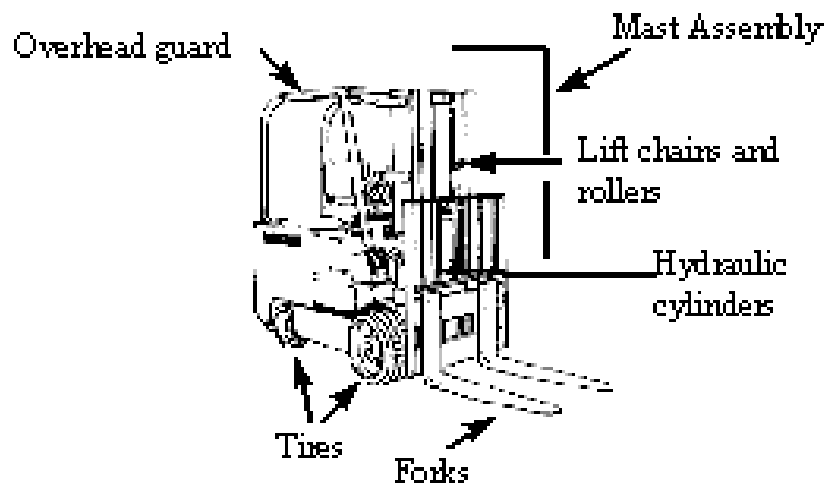
##### KEY OFF Procedures

- The vehicle inspection
  - Overhead guard
  - Hydraulic cylinders
  - Mast assembly
  - Lift chains and rollers
  - Forks
  - Tires
- Examine the battery
- Check the hydraulic fluid level

##### KEY ON Procedures

- Check the gauges
  - Hour meter
  - Battery discharge indicator
- Test the standard equipment
  - Steering
  - Brakes
  - Front, tail, and brake lights
  - Horn
  - Safety seat (if equipped)
- Check the operation of load-handling attachments

### Electric Forklift Truck



## DAILY INSPECTION CHECKLIST

### Propane Forklift Truck

#### KEY OFF Procedures

- The vehicle inspection
  - Overhead guard
  - Hydraulic cylinders
  - Mast assembly
  - Lift chains and rollers
  - Forks
  - Tires
  - LPG tank and locator pin
  - LPG tank hose
  - Gas gauge
- Check the engine oil level
- Examine the battery
- Check the hydraulic fluid level
- Check the engine coolant level

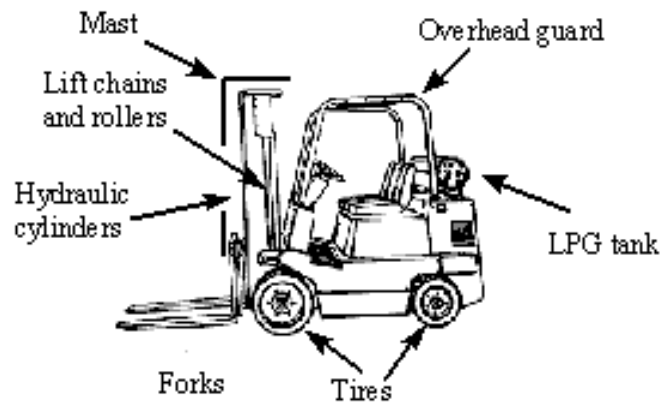
#### KEY ON Procedures

- Test the front, tail, and brake lights

#### ENGINE RUNNING Procedures

- Check the gauges
  - Oil pressure indicator lamp
  - Ammeter indicator lamp
  - Hour meter
  - Water temperature gauge
- Test the standard equipment
  - Steering
  - Brakes
  - Horn
  - Safety seat (if equipped)
- Check the operation of load-handling attachments
- Check the transmission fluid level

## Propane Forklift



**DAILY INSPECTION  
CHECKLIST**

**Yard Forklift Truck**

**KEY OFF Procedures**

- The vehicle inspection
  - Overhead guard
  - Hydraulic cylinders
  - Mast assembly
  - Lift chains and rollers
  - Forks
  - Tires
  - LPG tank and locator pin
  - LPG tank hose
  - Gas gauge
- Check the engine oil level
- Examine the battery
- Inspect the hydraulic fluid level
- Check the engine coolant level

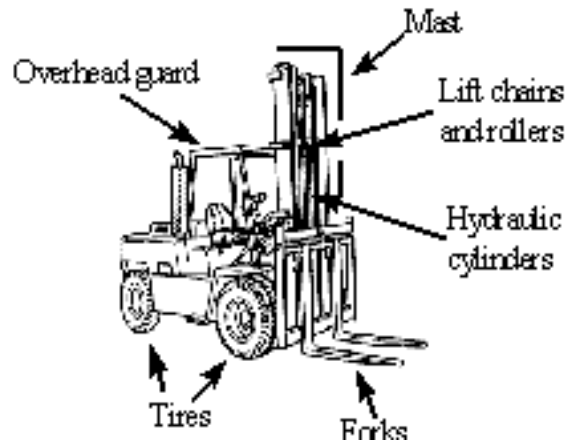
**KEY ON Procedures**

- Test the standard equipment
  - Front, tail, and brake lights
  - Fuel gauge (if diesel)
  - Windshield wiper
  - Heater

**ENGINE RUNNING Procedures**

- Check the gauges
  - Oil pressure indicator lamp
  - Ammeter indicator lamp
  - Ammeter
  - Hour Meter
  - Water Temperature Gauge
- Test the standard equipment
  - Steering
  - Brakes
  - Horn
  - Safety seat (if equipped)
- Check the operation of load-handling attachments
- Check the transmission fluid level

**Yard Forklift**



## DAILY INSPECTION CHECKLIST

### Electric Transtacker

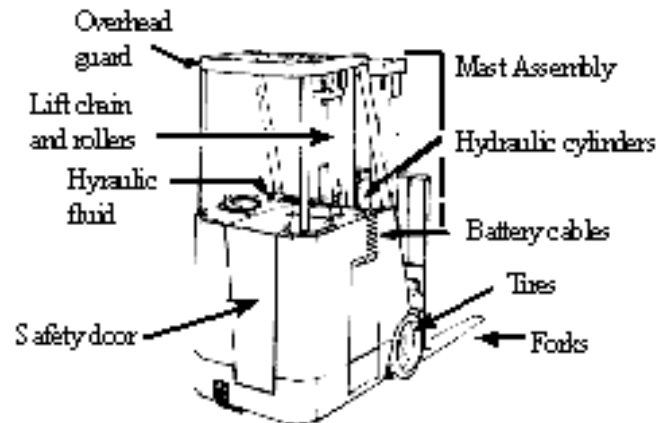
#### KEY OFF Procedures

- **The vehicle inspection**
  - **Overhead guard**
  - **Hydraulic cylinders**
  - **Mast assembly**
  - **Lift chains and rollers**
  - **Forks**
  - **Tires**
  - **Battery cables**
  - **Safety door**

#### KEY ON Procedures

- **Check the gauges**
  - **Battery discharge indicator**
  - **Hour meter**
- **Test the standard equipment**
  - **Steering Brakes**
  - **Lights**
  - **Horn**
- **Test the control lever**
- **Check the operation of load-handling attachments**

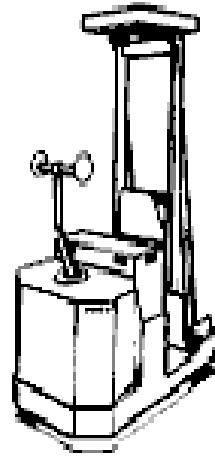
## The Transtacker



## Riding Grip Tow

### DAILY INSPECTION CHECKLIST Riding Grip Tow

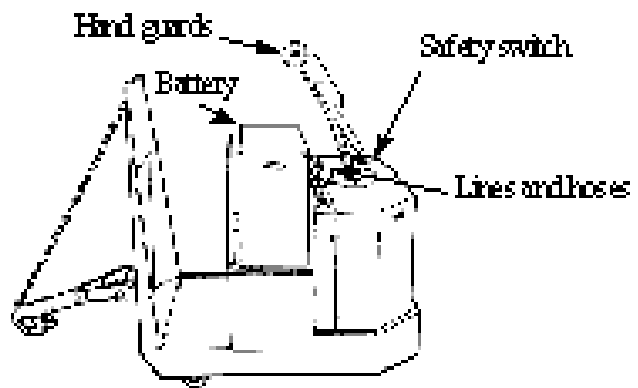
- The vehicle inspection
  - Lines and hoses
  - Battery
  - Safety switch
  - Hand guards
- The operations inspection
  - Test the brakes
  - Check the drive operations
  - Test the horn
  - Check the grip coupling



### DAILY INSPECTION CHECKLIST Stand-up Riding Tow Tractor

- The vehicle inspection
  - Lines and hoses
  - Battery
  - Safety switch
  - Hand guards
- The operations inspection
  - Test the brakes
  - Check the drive operations
  - Test the horn
  - Check the tow hook and safety catch

## Stand-up Riding Tow Tractor



## DAILY INSPECTION CHECKLIST

### Walking Pallet Truck

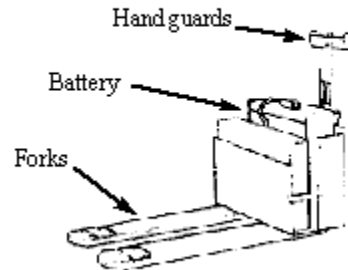
- **The vehicle inspection**
  - Forks
  - Battery
  - Hand guards
- **The operations inspection**
  - Check the drive operations
  - Test the brakes
  - Check the horn
  - Inspect the load-handling attachment operations

## DAILY INSPECTION CHECKLIST

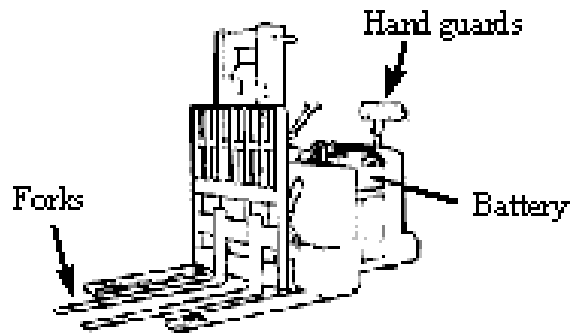
### Walking Transtacker

- **The vehicle inspection**
  - Forks
  - Battery
  - Hand guards
- **The operations inspection**
  - Check the drive operations
  - Test the brakes
  - Check the horn
  - Inspect the load-handling attachment operations

### Walking Pallet Truck



### Walking Transtacker



## DAILY INSPECTION CHECKLIST

### Indoor Propane Tow Tractor

#### KEY OFF Procedures

- **The vehicle inspection**
  - **Fluid leakage**
  - **Tires**
  - **Tow hook**
  - **Windshield (if equipped)**
  - **Overhead guard (if equipped)**
  - **LPG tank and locator pin**
  - **LPG tank hose**
  - **Gas gauge**
- **Check the engine oil level**
- **Check the engine coolant level**
- **Examine the battery**

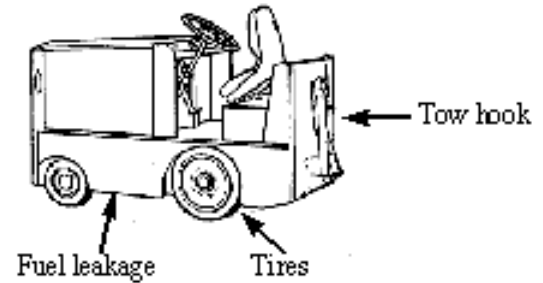
#### KEY ON Procedures

- **Test the front, tail, and brake lights**
- **Check the gauges**
  - **Oil pressure gauge**
  - **Ammeter**
  - **Water temperature gauge**
  - **Hour meter**

#### ENGINE RUNNING Procedures

- **Inspect the standard equipment**
  - **Steering**
  - **Brakes**
  - **Horn**
  - **Safety seat (if equipped)**
- **Check the transmission fluid level**

## Indoor Tow Tractor



## DAILY INSPECTION CHECKLIST

### Industrial Tractors

#### KEY OFF Procedures

- **The vehicle inspection**
  - **Windshield**
  - **Tires**
  - **Three-point hitch assembly**
- **Engine oil**
- **Engine coolant**

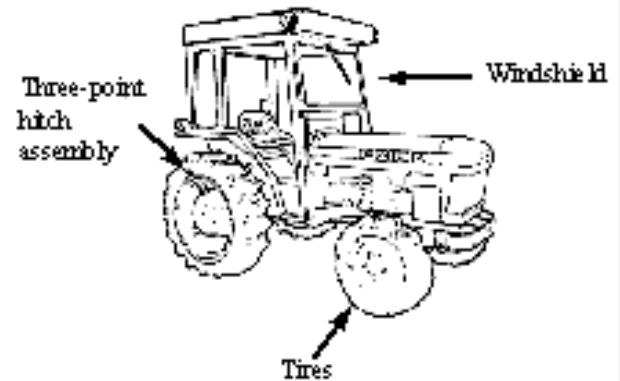
#### KEY ON Procedures

- **Check gauges**
  - **Oil and battery lights**
  - **Temperature**
  - **Hour meter**
- **Standard equipment**
  - **Steering**
  - **Front, tail, and brake lights**
  - **Horn**

#### ENGINE RUNNING Procedures

- **Standard equipment**
  - **Windshield wiper**
  - **Brakes**
  - **Hoist operation**

### Industrial Tow Tractor





## DAILY INSPECTION CHECKLIST

### Reach Truck

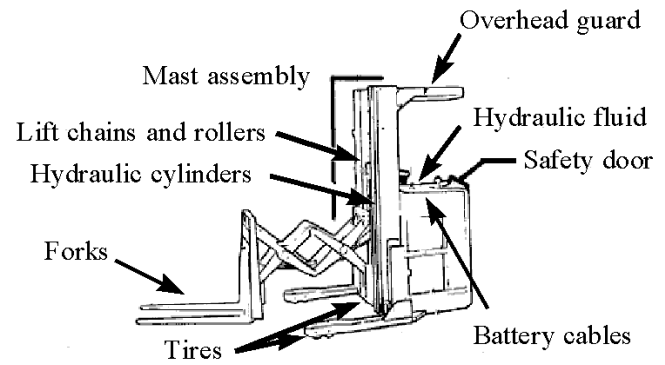
#### KEY OFF Procedures

- **The vehicle inspection**
  - **Overhead guard**
  - **Hydraulic cylinders**
  - **Mast assembly**
  - **Lift chains and rollers**
  - **Forks**
  - **Tires**
  - **Battery cables**
  - **Safety door**
  - **Hydraulic fluid**

#### KEY ON Procedures

- **Check the gauges**
  - **Battery discharge indicator**
  - **Hour meter**
- **Test the standard equipment**
  - **Steering**
  - **Brakes**
  - **Lights**
  - **Horn**
- **Test the control lever**
- **Check the operation of load-handling attachments**

### Reach Truck



## DAILY INSPECTION CHECKLIST

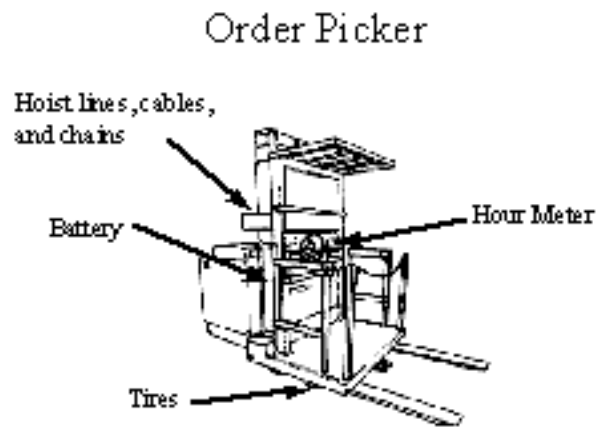
### Order Picker

#### KEY OFF Procedures

- The vehicle inspection
  - Hoist lines, cables, and chains
  - Hour meter
  - Tires
  - Battery cables
  - Limiting device

#### KEY ON Procedures

- Check the battery discharge indicator
- Test the standard equipment
  - Safety interlock
  - Steering
  - Brakes
  - Lights
  - Horn
- Check the accessories
  - Gripper jaws
  - Work platform



## GENERIC CHECKLIST FOR POWERED INDUSTRIAL TRUCKS

**Overhead Guard** - Are there broken welds, missing bolts, or damaged areas?

**Hydraulic Cylinders** - Is there leakage or damage on the lift, tilt, and attachment functions of the cylinders?

**Mast Assembly** - Are there broken welds, cracked or bent areas, and worn or missing stops?

### Lift Chains and rollers

Is there wear or damage or kinks, signs of rust, or any sign that lubrication is required?

Is there squeaking?

### Forks

Are they cracked or bent, worn, or mismatched?

Is there excessive oil or water on the forks?

**Tires** - What do the tires look like?

Are there large cuts that go around the circumference of the tire?

Are there large pieces of rubber missing or separated from the rim?

Are there missing lugs?

Is there bond separation that may cause slippage?

### Battery Check

Are the cell caps and terminal covers in place?

Are the cables missing insulation?

**Hydraulic Fluid** - Check level?

**Gauges** - Are they all properly working?

### Steering

Is there excessive free play?

If power steering, is the pump working?

### Brakes

If pedal goes all the way to the floor when you apply the service brake that is the first indicator that the brakes are bad. Brakes should work in reverse, also.

Does the parking brake work? The truck should not be capable of movement when the parking brake is engaged.

**Lights** - If equipped with lights, are they working properly?

**Horn** - Does the horn work?

**Safety seat** - if the truck is equipped with a safety seat is it working?

### **Load Handling Attachments**

Is there hesitation when hoisting or lowering the forks, when using the forward or backward tilt, or the lateral travel on the side shift?

Is there excessive oil on the cylinders?

**Propane Tank** - Is the tank guard bracket properly positioned and locked down?

### **Propane Hose**

Is it damaged? It should not be frayed, pinched, kinked, or bound in any way.

Is the connector threaded on squarely and tightly?

**Propane Odor** - If you detect the presence of propane gas odor, turn off the tank valve and report the problem.

**Engine Oil** - Check levels.

**Engine Coolant** - Visually check the level. Note: Never remove the radiator cap to check the coolant level when the engine is running or while the engine is hot. Stand to the side and turn your face away. Always use a glove or rag to protect your hand.

**Transmission Fluid** - Check levels?

**Windshield Wipers** - Do they work properly?

**Seat Belts** - Do they work?

**Safety Door** - (found on stand up rider models) Is it in place?

**Safety Switch** - (found on stand up riding tow tractors) Is it working?

**Hand guards** - (found on stand up riding tow tractors, walking pallet trucks, walking transtackers) Are they in place?

### **Tow Hook**

Does it engage and release smoothly?

Does the safety catch work properly?

**Control Lever** - Does the lever operate properly?

**Safety Interlock** - (found on order pickers) If the gate is open, does the vehicle run?

**Gripper Jaws** - (found on order pickers) Do the jaws open and close quickly and smoothly?

**Work Platform** - (found on order pickers) Does the platform raise and lower smoothly?

# Facilitator's Guide to Lift Truck Demonstrations, Practice Exercises and Testing

## Introduction

While the classroom based portion of the course will provide trainees with safe lift truck operation knowledge, they must also have an opportunity to gain hands on experience operating the lift trucks used in your organization. The purpose of this guide is to integrate those hands on experiences with the classroom portion of the program. For specific information concerning the certification of lift truck operators see OSHA's internet page entitled [Powered Industrial Truck Operator Training; Final Rule](#). Or, [Industrial Truck Operator Training for General Industry](#).

## Demonstration and Practice Session 1

### Prerequisites

1. Trainees should complete the *classroom portion*.
2. Arrange for the various types of lift trucks used in your organization to be assembled in a safe practice area away from daily operations.

### What You Should Demonstrate

1. Show trainees the various lift trucks used in your organization. Identify whether they are gasoline, diesel, LP or electrically powered.
2. With each lift truck, show the location and function of all gauges, levers, pedals, switches and safety features.
3. Demonstrate starting the lift truck(s).
4. Demonstrate lifting the forks.
5. Demonstrate tilting the forks.
6. Demonstrate adjusting the width of the forks.

### What Trainees Should Practice and Be Able to Do

1. Have trainees identify and name the different types of lift trucks used in your organization.
2. Have trainees identify and explain the function of all gauges, levers, pedals, switches and safety features
3. Have trainees practice starting the lift truck(s).
4. Have trainees practice lifting the forks.
5. Have trainees practice tilting the forks.
6. Have trainees practice adjusting the width of the forks.

### Summary

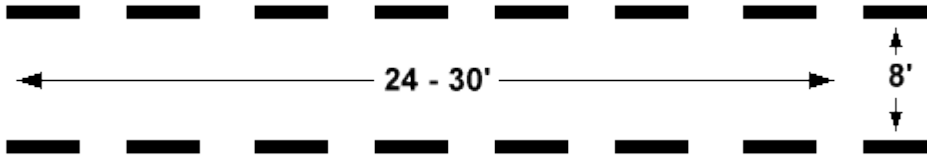
1. Summarize the session and emphasize the importance of safety.
  2. Answer any questions trainees may have.
  3. Distribute any printed literature you may feel is necessary to customize the course for your organization.
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## Demonstration and Practice Session 2

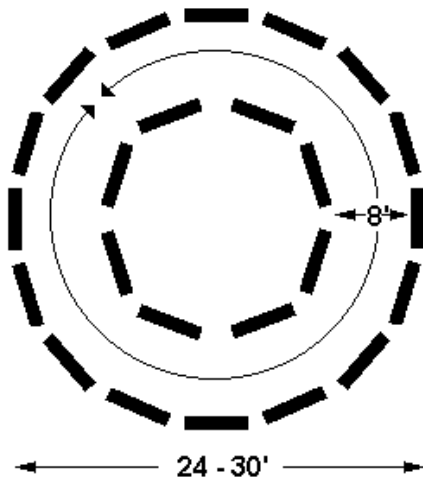
### Prerequisites

1. Trainees should complete the *classroom portion*.
2. Arrange for the various types of lift trucks used in your organization to be assembled in a safe practice area away from daily operations.
3. Arrange for a practice driving area that will allow for the following maneuvers. Note: you can use pallets to create the following practice courses for your trainees.

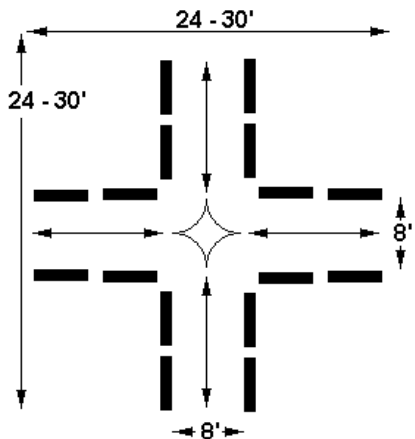
#### A. Straight - forward and back (exercise #1)



#### B. Circle - forward and back (exercise #2)



#### C. Cross - forward and back (exercise #3)

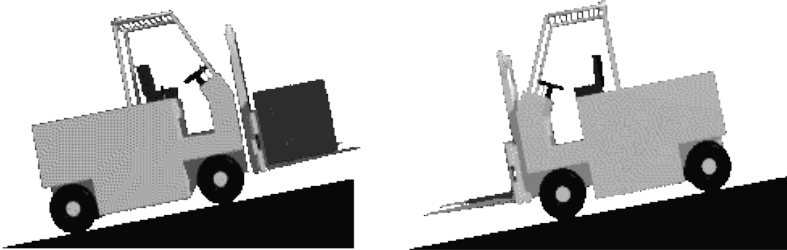




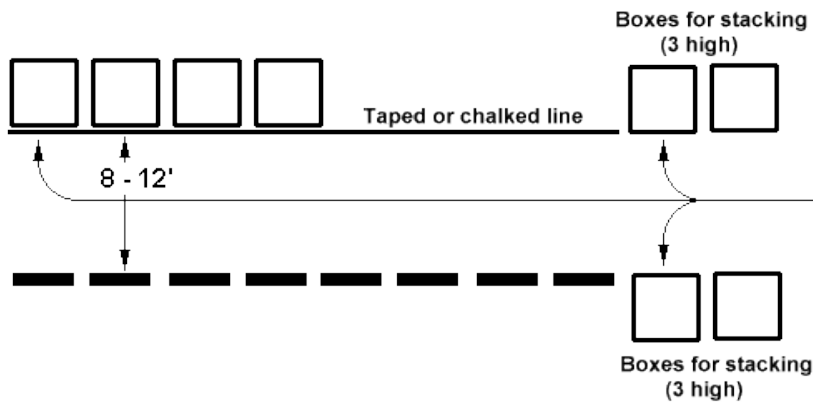
## Demonstration and Practice Session 3

### Prerequisites

1. Trainees should complete the *classroom portion*.
2. Arrange for the various types of lift trucks used in your organization to be assembled in a safe practice area away from daily operations.
3. Arrange for actual loads to be present in the practice area.
4. The practice driving area should be set up to allow for the following maneuvers.
  - A. Driving up and down inclines with and without a load. (exercise #5)



- B. Moving and stacking loads - Simulated loading dock. (exercise #6)



### What You Should Demonstrate

1. Demonstrate driving up and down an incline without a load.
2. Demonstrate picking up a load.
3. Demonstrate driving up and down an incline with a load.
4. Demonstrate picking up a load from a stack of boxes (3 high) and moving each to a new area. (Use simulated loading dock set up).
5. Demonstrate parking and shutting down a lift truck.

### What Trainees Should Practice and Be Able to Do

1. Drive up and down an incline without a load.
2. Pick up a load.
3. Driving up and down an incline with a load.
4. Pick up a load from a stack of boxes (3 high) and move each to a new area in a simulated loading dock set up.
5. Park and shut down a lift truck.

### Summary

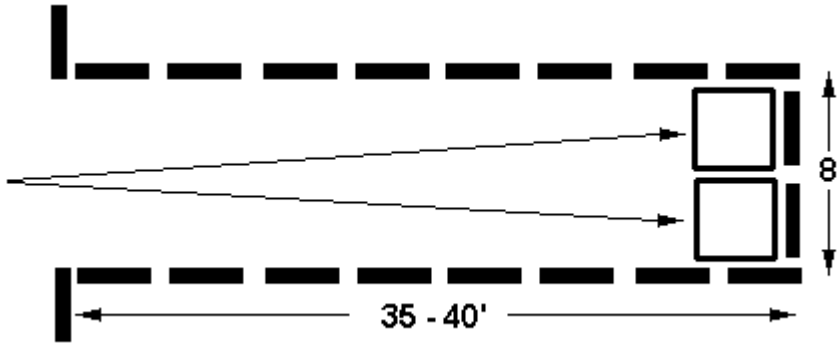
1. Summarize the session and emphasize the importance of safety.
2. Answer any questions trainees may have.
3. Allow adequate time for trainees to practice in the practice area.



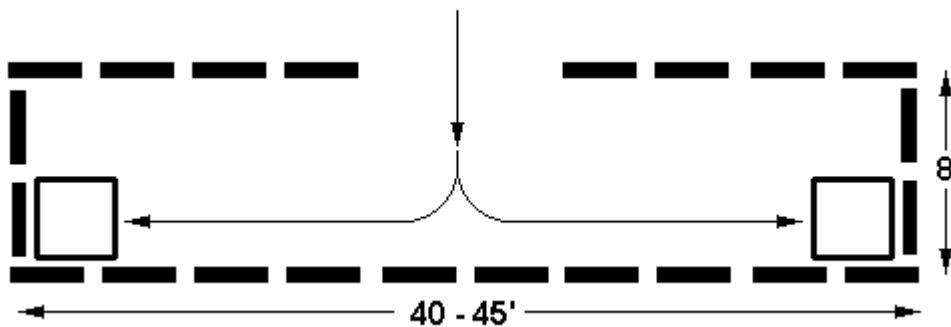
## Demonstration and Practice Session 4

### Prerequisites

1. Trainees should complete the *classroom portion*.
2. Arrange for the various types of lift trucks used in your organization to be assembled in a safe practice area away from daily operations.
3. Arrange for actual loads to be present in the practice area.
4. The practice driving area should be set up to allow for the following maneuvers.
  - A. Simulated trailer (exercise #7)



- B. Simulated box car (exercise #8)



### What You Should Demonstrate

1. Demonstrate picking up a load and placing it in a simulated trailer.
2. Demonstrate picking up a load and placing it in a simulated box car.

### What Trainees Should Practice and Be Able to Do

1. Pick up a load and place it in a simulated trailer.
2. Pick up a load and place it in a simulated box car.

### Summary

1. Summarize the session and emphasize the importance of safety.
2. Answer any questions trainees may have.
3. Allow adequate time for trainees to practice in the practice area.

## **Demonstration and Practice Session 5**

### **Prerequisites**

1. Trainees should complete the *classroom portion*.
2. Arrange for the various types of lift trucks used in your organization to be assembled in a safe practice area away from daily operations.
3. If possible, arrange for trainees to drive in actual work areas.

### **What You Should Demonstrate**

1. Demonstrate how to conduct a daily inspection.
2. Demonstrate how to complete the Daily Operator's Report.
3. Supervise trainees as they drive in the work area.
4. Supervise trainees as they lift a load and stack it in a predetermined area.

### **What Students Should Practice and Be Able to Do**

1. Conduct a daily inspection.
2. Complete the Daily Operator's Report.
3. Drive in the work area.
4. Lift a load and stack it in a predetermined area.

### **Summary**

1. Summarize the session and emphasize the importance of safety.
  2. Answer any questions trainees may have.
  3. Allow adequate time for trainees to practice in the practice area
- 

## **Demonstration and Practice Session 6**

### **Prerequisites**

Arrange for the various types of lift trucks used in your organization to be assembled in the area where they are refueled or recharged.

### **What You Should Demonstrate**

1. Demonstrate each step required to refuel or recharge the lift trucks used in your organization. Emphasize precautions that must be followed for safe refueling and recharging.

### **What Trainees Should Practice and Be Able to Do**

1. Complete each step required to refuel or recharge the lift trucks used in your organization.

### **Summary**

1. Summarize the session and emphasize the importance of safety.
  2. Answer any questions trainees may have.
  3. Allow adequate time for trainees to practice in the practice area.
- 

## **Course Test**

### **Lift Truck Knowledge**

Have students complete the computer based training Course Test.

**Lift Truck Skills**

Students may be tested individually or as a group. In the practice area, each student must complete the following exercises.

1. Tight Spot (exercise #4)
2. Moving and stacking loads - Simulated loading dock. (exercise #6)
3. Simulated trailer (exercise #7)
4. Simulated box car (exercise #8)

**The following score sheet may be used to assess student performance on each exercise.**

Name \_\_\_\_\_

Exercise # \_\_\_\_\_ Date Tested \_\_\_\_\_

	0=Failed	1=Poor	2=Fair	3=Good
Proper Approach				
Proper Pickup				
Load Stability				
Stalls engine				
Grinds gears				
Rides clutch				
Smooth turns				
Too fast / slow				
Lines up pallets				
Deposits load				
Other				

Totals                     +  +  +  =

**Use a form to document the overall performance for each operator.**

Name \_\_\_\_\_

Exercise # \_\_\_\_\_ Date Tested \_\_\_\_\_

	Score
Lift Truck Knowledge	
Tight Spot Exercise	
Loading Dock Exercise	
Trailer Exercise	
Box Car Exercise	
Total	

111 - 168 Passing

61 - 110 Retrain or  
assign additional  
practice

Below 60 Reassign

**Sample Lift Truck Operator's Permit.**

<b>Lift Truck Operator's Permit</b>	
Name _____	
Dept./Div _____	
This Card Certifies that the Employee Named Above is Qualified to Operate a Lift Truck.	
Date Course Completed _____	Trainer _____

**Sample Lift Truck Operator's Certificate of Achievement.**

	<h2 style="margin: 0;">Certificate of Achievement</h2> <p style="margin: 0;">This certificate is awarded to</p> <p style="margin: 0;">_____</p> <p style="margin: 0;">in recognition of successfully completing the course of study in</p> <h3 style="margin: 0;">Lift Truck Operation and Safety</h3> <p style="margin: 0;">Given this ____ day of _____, 19 ____.</p> <p style="margin: 0; text-align: right;">Trainer _____</p>
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## Powered Industrial Truck License Certification Form

Name \_\_\_\_\_ Department \_\_\_\_\_

### **Selection Criteria**

I certify that I meet all of the following physical qualifications and that if any change to my physical condition develops, I will inform my supervisor within 24 hours.

- No adverse vision problems that are not corrected by glasses or contacts
- No adverse hearing problems that are not corrected by hearing aids
- No physical disorders that would impair safe operation
- No medication is being taken that will affect perception, vision, or physical abilities

**Employee Signature:** \_\_\_\_\_

<b>Classroom Training</b>			
Review of OSHA Standard 1910.178		Safe Operating Procedures	
Load Handling & Vehicle Inspections		Refueling / Recharge Procedure	
Special Environments		Stability & Control	
Fuel Spill / Battery Acid Spill Procedure		Safety around pedestrians	
Trainer Signature:		Date:	
<b>Hands On Training &amp; Evaluation</b>			
Rating: 1=Poor 2=Fair 3=Good 4=Excellent			
Grade	Area of Evaluation	Grade	Area of Evaluation
	Familiarity w/ controls		Travel w/ load at proper height
	Slows at intersections		Lowers load smoothly & slow
	Sounds horn at intersections		Load properly balanced
	Obeys Signs		Smooth start & stop
	Plans route, checks doorways		Moves forks properly
	Proper cornering & turning		Dock plate inspection
	Proper Refueling		Yields to pedestrians
	Places-stacks load square & even		Drives forward under control
	Drives backward under control		Parks properly-neutralizes controls
	Proper approach to loads		Maneuvers w/ load properly
	Lifts load properly		Properly changes & charges battery
	Maintains clear view		Drives on ramps
	Pre-use check		
<b>Additional training is required for all areas graded as <i>Fair</i> or below</b>			
Evaluator Signature		Date:	
<b>Certification</b>			
Written Exam Grade / Date		/	
Qualified - Safety Manager Signature			

# Forklift Operator Written Test

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. If your forklift has a rearview mirror, looking behind you is not necessary.  
True or False
  
2. Name two of the three ways to detect a propane leak \_\_\_\_\_  
\_\_\_\_\_
  
3. Describe the four items that must be completed prior to driving your forklift into a trailer:  
(1) \_\_\_\_\_  
(2) \_\_\_\_\_  
(3) \_\_\_\_\_  
(4) \_\_\_\_\_
  
4. If a load blocks your vision, it is OK to raise the load while moving to see under it.  
True or False
  
5. Preoperation inspections are done only because OSHA says we have to do them.  
True or False
  
6. Attachments reduce capacity by increasing the load center and adding weight.  
True or False
  
7. Minimum PPE items required when refueling a propane tank are  
\_\_\_\_\_  
\_\_\_\_\_
  
8. The most important differences between a forklift and a car are weight and steering.  
True or False
  
9. Name at least one condition that when combined with turning sharply may cause a tipover.  
\_\_\_\_\_
  
10. Pedestrians have the right-of-way only while in designated pedestrian lanes.  
True or False

# Forklift Operator Written Test

## Answer sheet

1. False. You must always look behind you before backing up.
2. Hissing sound, distinct odor, or frost on fittings.
3. Chock the wheels, support the nose of the trailer, inspect the dock plate, check the trailer floor.
4. False. Never drive with the load up. Drive in reverse when the load obstructs forward vision.
5. False. Inspections are also done so that the operator can prevent mechanical failure accidents and because the company needs to prove compliance with OSHA's requirement.
6. True. Attachments are heavy, and they cause the load center to move away from the forklift.
7. Minimum PPE items required when refueling a propane tank are gloves and safety glasses.
8. True. There are many differences, but the most significant are weight and steering.
9. Hitting a pothole, carrying an off-center load, getting a flat tire, having a raised & tilted back load, or being on a ramp.
10. False. Pedestrians always have the right of way.