

SAFETY PROGRAM FOR FORKLIFTS & OTHER INDUSTRIAL TRUCKS

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FORKLIFTS & POWERED INDUSTRIAL TRUCK SAFETY PROGRAM

Penn Fencing, Inc.

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FORKLIFTS & POWERED INDUSTRIAL TRUCK SAFETY PROGRAM

Penn Fencing, Inc.

1.1 PURPOSE

In accordance with OSHA's powered industrial truck standard found in 29 CFR 1910.178 (see Attachment A), this program is designed to present procedures for the safe operation of:

- Forklifts
- Powered Pallet Jacks
- Stackers
- Other Material Handling Equipment

All employees must successfully complete a training course before operating this type of equipment.

1.2 INTRODUCTION

Each year, tens of thousands of forklift-related injuries occur in U.S. workplaces. Many employees are injured when lift trucks are inadvertently driven off loading docks or lifts fall between a dock and an unsecured trailer. Employees are also struck by a lift truck or fall while on elevated pallets and tines. Most incidents also involve property damage, including damage to overhead sprinklers, racking, pipes, walls, and machinery. Unfortunately, most employee injuries and property damage can be attributed to lack of safe operating procedures, lack of safety-rule enforcement, and insufficient or inadequate training. It is a violation of Federal law for anyone under 18 years of age to operate a forklift or anyone over 18 years of age whom is not properly trained and certified to do so.

The National Institute for Occupational Safety and Health (NIOSH) investigations of forklift-related deaths indicate that many workers and employers may not be aware of the risks of operating or working near forklifts. Many individuals are not following the procedures set forth in the OSHA standards, consensus standards, or equipment manufacturer's guidelines.

Generally, reducing the risk of forklift incidents requires comprehensive worker training, systematic traffic management, a safe work environment, a safe forklift, and safe work practices. The primary OSHA standard is 1910.178, Powered Industrial Trucks (see Attachment A for a copy of this Standard). It should be noted however, this standard incorporates by reference a number of other OSHA standards as well as industry standards describing truck design, approval, and labeling.

The specific OSHA requirements that apply to employers who use powered industrial trucks are separated into the following activities:

- Loading and Unloading
- Working with Hazardous Materials
- Vehicle Maintenance

1.3 RESPONSIBILITIES

PROGRAM ADMINISTRATOR - CHAD GALBREATH

- Administer and implement this program.
- Account for initial and follow-up training/certification
- Maintain program documentation

FORKLIFT & POWERED INDUSTRIAL TRUCK OPERATORS

- Comply with company rules for operating the equipment.
- Inspect equipment at the beginning of each shift, including completion of an inspection checklist.
- Immediately report any maintenance problems or malfunctions to the foreman

MAINTENANCE

- Maintain all material handling equipment according to manufacturer's recommendations
- Contract with outside vendors, if needed, to perform service on the equipment.
- Keep a maintenance log that lists:
 - Repairs needed for each forklift and piece of material handling equipment, and
 - Repairs completed for each forklift and piece of material handling equipment.

1.4 TYPES OF POWERED INDUSTRIAL TRUCKS

The hazards commonly associated with powered industrial trucks vary depending on the vehicle type and the workplace where the truck is used. Each type of truck presents different operating hazards. For example, a sit-down, counterbalanced high lift rider truck is more likely than a motorized hand truck to be involved in a falling load accident, because the sit-down rider truck can lift a load much higher than a hand truck. Workplace conditions also present different hazards.

The best way to protect employees from injury also depends on the type of truck operated and worksite where it is being used. Employees must be properly trained on each different type of forklift that they operate.

Penn Fencing presently uses the following types of powered industrial trucks:

Make & Model:	Type of Forklift	Purpose:	Location:
Nissan (2)	Sit down	Material handling	Warehouse1 & 2
Komatsu	Sit down	Material handling	Indiana office

The following powered industrial truck attachments are available for use:

Type of Attachment	Use of Attachment
Fork extensions	Material Handling

1.5 TRAINING AND CERTIFICATION

Before an employee may operate a powered industrial truck (except for training purposes), employers must make sure that each operator has successfully completed appropriate training and has demonstrated competency to operate each powered industrial truck safely.

Training is to consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

Operator training and evaluation must be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

LEARNING TO OPERATE A POWERED INDUSTRIAL TRUCK

Prior to taking a driving test, employees must be provided with training on how to operate the specific powered industrial truck(s) that they will be using in the workplace. The operator's manual will need to be reviewed with the employee for each vehicle type that they are being trained to operate. Additional training will be provided for any new equipment that the employee will be operating.

Section 1910.178(l)(3) of the OSHA standards requires that powered industrial truck operators receive training on the following topics (except for topics which the employer can demonstrate are not applicable to safe operation of the truck in the employer's workplace).

TRUCK-RELATED TOPICS

- Operating instructions, warnings, and precautions for the types of trucks the operator will be authorized to operate
- Differences between powered industrial trucks and automobiles
- Truck 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 types of vehicle that the employee is being trained to operate

WORKPLACE-RELATED TOPICS

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

Trainees may operate a powered industrial truck only under the following conditions:

- Under the direct supervision of persons 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.

REFRESHER TRAINING

During the course of truck operation, a foreman may observe the employee performing an unsafe act, such as riding with the load too high or traveling at an unsafe speed. The person making the correction should point out the incorrect manner of operation of the truck or other unsafe act being conducted, tell the employee how to do the operation correctly, and then ensure the employee performs the operation correctly.

When there have been multiple on-the-spot corrections, the employer may decide to conduct a more structured retraining program which would include the following information.

- Common unsafe situations encountered in the workplace
- Unsafe operating methods observed or known to be used

- The need for constant attentiveness to the vehicle, the workplace conditions, and the manner in which the vehicle is operated

Refresher training in relevant topics must be provided to an operator when:

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

EVALUATION & CERTIFICATION

After employees complete training exercises and prior to operating the truck in the workplace, an evaluation of powered industrial truck operators must be conducted. This evaluation will determine the adequacy of training and the ability of the employee to perform truck operations safely in the workplace. An evaluation of the operator's performance is required to be conducted at least once every three years.

Certification that each operator has been trained and evaluated per the OSHA standard is required. The certification must include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation.

Note: If an operator has previously received training in a topic specified in the OSHA powered industrial truck standard, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required, if the operator has been evaluated and found competent to operate the truck safely.

1.6 MAINTENANCE, FUELING, & REPAIR

Forklift mechanics are exposed to a variety of hazardous materials. Chemicals pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and reactivity). Forklift operators are often authorized to perform some of their own maintenance, such as refueling diesel or gasoline powered trucks, changing propane tanks on LPG trucks, or recharging and servicing electric batteries on electric forklifts. They may also change oil, antifreeze, or other fluids and so are also exposed to a variety of hazardous chemicals.

The OSHA standard includes specific training requirements for forklift operators who change and charge batteries, handle propane tanks; fuel diesel or gasoline engines, and otherwise repair and maintain powered industrial trucks.

All forklifts and material handling equipment must be kept clean and free of excess dirt, oil, and grease. Do not operate forklift or material handling equipment in need of repair until repairs are completed. The equipment must be labeled or tagged: OUT OF SERVICE, DO NOT USE.

- After repairs are completed, forklifts and material handling equipment must be tested to assure safe operation.
- No fuel tanks will be filled while the engine is running; turn the power off when refueling.
- Oil and fuel spilled on the floor during filling must be cleaned up immediately.
- Equipment is provided to safely flush spilled fuel and battery acid.
- Eyewash equipment is maintained in all fueling and charging areas.
- The following are prohibited in the fueling and charging areas:
 - Eating
 - Smoking
 - Open Flames
 - Sparks

1.7 OPERATOR SAFETY

AUTHORIZED USE

Only trained operators are authorized to operate powered industrial trucks. Forklift and material handling equipment operators are responsible for complying with safe operation rules, conducting pre-use inspections, and immediately reporting maintenance problems or defects. Inspection checklists are located in Attachment B of this program.

Unauthorized personnel are not permitted to ride on a forklift or material handling equipment. A safe place to ride must be provided where riding is authorized.

UNATTENDED EQUIPMENT

Special precautions apply to forklifts and material handling equipment that is unattended. Equipment will be considered unattended whenever:

- The operator is 25 feet or more away; or
- The forklift or material handling equipment is not in view.

When equipment is left unattended, the operator must:

- Fully lower the load engaging means
- Put the equipment into neutral.
- Set the emergency brake.
- Turn the power off.
- Block the wheels (if the equipment is parked on an incline).

HAZARDOUS MATERIALS & LOCATIONS

Forklift operators transport chemicals and encounter hazardous locations. Please refer to the SDS and labeling regarding hazards associated with transported chemicals.

In hazardous locations, only specially approved industrial forklifts and material-handling equipment will be used.

An overhead guard must be used to protect the operator from falling objects unless operating conditions do not permit doing so.

1.8 EQUIPMENT OPERATION

OPERATION RULES

The following rules must be obeyed when operating a powered industrial truck:

1. When equipped, safety belts must be worn at all times
2. Never lift a person unless a safety platform is used and is firmly secured to the lifting carriage or forks. An operator must remain at the controls at all times while a person is being lifted.
3. Speed limits will be posted and observed at all times. Always operate equipment at a speed that permits safe stopping.
4. When more than one powered industrial truck is being operated, at least three truck lengths will be maintained between the pieces of equipment.
5. The operator must remain in control of the equipment at all times.
6. The operator will keep a clear view of the path of travel. At corners or when vision is obscured, the operator will slow down and sound the horn.
7. Only stable and safely arranged loads that are within the forklift or material handling equipment's rated capacity will be handled.
8. If a load blocks the operator's view, the forklift, or material handling equipment will be driven backwards.
9. Loaded forklifts and material handling equipment will be driven with the load upgrade when traveling on an upgrade or decline of more than 10%.
10. When forklift or material handling equipment is used to remove materials from truck trailer, employees must set the brakes on the trailer and place wheel chocks under the wheels.
11. Wheel stops will be used to prevent railroad cars from moving during loading and unloading.
12. All forklifts or material handling equipment will cross railroad tracks at an angle.
13. Dock boards or bridges will be properly secured before they are driven upon.

LOADING AND UNLOADING

Forklifts, also known as powered industrial trucks, are used in numerous work settings, primarily to load and unload materials. Forklift overturns are the leading cause of fatalities involving forklifts; they represent about 25% of all forklift-related deaths. The case studies examined by NIOSH indicate that the forklift, the factory environment, and actions of the operator can all contribute to fatal incidents involving forklifts. In addition, these fatalities indicate that many workers and employers are not using or may be unaware of safety procedures and the proper use of forklifts to reduce the risk of injury and death.

ATTACHMENT A: OSHA STANDARD FOR POWERED
INDUSTRIAL TRUCKS
(29 CFR 1910.178)

ATTACHMENT B: INSPECTION CHECKLISTS

Forklift Inspection Daily Checklist

Week of		Operator		Truck#	
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Key: ✓ – Good X – Attention Needed

General Inspection (All Powered Industrial Truck types)	M	T	W	Th	F	Sat	Sun
Fluid Levels - oil, water, & hydraulic fluid							
Visual leaks, cracks, or any other visible defect including hydraulic hoses and mast chains							
Tire condition & pressure including cuts & gouges							
Condition of the forks and the top clip retaining pin and heel							
Load backrest extension							
Finger guards							
Safety decals & nameplates							
Operator manual on truck and legible							
Operator compartment - check for grease and debris							
All safety devices are working properly including the seatbelt							
Electric forklifts	M	T	W	Th	F	Sat	Sun
Cables and connectors for frayed or exposed wires							
Battery restraints							
Electrolyte levels							
Hood latch							
Internal Combustion Forklifts	M	T	W	Th	F	Sat	Sun
Engine oil							
Brake reservoir							
Engine coolant							
Air filter							
Belts and hoses							
Radiator							
Hood latch							
Liquid Propane Forklifts	M	T	W	Th	F	Sat	Sun
Properly mounted tank							
Pressure relief valve pointing up							
Hose and connectors							
Tank restraint brackets							
Tank for dents and cracks							
Tank fits within profile of truck							
Leaks. Use a soapy solution							

Notes:

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Operator's Daily Checklist
Internal Combustion Engine Industrial Truck - Gas/LPG/Diesel Truck

Week of		Operator		Truck#	
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Key: ✓ – Good X – Attention Needed

Engine Off Checks	M	T	W	Th	F	Sat	Sun
Leaks – fuel, hydraulic oil, engine oil or radiator coolant							
Tires – condition and pressure							
Forks, top clip retaining pin and heel – check condition							
Load backrest – securely attached							
Hydraulic hoses, mast chains, cables and stops – check visually							
Overhead guard – attached							
Finger guards – attached							
Propane tank (LP gas truck) – rust corrosion, damage							
Safety warnings – attached (refer to parts manual for location)							
Battery – check water/electrolyte level and charge							
All engine belts – check visually							
Hydraulic fluid level – check level							
Engine oil level – dipstick							
Transmission fluid level – dipstick							
Engine air cleaner – squeeze rubber dirt trap or check the restriction alarm (if equipped)							
Fuel sedimentor (diesel)							
Radiator coolant – check level							
Operator's manual – in container							
Nameplate – attached and information matches model, serial number and attachments							
Seat belt – functioning smoothly							
Hood latch – adjusted and securely fastened							
Brake fluid – check level							
Engine On Checks – Unusual Noises Must Be Investigated Immediately	M	T	W	Th	F	Sat	Sun
Accelerator or direction control pedal – functioning smoothly							
Service brake – functioning smoothly							
Parking brake – functioning smoothly							
Steering operation – functioning smoothly							
Drive control – forward/reverse – functioning smoothly							
Tilt control – forward and back – functioning smoothly							
Hoist and lowering control – functioning smoothly							
Attachment control – operation							
Horn and lights – functioning							
Cab (if equipped) – heater, defroster, wipers – functioning							
Gauges: ammeter, engine oil pressure, hour meter, fuel level, temperature, instrument monitors – functioning							

Operator's Daily Checklist Electric Industrial Truck

Week of		Operator		Truck#	
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Key: ✓ – Good X – Attention Needed

Motor Off Checks	M	T	W	Th	F	Sat	Sun
Leaks – Hydraulic Oil, Battery							
Tires – Condition and Pressure							
Forks, Top Clip Retaining Pin and Heel -- Condition							
Load Backrest Extension – Attached							
Hydraulic Hoses, Mast Chains, Cables & Stops – Check Visually							
Finger Guards – Attached							
Overhead Guard – Attached							
Safety Warnings – Attached (Refer to Parts Manual for Location)							
Battery – Water/Electrolyte Level and Charge							
Hydraulic Fluid Level – Dipstick							
Transmission Fluid Level – Dipstick							
Operator's Manual in Container							
Capacity Plate Attached – Information Matches Model, Serial Number and Attachments							
Battery Restraint System – Adjust and Fasten							
Operator Protection Sit Down Truck - Seat Belt – Functioning Smoothly Man-up Truck – Fall protection/Restraining means - Functioning							
Brake Fluid – Check level							

Motor On Checks (Unusual Noises Must Be Investigated Immediately)	M	T	W	Th	F	Sat	Sun
Accelerator Linkage – Functioning Smoothly							
Parking Brake – Functioning Smoothly							
Service Brake – Functioning Smoothly							
Steering Operation – Functioning Smoothly							
Drive Control – Forward/Reverse – Functioning Smoothly							
Tilt Control – Forward and Back – Functioning Smoothly							
Hoist and Lowering Control – Functioning Smoothly							
Attachment Control – Operation							
Horn – Functioning							
Lights & Alarms (where present) – Functioning							
Hour Meter – Functioning							
Battery Discharge Indicator – Functioning							
Instrument Monitors – Functioning							

Operator's Daily Checklist Electric Pallet Jacks

Week of		Operator		Truck#	
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Key: ✓ – Good X – Attention Needed

	M	T	W	Th	F	Sat	Sun
Tires/Wheels: wear, damage, nuts tight							
Gauges/Instruments: damage, operation							
Warning Decals/Operators' Manual: Missing, not readable							
Data Plate: not readable, missing							
Forks: bent, worn, stops OK							
Covers/Sheet metal: damaged, missing							
Brake: Emergency Brake Test							
Steering: rolls up, down, back and forth freely							
Horn: Operational							
Battery connections loose, charge, electrolyte lot							
Lift/Lower: loose/binding, excessive drift, leaks							
Directional Control: lose/binding, find neutral OK							

Notes:

Monday:
Tuesday:
Wednesday:
Thursday:
Friday:
Saturday:
Sunday:

ATTACHMENT C: PERFORMANCE TESTS

**Powered Industrial Truck Operator Training:
Written Proficiency Test**

Student's Name:

Date:

	True	False
1. Only authorized and trained employees or their supervisors can operate a forklift	<input type="checkbox"/>	<input type="checkbox"/>
2. Operators are required to inspect their forklift prior to use	<input type="checkbox"/>	<input type="checkbox"/>
3. Riders are allowed on a forklift if they are strapped in	<input type="checkbox"/>	<input type="checkbox"/>
4. Travel with your load high enough to see under it	<input type="checkbox"/>	<input type="checkbox"/>
5. Pedestrians have the right of way, except when the forklift driver is in a hurry	<input type="checkbox"/>	<input type="checkbox"/>
6. Always look over both shoulders before backing up	<input type="checkbox"/>	<input type="checkbox"/>
7. If your vision is obstructed when traveling with a load, travel in reverse	<input type="checkbox"/>	<input type="checkbox"/>
8. You only need to obey traffic rules and signs when people are around	<input type="checkbox"/>	<input type="checkbox"/>
9. A forklift is less stable when the mast is raised during load stacking and unstacking	<input type="checkbox"/>	<input type="checkbox"/>
10. Forklift repairs should be made whenever you get a break from work	<input type="checkbox"/>	<input type="checkbox"/>
11. Forks should be inserted into the pallet at least three quarters of the way	<input type="checkbox"/>	<input type="checkbox"/>
12. The rated capacity will not be affected by the use of special load attachments	<input type="checkbox"/>	<input type="checkbox"/>
13. Always check the mast for cracked or broken welds	<input type="checkbox"/>	<input type="checkbox"/>
14. Always drive straight-on when driving over railroad tracks	<input type="checkbox"/>	<input type="checkbox"/>
15. A forklift's rated capacity is located on the manufacturer's ID plate	<input type="checkbox"/>	<input type="checkbox"/>
16. Allow at least one forklift length when driving behind another vehicle	<input type="checkbox"/>	<input type="checkbox"/>
17. Five miles an hour is always a safe driving speed	<input type="checkbox"/>	<input type="checkbox"/>
18. Industrial areas/warehouses can have low overhead clearances	<input type="checkbox"/>	<input type="checkbox"/>
19. When you are working in a trailer, you should use dock lights or headlights	<input type="checkbox"/>	<input type="checkbox"/>
20. A lateral tip-over is usually caused by driving over trash or carrying a load too high	<input type="checkbox"/>	<input type="checkbox"/>
21. When carrying a load, you drive down a ramp forks first	<input type="checkbox"/>	<input type="checkbox"/>
22. The front wheels steer a forklift	<input type="checkbox"/>	<input type="checkbox"/>
23. When turning into an aisle, steer wide	<input type="checkbox"/>	<input type="checkbox"/>
24. Turning off the engine is all you need to do when leaving a forklift unattended	<input type="checkbox"/>	<input type="checkbox"/>
25. When traveling with a load, keep the forks approximately six inches off the surface	<input type="checkbox"/>	<input type="checkbox"/>
26. The only check that a battery needs is for cracks or holes	<input type="checkbox"/>	<input type="checkbox"/>
27. Forklifts are powered by battery, gasoline, diesel or propane	<input type="checkbox"/>	<input type="checkbox"/>
28. Pre-use inspections should require that each hydraulic line be checked	<input type="checkbox"/>	<input type="checkbox"/>
29. The forklift should always be started at the beginning of a pre-inspection	<input type="checkbox"/>	<input type="checkbox"/>
30. If the mast height must be adjusted, only lower the mast when in forward motion	<input type="checkbox"/>	<input type="checkbox"/>
31. When setting down your load, start leveling forks before reaching your destination	<input type="checkbox"/>	<input type="checkbox"/>
32. After picking up a load, the forklift will be more stable if the mast is tilted forward	<input type="checkbox"/>	<input type="checkbox"/>
33. Before pre-inspection it is OK to lift a heavy object to check the lift cylinders	<input type="checkbox"/>	<input type="checkbox"/>
34. If a tire is not flat, assume the vehicle is useable	<input type="checkbox"/>	<input type="checkbox"/>
35. When loading a trailer with a forklift that is too heavy, use more trailer supports	<input type="checkbox"/>	<input type="checkbox"/>
36. Drive at a steady speed to avoid slipping and skidding on bridge plates	<input type="checkbox"/>	<input type="checkbox"/>
37. Forklift tires are engineered to prevent skidding, slipping and sliding	<input type="checkbox"/>	<input type="checkbox"/>
38. Propane tanks should be checked for leaks and for secure valves and nozzles	<input type="checkbox"/>	<input type="checkbox"/>
39. Inadequately trained spotters have been caught between fixed objects and forklifts	<input type="checkbox"/>	<input type="checkbox"/>

ANSWER KEY:
Powered Industrial Truck Operator Training:
Written Proficiency Test

	True	False
1. Only authorized and trained employees or their supervisors can operate a forklift	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Operators are required to inspect their forklift prior to use	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Riders are allowed on a forklift if they are strapped in	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Travel with your load high enough to see under it	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Pedestrians have the right of way, except when the forklift driver is in a hurry	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Always look over both shoulders before backing up	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. If your vision is obstructed when traveling with a load, travel in reverse	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. You only need to obey traffic rules and signs when people are around	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. A forklift is less stable when the mast is raised during load stacking and unstacking	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Forklift repairs should be made whenever you get a break from work	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Forks should be inserted into the pallet at least three quarters of the way	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. The rated capacity will not be affected by the use of special load attachments	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Always check the mast for cracked or broken welds	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Always drive strait-on when driving over railroad tracks	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. A forklift's rated capacity is located on the manufacturer's ID plate	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16. Allow at least one forklift length when driving behind another vehicle	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17. Five miles an hour is always a safe driving speed	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Industrial areas/warehouses can have low overhead clearances	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. When you are working in a trailer, you should use dock lights or headlights	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. A lateral tip-over is usually caused by driving over trash or carrying a load too high	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21. When carrying a load, you drive down a ramp forks first	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22. The front wheels steer a forklift	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23. When turning into an aisle, steer wide	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24. Turning off the engine is all you need to do when leaving a forklift unattended	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25. When traveling with a load, keep the forks approximately six inches off the surface	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26. The only check that a battery needs is for cracks or holes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27. Forklifts are powered by battery, gasoline, diesel or propane	<input checked="" type="checkbox"/>	<input type="checkbox"/>
28. Pre-use inspections should require that each hydraulic line be checked	<input checked="" type="checkbox"/>	<input type="checkbox"/>
29. The forklift should always be started at the beginning of a pre-inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30. If the mast height must be adjusted, only lower the mast when in forward motion	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31. When setting down your load, start leveling forks before reaching your destination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
32. After picking up a load, the forklift will be more stable if the mast is tilted forward	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33. Before pre-inspection it is OK to lift a heavy object to check the lift cylinders	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34. If a tire is not flat, assume the vehicle is useable	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35. When loading a trailer with a forklift that is too heavy, use more trailer supports	<input checked="" type="checkbox"/>	<input type="checkbox"/>
36. Drive at a steady speed to avoid slipping and skidding on bridge plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>
37. Forklift tires are engineered to prevent skidding, slipping and sliding	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38. Propane tanks should be checked for leaks and for secure valves and nozzles	<input checked="" type="checkbox"/>	<input type="checkbox"/>
39. Inadequately trained spotters have been caught between fixed objects and forklifts	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Forklift Training Group Exercise

- 1. Define the term counterweight and discuss its role in forklift load handling.**
- 2. Discuss forklift longitudinal stability and the importance it has in forklift operation.**
- 3. What is the stability triangle?**
- 4. Discuss what is meant by lateral stability.**
- 5. Define the term dynamic stability.**
- 6. Define the term fulcrum. How is the term relevant to forklift operation?**
- 7. What is the difference between track and wheelbase? How could these differences effect forklift operations?**
- 8. How does grade affect forklift operation?**

ANSWER KEY:
Forklift Training Group Exercise

- 1. Define the term counterweight and discuss its role in forklift load handling.**

Weight that is part of the basic structure of a truck that is used to offset the load and maximize the resistance to keep the truck from tipping over.

- 2. Discuss forklift longitudinal stability and the importance it has in forklift operation.**

This is the resistance of a truck to overturning forward or rearward

- 3. What is the stability triangle?**

The vehicle wheelbase, track height, and weight distribution of the load, and the location of the counterweights of the vehicle.

- 4. Discuss what is meant by lateral stability.**

It is the line of action: a vertical line that passes through combined center of gravity of the vehicle and the load.

- 5. Define the term dynamic stability.**

This is when the vehicle and load are put into motion; moving, braking, cornering, lifting, tilting, and lowering loads, etc. are important stability considerations.

- 6. Define the term fulcrum. How is the term relevant to forklift operation?**

The fulcrum would be the pivot point pertaining to forklift operations: the axis of rotation of the truck when it tips over.

- 7. What is the difference between track and wheelbase? How could these differences effect forklift operations?**

Track is the distance between wheels on the same axle. Wheelbase is the distance between centers of the front and rear wheels of the forklift.

- 8. How does grade affect forklift operation?**

It can upset the stability triangle. Grade is measured as the number of feet in rise or fall over a hundred foot horizontal distance.

**Powered Industrial Truck Operator Training:
Hands-On Proficiency Test**

Student's Name: _____ **Date:** _____

Evaluator's Name: _____ **Type of PIT:** _____

Results: Pass Fail

Category	Action	Pass	Fail	N/A
Inspection	1. Able to accurately follow vehicle inspection checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating Principles	2. Able to identify type of power source	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	3. Able to follow local procedures for refueling/recharging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4. Able to safely start vehicle in preparation for use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5. Understands use/location of controls and gauges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6. Able to demonstrate example of unattended vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fork Adjustment	7. Able to determine proper adjustment of forks for load	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Traffic Patterns	8. Able to maintain vehicle within established traffic pattern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	9. Able to recognize warning devices, mirrors, guards etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forklift Type	10. Able to determine the type and configuration of vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	11. Able to determine rated lifting capacity of vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Picking Up Loads	12. Approaches slowly and straight-on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	13. Stops when forks are about a foot from load	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	14. Safely engages pallet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	15. Checks mast height for obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	16. Slowly/safely picks up load with load against backrest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unstacking Loads	17. Checks rear for pedestrians, traffic, obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	18. Approaches slowly and straight-on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	19. Stops when forks are about a foot from load	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	20. Checks mast height for obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	21. Safely raises forks to desired height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	22. Safely engages pallet and tilts to safe angle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stacking Loads	23. Slowly and safely picks up load and lowers to safe height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	24. Approaches slowly and straight-on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	25. Stops when forks are about a foot from load	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	26. Checks mast height for obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	27. Safely raises forks to desired height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	28. Safely drives forward until load is squarely over stack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	29. Safely tilts to safe angle and places load on stack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	30. Slowly and safely levels forks within inside of pallet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	31. Checks rear for pedestrians, traffic, obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	32. Slowly and safely backs out and lowers to safe height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Powered Industrial Truck Operator Training:
Hands-On Proficiency Test (Continued)**

Driving With Loads	33. Plans load route based on current path obstructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	34. Carries load with load tilted back to safe angle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	35. Carries load with forks at safe height above surface	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	36. Drives cautiously and at slow speeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	37. Avoids tight turns when possible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	38. Applies brakes smoothly and evenly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	39. Aware of overhead clearances and mast height	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	40. Never passes pedestrians (allows them to yield way)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	41. Obeys all local traffic rules and signs en-route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	42. Uses horns when approaching corners, doorways etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	43. Uses mirrors effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	44. Maintains a safe distance from other vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	45. Passes other vehicles only in authorized areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	46. Approaches railroad tracks at 45 degree angle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Slowly and safely levels forks within inside of pallet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Loading Docks	48. Checks bridge or dock plates for safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	49. Approaches bridge or dock plates straight-on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	50. Never accelerates on bridge or dock plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	51. Maintains safe distances from edges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trailer Operations	52. Verifies trailer floor is rated for vehicle weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	53. Verifies trailer floor is in serviceable condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	54. Verifies trailer will not roll	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	55. Verifies that vehicle will not unbalance trailer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	56. Checks interior trailer height before loading or unloading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ramp Operations	57. Loaded Vehicle - Travels up ramp load first	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	58. Loaded Vehicle - Travels down ramp load last	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	59. Unloaded Vehicle - Travels up ramp forks last	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	60. Unloaded Vehicle - Travels down ramp forks first	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obstacle Course	61. Maintains safe distance from obstacles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	62. Able to maneuver safely in tight areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	63. Maintains safe speed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	64. Accelerates and brakes smoothly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ATTACHMENT D: TRAINING DOCUMENTATION

OSHA's Employee Responsibilities

- Read the OSHA Poster at the workplace.
- Comply with all applicable OSHA standards.
- Follow all lawful employer safety and health rules and regulations and wear or use prescribed protective equipment while working.
- Report hazardous conditions to the supervisor.
- Report any work-related injury or illness to the employer, and seek treatment promptly.
- Exercise rights under the Act in a responsible manner.

New Hire Training Summary:

The following items must be reviewed with employees upon initial assignment.

- Operating instructions, warnings, and precautions (Incorporate engine or motor operation; controls and instrumentation: where they are located, what they do, and how they work; Steering and maneuvering)
- Operating limitations including differences between the forklift and the automobile
- Vehicle capacity
- Vehicle stability
- Fork and attachment adaptation, operation, and use limitations
- Workplace Hazards (Surface conditions where the vehicle will be operated; Narrow aisles and other restricted places; Ramps and other sloped surfaces that could affect the vehicle's stability; Pedestrian traffic in areas where the vehicle will be operated; Visibility including restrictions due to loading; Etc.)
- Hazardous (classified) locations including closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- Unique or potentially hazardous environmental conditions in the workplace that could affect safe operation
- Load Hazards (Composition of loads to be carried and load stability; Load manipulation, stacking, and unstacking; Etc.)
- Vehicle inspection and maintenance
- Refueling and/or charging and recharging of batteries

Upon completing the review of the above information, have new employees sign the new hire training log on the following page.

