SUNZ INSURANCE

Powered Industrial Trucks Forklift Toolkit

Quick Guide to PIT / Forklift Safety & Best Practices

The SUNZ Insurance Risk Management Team is dedicated to enhancing safety and wellness practices for our Insureds. We want to provide you with the tools, knowledge, and resources so anyone who works on, with, or around forklifts, pallet jacks, or any Powered Industrial Truck (PIT) are as safe as possible.

Table Of Contents

Why is Forklift Safety Important?

Powered Industrial Trucks (PIT), forklifts specifically, are useful machines in many industries but could become extremely dangerous when operated by an untrained or inexperienced employee. A minor misstep can turn into a major disaster in the blink of an eye. However, forklift-related violations, accidents, injuries, and fatalities are preventable with the proper training and appropriate safety measures.

The SUNZ Risk Management team has identified an alarming upward trend of forklift-related accidents, with 8 significant loss incidents involving a forklift in 2020 – increasing to 19 incidents in 2021. After evaluating these accidents, SUNZ field Risk Managers have found the most common, contributing factors include:

- *Forklift / PIT operators not properly trained on the specific type of machine they are operating.*
- *Lowering or raising a load while the forklift is still in motion, driving forward or in reverse.*
- *Failure to look in the direction of travel.*
- *Not wearing a seatbelt.*
- *Lack of awareness training for employees working in the vicinity of forklift operations.*

These factors are found across multiple industries, but all are within the employers' control to prevent with the proper training.

Consider a recent case we experienced: a simple error caused an employee to be out of work for two months, placed on light duty the following three months, and the claim incurred over $126,000. The employee was operating a forklift in reverse and had a hand outside of the protected area. The employee was distracted, speaking with a coworker, and crushed said hand between the forklift and a wall. That injured hand will likely never be the same again and it could have been avoided by adhering to proper safety and training.

SUNZ is not alone in experiencing these incidents. Simple, avoidable mistakes are easily turned into lessons, bringing awareness to the increasing frequency in forklift-related accidents. For example, KPA's Forklift Safety: Simple Mistakes Lead to Costly Results highlights a similar story – an employee, distracted on their cell phone, walked into a forklift operators blind spot while driving in reverse, resulting in the forklift operator running over and crushing a foot of the distracted employee. Another accident that could have been prevented if proper forklift safety training was followed.

Not every accident is as simple as a crushed appendage - forklift-related injuries range in severity and can even be deadly. In 2020, there were 78 forklift-related fatalities and 7,290 non-fatal, forklift-associated injuries that included days away from work. The average number of days away from work increased to 17 the same year due to these types of injuries (NSC Injury Facts). OSHA also takes PIT/forklift matters seriously and frequently issues citations for incorrect PIT/forklift use. In fiscal year 2021, Powered Industrial Trucks in general industry was in the top ten most frequently cited standards with 1,626 citations, 1,088 Inspections, and over $5.7 million in penalties.

PIT / Forklift Training Requirements

1. Formal Instruction (e.g., lecture, discussion, interactive computer learning, video tape, printed material)
   - General principles of safe PIT/forklift operation.
   - The various types of PITs being used.
   - Hazards created by use of the PIT/forklift in the workplace.
   - General safety requirements of the OSHA PIT/forklift standard.
   - Sunz Risk Management Center (RMC) contains samples of formal instruction.

2. Practical (hands-on) Training & Evaluation (must include truck-related topics & workplace-related topics)
   - Hands-on training on the operation of the PIT/forklift(s) that will be used.
   - Visual Inspection Process
   - Operational Inspection Process
   - Must cover facility specifics
   - Hands-on evaluation is required and must be conducted by an authorized qualified trainer. (See Important Reminders for more details).
   - Attachment 1: Sample Forklift Certification for Practical Evaluation

3. A refresher training course that evaluates the operator's skill level when one of the following occurs:
   - An operator is found to be unsafely operating a PIT/forklift.
   - An accident or near miss takes place.
   - There is a change of equipment.
   - There is a significant change in the workplace.
   - An evaluation indicates the need.
   - Once every three years, a complete evaluation of each operator's performance must be conducted.

4. Certification of Training
   - Operator name
   - Training date
   - Evaluation date
   - Equipment Class
   - Name of person(s) performing the training or evaluation
   - Attachment 2: Sample PIT/Forklift Operator Safety Training Certification of Completion
   - Attachment 3: Sample PIT/Forklift Operator Certification Wallet Cards (Optional but Highly Recommended to document training and track operator qualifications).

Important Reminders

Before PIT / Forklift training, read through these important reminders that are applicable to all industries. They are pivotal to employee safety.

- It is a violation of Federal law for anyone UNDER 18 years old to operate or ride on a PIT / Forklift.

- It is a violation of Federal law for anyone OVER 18 years old to operate a PIT / Forklift that has NOT been properly trained and certified to do so.

- The information in this document is referenced from Title 29 CFR 1910.178 Click here to view (29 CFR 1910.178).

- **State Plans:** 28 U.S. states and territories have their own OSHA-approved occupational safety and health programs. These State Plans dictate and enforce their own occupational safety and health standards that are required to be at least as effective as OSHA's in protecting workers but may have different or additional requirements. Check if your workforce is subject to a State Plan and learn more at osha.gov/stateplans/.

- Employers are required to train employees in all operating instructions, warnings, and precautions listed in the **operator's manual** for the type of machine which the employee is being trained to operate.

  - Due to the vast variety of makers, types, and classifications of PITs / forklifts, reference each machine's operator's manual for training specifics.
  - OSHA's PIT / Forklift eTool provides more information on requirements, best practices, and forklift classification examples.

- Definition of a 'Qualified Trainer' to conduct the practical component of PIT / Forklift Training: an individual with the knowledge, training, and experience to train PIT / forklift operators and evaluate their performance.

  - OSHA's Letter of Interpretation (Standard Number: 1910.178 1910.178(l)(2)(iii)) on PIT/forklift operator trainer qualifications.

- Forklift Safety Awareness Training should expand to include those who will be working in the vicinity of PITs / forklifts. The safety of those working around forklifts is the responsibility of everyone in the work environment, whether operating a machine or as a pedestrian.

Staffing Company Reminder

Joint Responsibility

SUNZ recognizes the disproportionate rate at which temporary workers are injured in workplace accidents, and in some cases frequency of injuries is near double that of the traditional employment relationship. Most staffing companies take the safety and health of the temporary employees they send to Client/Host Employer sites seriously, but meeting OSHA's regulations requires more - it requires partnering with the host employers, planning, collaborating, and training employees. Equal responsibility is shared with clients, and there should be regular follow-up at client work sites where temporary workers are assigned.

Whenever temporary workers are employed, OSHA will consider the host company and staffing company as "joint employers". As joint employers, both companies will "have responsibilities for protecting the safety and health of the temporary worker under the OSH Act."

Protecting Temporary Workers – the Highlights:

- While the extent of responsibility under the law of staffing agencies and host employers is dependent on the specific facts of each case, staffing agencies and host employers are jointly responsible for maintaining a safe work environment for temporary workers - including, for example, ensuring that OSHA's training, hazard communication, and recordkeeping requirements are fulfilled.
- OSHA could hold both the host and temporary employers responsible for the violative condition(s) - and that can include lack of adequate training regarding workplace hazards. Temporary staffing agencies and host employers share control over the worker and are therefore jointly responsible for temporary workers' safety and health.
- Both host employers and staffing agencies have roles in complying with workplace health and safety requirements and they share responsibility for ensuring worker safety and health.
- A key concept is that each employer should consider the hazards it is able to prevent and correct, and in a position to comply with OSHA standards. For example: staffing agencies might provide general safety and health training, and host employers provide specific training tailored to the workplace equipment/hazards.
- The host employer must still verify a PIT/forklift operators training and provide site-specific information and training on the particular types of PIT/forklift(s) and working conditions present at the worksite.

Where, Who, and When

PIT/Forklift Safety Training Requirements

Where does Forklift Safety Training need to be conducted?

- Anywhere a forklift or PIT are in use.

Who needs Forklift Safety Training?

- Anyone who will be operating a forklift or PIT.
- All employees working in the vicinity of forklifts.

When is Forklift Certification / Safety Training needed?

- All new operators BEFORE initial use or use of a new forklift/PIT model.
- Every three (3) years, a complete evaluation of an operator's performance.
- If the operator performs unsafe actions while operating a forklift.
- An accident or near miss occurs.
- When there is a change of equipment.
- If there is a significant change(s) in the workplace.
- An evaluation/safety assessment indicates there is a need.

Essential Tools for PIT/Forklift Safety

Written PIT / Forklift Safety Program

Attachment 4: Sample Forklift Operation Program / Policy

Documented Training & Certification

Attachment 1: Sample Forklift Certification for Practical Evaluation

Daily Safety Inspection Forms for PIT

Attachment 5: Sample Forklift Operator's Checklist

Regular Maintenance – PIT

Attachment 6: Sample 6-Week (250-Hour) Forklift Maintenance Checklist for Electric Forklifts

Attachment 7: Sample 6-Week (250-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

Attachment 8: Sample 12-Month (2000-Hour) Forklift Maintenance Checklist for Electric Forklifts

Attachment 9: Sample 12-Month (2000-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

Basic Guide to Forklift Safety Compliance

Best Practices Checklist

Please select all applicable classifications of PIT used at the Worksite:

- 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

- Written PIT Safety Program in place: Y ☐ N ☐

  - o Program is readily available for review: Y ☐ N ☐
  - o Program contains all essential elements: Y ☐ N ☐
  - o Updated at least annually: Y ☐ N ☐
  - o Covers all types of PIT used: Y ☐ N ☐
  - o All affected employees are trained on PIT program: Y ☐ N ☐

- Documented Training & Certification for all operators: Y ☐ N ☐

  - o Competent trainer conducts training & evaluations: Y ☐ N ☐
  - o Formal Instruction and Practical Evaluation completed: Y ☐ N ☐
  - o All PIT operators are in possession of current certification: Y ☐ N ☐
  - o Required Initial and Refresher training completed: Y ☐ N ☐

- Daily documented safety inspection of all PIT equipment completed: Y ☐ N ☐

  - o Inspection forms are readily available for review: Y ☐ N ☐
  - o Inspection forms are completed by each operator before shift start: Y ☐ N ☐
  - o All required components are inspected before operation: Y ☐ N ☐
  - o If found unsafe, equipment is locked out to prevent use: Y ☐ N ☐

- Equipment is in good condition and regularly maintained: Y ☐ N ☐

  - o Records of recommended/required service are kept: Y ☐ N ☐
  - o All safety devices are present and operational: Y ☐ N ☐
  - o Equipment is stored and cleaned properly: Y ☐ N ☐
  - o All attachments used with PITs are designed and certified by equipment manufacturer(s): Y ☐ N ☐

Attachment 1: Sample Forklift Certification for Practical Evaluation

Operator's Name: _____

FORKLIFT OPERATORS' PERFORMANCE EVALUATION	Satisfactory	Needs Practice	Unsatisfactory
Forklift Inspection			
Properly completes the inspection checklist prior to operating forklift.	❑	❑	❑
Use of controls and instrumentation			
Directional control (forward, neutral, reverse).	❑	❑	❑
Lift control (raise, lower, tilt).	❑	❑	❑
Knowledge of instrumentation functions.	❑	❑	❑
Maneuvering skills			
Smooth starting and stopping.	❑	❑	❑
Drives safely and under control in both forward and reverse.	❑	❑	❑
Proper speed.	❑	❑	❑
Turns corners correctly – aware of rear end swing.	❑	❑	❑
Selecting and picking up load			
Knows the capacity of the forklift and checks load weight.	❑	❑	❑
Approaches load properly.	❑	❑	❑
Properly seats forks and pickup technique.	❑	❑	❑
Uses proper pickup technique	❑	❑	❑
Tilts load back slightly against backrest.	❑	❑	❑
Load balanced properly.	❑	❑	❑
Carries load low; 6" – 8" off ground.	❑	❑	❑
Yields to pedestrians.	❑	❑	❑
Lowers load smoothly/slowly.	❑	❑	❑
Drives with forks low to ground (6" – 8" off ground).	❑	❑	❑
Driving with a load and driver visibility			
Smooth starting and stopping.	❑	❑	❑
Proper speed during turns.	❑	❑	❑
Slows at intersections and corners.	❑	❑	❑
Looks in both directions and sounds horn at intersections.	❑	❑	❑
Keeps to the right in aisles and maintains proper clearance.	❑	❑	❑
Travels at least three lengths behind other vehicles.	❑	❑	❑
Handles load in manner to prevent product damage.	❑	❑	❑
Keeps clear view of direction of travel.	❑	❑	❑
Drives backward in reverse when necessary to maintain visibility.	❑	❑	❑
Remains alert to overhead obstructions.	❑	❑	❑
Vehicle parking			
Parks on level area.	❑	❑	❑
Sets forks flat on floor.	❑	❑	❑
Sets parking brake.	❑	❑	❑
Removes key.	❑	❑	❑
Demonstrates ability to refuel and/or recharge batteries.	❑	❑	❑
Site specific hazards			
Reviewed surface hazards. (Ramps, curbs, pavement changes, oily floors, etc.)	❑	❑	❑
Reviewed facility hazards. (Overhead lines, ceilings, confined spaces, etc.)	❑	❑	❑
Reviewed on-site traffic patterns. (One ways, blind corners, pedestrian crossings, etc.)	❑	❑	❑
Reviewed locations where forklift should not be operated due to potential stability problems.	❑	❑	❑
Remarks:			
FINAL EVALUATION:	**❑ Pass**		**❑ Fail**
Evaluator's Name: Date:			

CERTIFICATE OF COMPLETION

This is to certify that

_____

has successfully completed **Forklift Operator Safety Training** and agrees to comply with all applicable employer, state, federal, and national (OSHA) standards.

_____	_____	_____	_____
Date of Training	Date of Evaluation	Equipment Class	Trainer/Evaluator

Attachment 3: Sample Forklift Operator Certification Wallet Cards

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Forklift Certification Card

The following individual has successfully completed forklift operator safety training and agrees to comply with all applicable employer, state, federal, and national standards (OSHA).

Operator: ____________________

Date of Training: ____________________

Date of Evaluation: ____________________

Trainer/Evaluator: ____________________

Equipment Class: ____________________

Attachment 4: Sample Forklift Operation Program / Policy.

Forklift Operation – Procedure

Scope and Application

This procedure applies to all operations where forklifts, other Powered Industrial Trucks (PITs), or jacks are used for the purpose of material handling.

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 program applies to all powered industrial trucks, hoists, and lifting gear used in material handling. The information in this program shall be used to train prospective industrial truck operators and provide the basis for initial and refresher training.

Implementation

Implementation of this procedure is the responsibility of the facility manager.

Procedure

1.0 Operator Requirements

A. Ensure that all candidates for powered industrial truck operators meet the following basic requirements:

1. No vision problems that cannot be corrected by glasses or contacts.
2. No hearing loss that cannot be corrected with hearing aids.
3. No physical impairments (including neurological, balance, or consciousness issues) that affect:
   a) Perception
   b) Vision
   c) Physical abilities

2.0 Training

A. Training of operators must be done by an experienced operator that is familiar with the company equipment, applications, and layout.

B. Supervise trainees closely.

1. Never allow trainees to operate independently.
2. Trainees must only operate equipment:
   a) In a safe area, under continual supervision
   b) After they have successfully completed the training program
   c) After they are evaluated on their skills with the equipment
3. They are not to be certified unless they clearly demonstrate the necessary skills and abilities.

C. Only organization certified operators are allowed to operate PITs.

3.0 Periodic Evaluation and Refresher Training

A. Sufficient evaluation and refresher training must be conducted to assure all operators truly understand and follow training received and proper procedures to operate the powered industrial truck safely. Job Hazard Analyses and Safety Observations can be used to reinforce proper behaviors.
B. A skills evaluation must be performed of each operator's performance on the type of powered industrial truck they will operate. This is to be completed after training, and at least every three years.
C. It is advisable that Safety Observations be done on an ongoing basis as part of a developed Safety Culture.
D. Refresher training is required if any of the following occur:
   1. The operator is involved in an accident or near-miss incident.
   2. The operator has been observed operating the vehicle in an unsafe manner.
   3. The operator has been determined in an evaluation to need additional training.
   4. There are changes in the workplace that could affect safe operation of the truck.
   5. The operator is assigned to a different type of truck.
E. It is advisable that refresher training be done throughout the year, and that it is coupled with ongoing Safety Observations. Any individual with poor behaviors should be pulled from the powered industrial truck responsibilities to assure their safety and that of their co-workers.

4.0 PIT Maintenance Requirements

A. Power-operated industrial trucks must be in safe operating condition or will be removed from service.
B. Copies of the vehicle inspections and owner's manuals must be kept on the respective gear.
C. All repairs shall be made by authorized personnel to manufacturer standards.
D. Pre-shift, each PIT must be inspected to the manufacturer requirements.
E. Repairs to the fuel and ignition systems of industrial trucks must be conducted in locations designated for such repairs with ignition sources eliminated.
F. Repairs to the electrical system shall have the battery disconnected prior to repairs.
G. Industrial trucks are not to be modified to affect the weight limits of the truck or other safety aspects without the re-certification of the manufacturer.
H. Additional counter-weighting or lift gear not original to the PIT shall not be used unless approved by the manufacturer.
I. Any PIT that has noted deficiencies in the pre-shift inspection shall be removed from service.
J. All PITs and related equipment, storage areas, etc, will be kept in a clean condition, free of:
   1. Debris
   2. Dust
   3. Oil
   4. Grease
K. Cleaning is to be done in well ventilated areas with non-combustible cleaners.

5.0 Safe Operating Procedures and Rules

A. Certification by [Organization Name] is required before use.
    1. Attend refresher training.
    2. Any unsafe act results in de-certification and retraining. A new certificate is required.
B. Conduct safety observations.
C. Do not drive sideways on incline.
    1. Grades shall be ascended or descended slowly.
    2. When ascending or descending grades, loaded trucks shall be driven with the load upgrade.
    3. Loads shall be tilted back and raised as necessary to clear the surface.
    4. Training and care is to be focused on the transition of the inclines.
D. Keep loads uphill.
E. Keep all clear from fall zone around gear.
F. Ensure trucks, rail cars etc. are checked before entering for load and that gear is secured to prevent it from moving when loading or unloading.
G. Ensure use of stop logs at edges of docks.
H. Maintain designated walkways for pedestrian traffic as well as warning systems and mirrors at blind spots.
I. Assume that pedestrians do not see you.
J. Always keep load upgrade and do not use truck on grades greater than 10%.
K. Keep arms and legs inside operator compartment.
    1. Keep all clear from lifting mechanism and loads.
L. Avoid bumps, slippery areas, and rough services.
M. Avoid sudden starts and stops.
N. Ensure clearances for vehicle components, mast, and swing of truck.
O. Handle only stable secured loads.
P. Ensure weight is centered on forks, and that load center and weight are within limits of gear, and that load is against the carriage.
Q. Ensure good visibility at all times.
R. Always look behind and beep before backing.
S. Ensure back-up alarms are functional and that they can be heard above ambient noise levels.
T. Always keep loads in a down position when moving.
U. Do daily inspection and correct deficiencies before use.
    1. 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) are to be reported for immediate repair
    2. Any unsafe gear is to be taken “Out of Service.”
    3. Ensure that the horn works and can be heard above ambient noise levels.
V. Always put forks down and set brake when forklift is stopped.
W. Use restraint systems provided.
X. Slow at all transition points and beep.
    1. Stop at blind spots and beep before proceeding slowly.

Y. Know the weight limits, load centers limits of the equipment and never exceed posted weight limits of:
    1. Forklifts
    2. Racks
    3. Shelves
    4. Any other storage areas
Z. Never allow riders.
AA. Ensure vehicle horn is operative.
BB. Lifting personnel:
    1. If using the forklift for lifting people, always use an approved work platform provided with guardrails.
    2. Make sure it is guarded between the work platform and mast.
    3. Attach the work platform to the forks; ensure that fall protection is used in accordance with a Hazard Assessment.
    4. Assure that the operator stays with the forklift, and employees are not to travel from point to point in the platform!

6.0 Hazards

A. Being caught by moving part or stored energy: A fracture or crushing hazard
    1. Use lockout procedures for any maintenance, service and or dejamming work and eliminate stored energy
    2. Block mast and forks in the upright position if working with forks elevated
B. Forklift battery changes: Hazards can include exposure to acid, eye injury, fire hazards
    1. Wear full eye protection, face shield, chemical resistant apron and gloves, and safety shoes when handling batteries
    2. Ensure ventilation is adequate in area
    3. Ensure eye wash is functional
    4. Ensure no ignition sources in area
    5. Ensure no smoking signs are posted and adhered to
    6. Wash hands and any contaminated clothing immediately and when finished handling batteries
C. Forklift re-fueling with propane can include diesel or gasoline hazards: flammability, health effects from overexposure including skin drying/ dermatitis, headache, nausea, dizziness, nervous system effects
    1. Refer to Safety Data Sheet (SDS). But at a minimum, wear full eye and skin protection.
    2. Ensure ventilation is adequate in area.
    3. Ensure eye wash is functional.
    4. Ensure no ignition sources in area.
    5. Ensure no smoking signs are posted and adhered to.
    6. Wash hands and any contaminated clothing immediately and when finished handling batteries.
    7. Use grounding and bonding procedures for container transfers involving flammables.
    8. Use approved cabinets and storage procedures; assure they are locked and secured.
    9. Store outside, assuring protected from vehicle traffic, and provided with spill containment.

10. Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
11. Spillage of oil or fuel shall be completely cleaned and evaporated, and the fuel tank cap replaced before restarting engine.
12. No truck shall be operated with a leak in the fuel system until the leak has been corrected.
13. Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.
14. LPG tanks will be removed in the following order:
    a) Shut off service valve, and let engine run down
    b) Shut off engine
    c) Disconnect tank from hose
    d) Unbuckle and remove tank from bracket
15. LPG tanks will be replaced in to following order:
    a) Place tank in bracket and re-buckle
    b) Reconnect hose to tank and tighten firmly
    c) Open valve slowly and assure proper seal
    d) NOTE: Federal Law Prohibits dispensing an improper fuel type into any Vehicle or into a non-approved fuel container.
16. In case of LPG Leaks or Tank Ruptures
    a) DO NOT start or move the PIT.
    b) If fuel hose is leaking, if safe, close the valve immediately and place PIT
    c) "Out of Service" until repaired.
    d) If tank ruptures, immediately leave the area (at least 50 feet), warn others and, notify management and call 911.
    e) Do not re-enter the area until cleared by Management.

D. Slips, falls, and tip overs

1. Keep steps and walking surfaces clear of mud and debris
2. Immediately clean up any hydraulic fluid, fuel, or oil, which is on the steps or walking surfaces
3. Maintain three points of contact when entering or exiting a forklift
4. NEVER jump off a forklift, always step off under control
5. Ensure that all powered industrial trucks will be equipped with:
    a) Overhead guard
    b) A fire extinguisher
    c) Rotating beacon
    d) Back-up alarm
    e) Seat belts
6. An overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., but not to withstand the impact of a falling capacity load or roll-over.
7. Tilt loads back and carry no more than 6-8 inches from the ground.
    a) Loads that restrict the operator's vision will be transported backwards.
8. Travel no faster than 2 mph or faster than a normal walk.
9. Hard hats will be worn by PIT Operators in high lift areas.
10. Aisles will be maintained free from obstructions, marked and wide enough (six foot minimum) for vehicle operation.

11. Lift capacity will be marked on all PITs.
    a) Operator will assure load does not exceed rated weight limits, know weight limits and weights being lifted.
12. When unattended, PITs will be turned off, forks lowered to the ground, key controlled, and parking brake applied.
13. All near misses, incidents and accidents, regardless of fault and severity, are to be immediately reported to Management.
    a) Management will conduct an investigation.
14. When lift trucks or other mechanically powered vehicles are being operated on open decks or docks (e.g., decks of ships or barges, or docks), the edges shall be guarded by railings, dockboards, or other means sufficient to prevent vehicles from going over.
15. Loading trucks and railcars
    a) Rail cars and trailers will be parked squarely to the loading area and have wheels choked in place or axles locked as applicable.
        • Keys need to be controlled to prevent movement of vehicles.
    b) Ensure that wheels are chocked on the downhill side and dock plates are in place and secure if entering a trailer.
    c) The flooring of trucks and trailers shall be checked for breaks and weakness before use.
    d) The brakes shall be set and wheel chocks to prevent movement.
    e) Fixed jacks may be necessary to support a semitrailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.
    f) When loading rail cars and trailers, dock plates will be used.
        • Operators will assure dock plates are in good condition and properly placed.
        • Positive protection shall be provided to prevent movement while dockboards or bridge plates are in position.
    g) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car.
    h) Dockboard or bridge plates shall be properly secured before they are driven over.
        • Dockboard or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
16. PITs shall not be driven up to anyone standing in front of a fixed object.
    a) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty, or within the fall zone.
17. PITs shall not be used for opening or closing freight doors.
18. There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system (18” minimum).
19. A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
20. PITs shall not be parked so as to block fire aisles, access to stairways, or fire equipment.
21. All traffic regulations shall be observed, including authorized speed limits.
    a) PITs shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
    b) Internal speed is to be limited to 2 mph.
    c) A safe distance shall be maintained approximately

c) 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.

d) Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.

e) The driver shall be required to slow down; stop at ANY blind spots; and sound the horn at intersections or other areas where vision is obstructed.

- If the load being carried obstructs forward view, the driver shall be required to break the load up or travel with the load trailing (if safe).

f) Railroad tracks shall be crossed diagonally wherever possible.

g) The driver shall be required to look in the direction of, and keep a clear view of the path of travel.

22. Fast or unsafe operation and horseplay are not permitted.
23. The driver shall be required to slow down for wet and slippery floors.
    a) Debris on the surfaces shall be removed and avoided.
24. While turning, speeds must be reduced to a safe level and steering movements performed in a smooth motion.
    a) Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.
25. Only stable or safely arranged loads shall be handled.
    a) Center loads and assure they are within the rated capacity of the PIT.
    b) Loads that affect balance shall be adjusted.
26. PITs equipped with attachments shall be operated as partially loaded trucks when not handling a load.
27. Tilting loads forward is to be avoided especially when elevated; except to pick up a load.
    a) Elevated loads cannot be tilted forward except when the load is being set over a rack or stack.
    b) When stacking or tiering, only enough backward tilt to stabilize the load is to be used.

Attachment 5: Sample Forklift Operator's Checklist

(Modify for your specific equipment, based on the Owner's Manual)

Vehicle #: _____ Date: _____

Operator: _____

Hour Meter Readings: _____

Hours Today: _____ Total Hours: _____

Visual Checks	**OK**	**Needs Repair**
Fluid Levels		
Leaks- Hydraulic, Battery		
Fuel Level		
Damage (Retaining Pins, Guards, Warnings)		
Tire Condition, Pressure		
Lights and Signals		
Hour Meter		
Other Gauges		
Battery Restraint System		
Seat Belt		
Mirrors and Windshields		
Hand Grabs, Foot Rests, Stepping/Walking Platforms		
Other		
Operational Checks		
Horn, Warning Alarms		
Steering		
Service Brakes		
Parking Brake		
Hydraulic Controls		
Manuals, Capacity Plate		
Discharge Indicator		
Battery Load Test		

Comments: _____

Inspected By: _____

6-Week (250-Hour) Forklift Maintenance Checklist

for Electric Forklifts

Date:	
Unit Number:	
Forklift Make:	
Forklift Model:	
Forklift Serial Number:	
Hour Meter:	

Note: This checklist was adapted from Toyota's 7FBE15-20 electric forklift operator's manual. It is not meant to be exhaustive. Please consult the operator's manual for your particular forklift before performing maintenance. Only trained and authorized technicians should perform service on forklifts.

System	Action	Maintenance Item	Complete?
Power & Drive System	**Inspect**	Drive unit for oil leakage and level	
		Motor rotation sound	
		Motor terminal for looseness	
		Battery charging level	
		Battery electrolyte level	
		Battery terminal for looseness	
		Upper battery case of abnormalities	
		Battery connector for condition and connection	
	Measure	Specific gravity of the battery	
Wheels & Axles	**Inspect**	Tires for debris and damage	
		Rim, side ring and disc wheel for damage	
		Front and rear wheel bearings for unusual noises and looseness	
		Hub nuts for looseness	
	Measure	Tire tread depth	
Steering & Brakes	**Inspect**	Steering wheel for play and operation	
		Steering valve for leakage	
		Power steering for oil leakage and check level	
		Power steering for looseness in mounting parts	
		Brake pedal operation	
		Parking brake pull margin operating force	
		Parking brake effectiveness	
		Braking rod and cable for operation, looseness, and damage	
		Disc brakes for disk to pad clearance	
		Steering valve mounting for looseness	
Forks, Attachment, Mast & Chains	**Inspect**	Fork and stopper pin condition	
		Forks for wear and deformation	
		Mast and lift bracket for cracks, damage, and deformation in welds	
		Roller bearing looseness	
		Mast and lift bracket for looseness	
		Mast support metal for wear and damage	
		Rollers for operation, wear, and damage	
		Chain for tension, deformation and damage	
		Cain anchor bolt condition	
		Chain wheel for operation, wear, and damage	
		Chain wheel bearing for wear	
		Attachment for abnormalities and mounting condition	
	Lubricate	Lifting chains	
Hydraulics (Cylinders, Pump, Control Valve & Levers)	**Inspect**	Hydraulic rod and rod end for deformation and damage	
		Cylinder operation	
		Hydraulic cylinders for oil leaks and damage	

Hydraulics (Cylinders, Pump, Control Valve & Levers)	**Inspect**	Pin and hydraulic cylinder shaft support for wear and damage	
		Hydraulic cylinders for uneven movement	
		Oil pump for leakage and unusual noise	
		Hydraulic tank oil level and for leaks and contamination	
		Control lever linkage for operation and looseness	
		Oil control valve for leakage	
		Oil control valve for relief valve function	
		Oil pressure piping for leaks, deformation, damage, and linkage looseness	
		Hydraulic cylinder mounting for looseness and check for damage	
	Replace	Hydraulic return oil filter (for new trucks)	
	Measure	Hydraulic cylinder natural drop and forward tilt	
		Lifting speed	
Electrical System (Ignition, Starter, Wiring)	**Inspect**	Magnetic contactor for looseness and damage	
		Auxiliary contactor for contamination, contact, and abrasion	
		Microswitch operation and timing	
		Microswitch for damage and looseness	
		Directional level for operation and damage	
		Controller operation	
		Fuses for looseness	
		Wiring harness for deterioration and damage	
		Wiring for looseness in connecting parts and taping condition	
	Clean	Interior controller and check for damage	
Safety Devices	**Inspect**	Overhead guard for cracks, damage, and deterioration	
		Load backrest for cracks, deformation and damage	
		All lights for operation and mounting looseness	
		Horn for operation and mounting	
		Turn signals (if equipped) for operation and mounting	
		Instruments for operation	
		Back-up buzzer (if equipped) for operation and mounting	
		Operator presence sensing system (OPSS) function	
		Seat mounting for looseness and damage	
		Seat belt for damage and operation	
		Seat switch for operation	
		Rear view mirror (if equipped) for dirt, damage, and reflection	
		Load backrest for looseness	
Notes			

Attachment 7: Sample 6-Week (250-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

6-Week (250-Hour) Forklift Maintenance Checklist

for Internal Combustion Forklifts

Date:	
Unit Number:	
Forklift Make:	
Forklift Model:	
Forklift Serial Number:	
Hour Meter:	

Note: This checklist was adapted from Toyota's 8FG-8FGCU 15-32 internal combustion forklift operator's manual. It is not meant to be exhaustive. Please consult the operator's manual for your particular forklift before performing maintenance. Only trained and authorized technicians should perform service on forklifts.

System	Action	Maintenance Item	Complete?
Engine, Transmission & Fuel System	**Inspect**	Oil leaks	
		Starting condition and unusual noises	
		PCV valve and piping for clogs and damage	
		Fuel system for leaks	
		Differential for oil level and leaks	
		Torque converter and transmission for oil level, leaks, looseness, and function	
		Control valve and clutch function	
		Inching valve function	
		Carburetor link mechanism	
		Fuel filter element for clogs	
	Change	Engine oil and filter (if new). If old, check oil filter for clogging	
	Clean	Air filter	
	Measure	Engine rotating condition during idling & acceleration	
		Engine valve clearance	
		Governor for maximum no-load stabilized rotation speed	
Exhaust & Cooling Systems	**Inspect**	Radiator coolant level and for leaks	
		Coolant hoses for wear/damage	
		Radiator cap condition	
		Fan belt tension and for damage	
		Exhaust system for operation, leaks, and damage	
	Measure	Carbon monoxide concentration in exhaust gas	
Wheels & Axles	**Inspect**	Tire air pressure	
		Tires for damage, debris, wear, and tread depth	
		Rim and side ring for damage	
		Front and rear wheel bearings for noise and looseness	
		Rear axle beam for looseness	
		Hub nuts for looseness	
Steering & Brakes	**Inspect**	Steering wheel for functionality and play	
		Steering valve for leakage	
		Power steering for oil leakage	
		Power steering mounting and linkage for looseness	
		King pin for looseness	
		Brake fluid level	
		Braking operation	
		Parking brake function and operating force	
		Parking brake linkage and cable for looseness and damage	
		Brake pipe and hose for leakage and damage	
		Steering valve mounting for looseness	
	Measure	Brake pedal play and reserve	

Attachment 7: Sample 6-Week (250-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

Steering & Brakes	**Measure**	Clearance between the brake drum and lining	
Forks, Attachment, Mast & Chains	**Inspect**	Forks and stopper pin for wear/damage	
		Left and right forks for uniformity	
		Mast and lift bracket for cracked welds, looseness, and damage	
		Mast rollers for wear and damage	
		Mast strip for wear and damage	
		Chain tension and for damage	
		Chain anchor bolt condition	
		Chain wheel for operation and wear	
		Attachment for abnormalities and mounting condition	
	Lubricate	Lifting chains	
Hydraulics (Cylinders, Pump, Control Valve & Levers)	**Replace**	Hydraulic oil return filter (for new trucks)	
	Inspect	Hydraulic cylinder rod, rod screw and rod end for damage	
		Overall hydraulic system operation	
		Hydraulic cylinders for leaks and damage	
		Hydraulic pin and cylinder shaft support for damage	
		Hydraulic cylinder for uneven movement	
		Oil pump for leakage and strange noises	
		Hydraulic tank oil level, and for leaks and contamination	
		Control lever linkage for looseness	
		Control lever operation	
		Oil control valve for leaks	
		Oil control relief valve and tilt lock valve operation	
		Oil pressure piping for leakage, damage, and linkage for looseness	
		Hydraulic cylinder mounting and check for damage and looseness	
	Measure	Lifting speed	
		Hydraulic cylinder natural drop and forward tilt	
Electrical System (Ignition, Starter, Wiring)	**Inspect**	Distributor cap for cracking	
		Spark plug gap and for signs of burning	
		Distributor side terminal for burning	
		Distributor cap center piece for damage	
		Starter pinion gear meshing	
		Battery electrolyte level (if battery isn't maintenance-free)	
		Electrical wiring harness for damage	
		Fuses	
Safety Devices	**Inspect**	Overhead guard for cracked welds, damage, and deformation	
		Load backrest for damage, deformation, and looseness	
		All lights for operation and mounting condition	
		Horn for operation and mounting condition	
		Directional indicators (if equipped) for operation and mounting	
		Instruments for operation	
		Back-up buzzer (if equipped) for operation and mounting	
		Operator presence sensing system (OPSS) for function	
		Seat mounting for looseness and damage	
		Seat switch for operation	
		Seat belt mounting for looseness	
		Seat belt for damage to the webbing, plate, and buckle	
		Rear view mirror for dirt and damage and reflection	
Notes			

12-Month (2000-Hour) Forklift Maintenance Checklist

for Electric Forklifts

Date:	
Unit Number:	
Forklift Make:	
Forklift Model:	
Forklift Serial Number:	
Hour Meter:	

Note: This checklist was adapted from Toyota's 7FBE15-20 electric forklift operator's manual. It is not meant to be exhaustive. Please consult the operator's manual for your particular forklift before performing maintenance. Only trained and authorized technicians should perform service on forklifts.

System	Action	Maintenance Item	Complete?
Power & Drive System	**Inspect**	Drive unit for oil leakage and level	
		Motor rotation sound	
		Motor terminal for looseness	
		Battery charging level	
		Battery electrolyte level	
		Battery terminal for looseness	
		Upper battery case of abnormalities	
		Battery connector for condition and connection	
		Drive unit nuts and bolts for looseness	
	Measure	Specific gravity of the battery	
		Measure motor insulation resistance	
		Measure battery insulation resistance	
		Voltage of each battery cell (after charging)	
Wheels & Axles	**Inspect**	Tires for debris and damage	
		Rim, side ring and disc wheel for damage	
		Front and rear wheel bearings for unusual noises and looseness	
		Hub nuts for looseness	
		Front and rear axles for deformation and damage	
	Measure	Tire tread depth	
Steering & Brakes	**Inspect**	Steering wheel for play and operation	
		Steering valve for leakage	
		Power steering for oil leakage and check level	
		Power steering for looseness in mounting parts	
		Brake pedal operation	
		Parking brake pull margin operating force	
		Parking brake effectiveness	
		Braking rod and cable for operation, looseness, and damage	
		Disc brakes for disk to pad clearance	
		Steering valve mounting for looseness	
		Right and left turn angle	
		Power steering hose for damage	
		Brake discs sliding portion and pad wear	
		Brake discs for disc wear and damage	
		Disc mounting parts for looseness	
	Measure	Brake disc return spring fatigue	
Forks, Attachment, Mast & Chains	**Inspect**	Fork and stopper pin condition	
		Forks for wear and deformation	
		Mast and lift bracket for cracks, damage, and deformation in welds	
		Roller bearing looseness	
		Mast and lift bracket for looseness	
		Mast support metal for wear and damage	
		Rollers for operation, wear, and damage	
		Chain for tension, deformation and damage	

Forks, Attachment, Mast & Chains	**Inspect**	Cain anchor bolt condition	
		Chain wheel for operation, wear, and damage	
		Chain wheel bearing for wear	
		Attachment for abnormalities and mounting condition	
	Lubricate	Lifting chains	
Hydraulics (Cylinders, Pump, Control Valve & Levers)	**Inspect**	Hydraulic rod and rod end for deformation and damage	
		Cylinder operation	
		Hydraulic cylinders for oil leaks and damage	
		Pin and hydraulic cylinder shaft support for wear and damage	
		Hydraulic cylinders for uneven movement	
		Oil pump for leakage and unusual noise	
		Hydraulic tank oil level and for leaks and contamination	
		Control lever linkage for operation and looseness	
		Oil control valve for leakage	
		Oil control valve for relief valve function	
		Oil pressure piping for leaks, deformation, damage, and linkage looseness	
		Hydraulic cylinder mounting for looseness and check for damage	
		Forks base for cracks	
		Mast roller pin for wear and damage	
		Oil pump drive system wear	
		Hydraulic filter for clogging	
	Replace	Hydraulic return oil filter (for new trucks)	
	Clean	Clean hydraulic oil tank and strainer	
	Measure	Hydraulic cylinder natural drop and forward tilt	
		Lifting speed	
		Oil control valve relief pressure	
Electrical System (Ignition, Starter, Wiring)	**Inspect**	Magnetic contactor for looseness and damage	
		Auxiliary contactor for contamination, contact, and abrasion	
		Microswitch operation and timing	
		Microswitch for damage and looseness	
		Directional level for operation and damage	
		Controller operation	
		Fuses for looseness	
		Wiring harness for deterioration and damage	
		Wiring for looseness in connecting parts and taping condition	
		Inspect directional switch contact	
		Arc shooter mounting	
		Magnetic contactor operating condition and timings	
		Magnetic contactor looseness of the coil mounting parts	
		Mounting condition of the main circuit lead wire for looseness	
		Wiring harness insulation for damage	
	Measure	Controller overcorrect limited value	
	Clean	Interior controller and check for damage	
Safety Devices	**Inspect**	Overhead guard for cracks, damage, and deterioration	
		Load backrest for cracks, deformation and damage	
		All lights for operation and mounting looseness	
		Horn for operation and mounting	
		Turn signals (if equipped) for operation and mounting	
		Instruments for operation	
		Back-up buzzer (if equipped) for operation and mounting	
		Operator presence sensing system (OPSS) function	
		Seat mounting for looseness and damage	
		Seat belt for damage and operation	
		Seat switch for operation	
		Rear view mirror (if equipped) for dirt, damage, and reflection	
		Load backrest for looseness	
		Frame, cross-member and other structural components for damage and cracking	
		Any loose frame bolts and nuts	

Notes

Attachment 9: Sample 12-Month (2000-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

12-Month (2000-Hour) Forklift Maintenance Checklist

for Internal Combustion Forklifts

Date:	
Unit Number:	
Forklift Make:	
Forklift Model:	
Forklift Serial Number:	
Hour Meter:	

Note: This checklist was adapted from Toyota's 8FG-8FGCU 15-32 internal combustion forklift operator's manual. It is not meant to be exhaustive. Please consult the operator's manual for your particular forklift before performing maintenance. Only trained and authorized technicians should perform service on forklifts.

System	Action	Maintenance Item	Complete?
Engine, Transmission & Fuel System	Inspect	Oil leaks	
		Starting condition and unusual noises	
		PCV valve and piping for clogs and damage	
		Fuel system for leaks	
		Differential for oil level and leaks	
		Torque converter and transmission for oil level, leaks, looseness, and function	
		Control valve and clutch function	
		Inching valve function	
		Carburetor link mechanism	
		Fuel filter element for clogs	
		Inspect the propellor and axle shaft joint for looseness	
		Draining of the fuel sedimenter	
		Engine cylinder head bolts for looseness	
		Differential bolts for looseness	
		Propellor and axle shafts for spine looseness	
		Universal joint for looseness	
		Axle shaft for twisting and cracks	
	Change	Engine oil and filter (if new). If old, check oil filter for clogging	
	Clean	Air filter	
	Measure	Engine rotating condition during idling & acceleration	
		Engine valve clearance	
		Governor for maximum no-load stabilized rotation speed	
		Injection timing	
		Perform a stall test and measure oil pressure	
		Engine valve clearance	
		Engine compression	
		Injection nozzle pressure and condition	
Exhaust & Cooling Systems	Inspect	Radiator coolant level and for leaks	
		Coolant hoses for wear/damage	
		Radiator cap condition	
		Fan belt tension and for damage	
		Exhaust system for operation, leaks, and damage	
		Rubber radiator mount	
		Rubber muffler mount	
		Exhaust system pipe joints for looseness and damage	
		Exhaust vacuum sensor for damage	
		Exhaust register for damage	
		Water temperature sensor for damage	
		Oxygen sensor for damage	
	Measure	Carbon monoxide concentration in exhaust gas	
	Clean	Exhaust injector and check for damage	
Wheels & Axles	Inspect	Tire air pressure	
		Tires for damage, debris, wear, and tread depth	
		Rim and side ring for damage	
		Front and rear wheel bearings for noise and looseness	
		Rear axle beam for looseness	
		Hub nuts for looseness	

Attachment 9: Sample 12-Month (2000-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

Wheels & Axles	**Inspect**	Front axle housing for damage	
		Rear axle beam for damage and looseness	
Steering & Brakes	**Inspect**	Steering wheel for functionality and play	
		Steering valve for leakage	
		Power steering for oil leakage	
		Power steering mounting and linkage for looseness	
		King pin for looseness	
		Brake fluid level	
		Braking operation	
		Parking brake function and operating force	
		Parking brake linkage and cable for looseness and damage	
		Brake pipe and hose for leakage and damage	
		Steering valve mounting for looseness	
		Brake backing plate mounting for looseness	
		Power steering hose for damage	
		Steer knuckle for cracking	
		Master cylinder or wheel cylinder for damage, looseness, and wear	
		Brake shoe sliding and lining for wear	
		Brake drum for wear and damage	
		Brake shoe operating condition	
		Brake anchor pin for rusting	
		Brake automatic adjusting function	
		Backing plate for damage	
	Measure	Brake pedal play and reserve	
		Clearance between the brake drum and lining	
		Brake return spring wear	
Forks, Attachment, Mast & Chains	**Inspect**	Forks and stopper pin for wear/damage	
		Left and right forks for uniformity	
		Mast and lift bracket for cracked welds, looseness, and damage	
		Mast rollers for wear and damage	
		Mast strip for wear and damage	
		Chain tension and for damage	
		Chain anchor bolt condition	
		Chain wheel for operation and wear	
		Attachment for abnormalities and mounting condition	
		Forks base and welds for cracks	
		Mast support bushings for wear and damage	
		Roller pin for wear and damage	
	Lubricate	Lifting chains	
Hydraulics (Cylinders, Pump, Control Valve & Levers)	**Replace**	Hydraulic oil return filter (for new trucks)	
	Inspect	Hydraulic cylinder rod, rod screw and rod end for damage	
		Overall hydraulic system operation	
		Hydraulic cylinders for leaks and damage	
		Hydraulic pin and cylinder shaft support for damage	
		Hydraulic cylinder for uneven movement	
		Oil pump for leakage and strange noises	
		Hydraulic tank oil level, and for leaks and contamination	
		Control lever linkage for looseness	
		Control lever operation	
		Oil control valve for leaks	
		Oil control relief valve and tilt lock valve operation	
		Oil pressure piping for leakage, damage, and linkage for looseness	
		Hydraulic cylinder mounting and check for damage and looseness	
	Measure	Lifting speed	
		Hydraulic cylinder natural drop and forward tilt	
		Oil control valve relief pressure	
	Clean	Hydraulic oil tank and strainer	
Electrical System (Ignition, Starter, Wiring)	**Inspect**	Distributor cap for cracking	
		Spark plug gap and for signs of burning	
		Distributor side terminal for burning	
		Distributor cap center piece for damage	
		Starter pinion gear meshing	
		Battery electrolyte level (if battery isn't maintenance-free)	
		Electrical wiring harness for damage	
		Fuses	
		Ignition timing	
		Specific gravity of the battery (unless battery is maintenance-free)	
Safety Devices	**Inspect**	Overhead guard for cracked welds, damage, and deformation	
		Load backrest for damage, deformation, and looseness	
		All lights for operation and mounting condition	
		Horn for operation and mounting condition	
		Directional indicators (if equipped) for operation and mounting	
		Instruments for operation	
		Back-up buzzer (if equipped) for operation and mounting	
		Operator presence sensing system (OPSS) for function	
		Seat mounting for looseness and damage	

Attachment 9: Sample 12-Month (2000-Hour) Forklift Maintenance Checklist for Internal Combustion Forklifts

Safety Devices	**Inspect**	Seat switch for operation	
		Seat belt mounting for looseness	
		Seat belt for damage to the webbing, plate, and buckle	
		Rear view mirror for dirt and damage and reflection	
		Frame, cross member and other structural components for damage, cracking, and wear	
		All bolts and nuts for looseness	
Notes			