

A photograph of a yellow forklift operator in a warehouse. The operator is wearing a blue shirt, light blue pants, and a white hard hat. They are moving a pallet loaded with various colored lumber (yellow, pink, blue). The background shows tall metal shelving units filled with stacks of lumber. A red banner is overlaid on the left side of the image, containing the title.

# FORKLIFT SAFETY AND MAINTENANCE GUIDE

**\*It is a violation of Federal law for anyone UNDER 18 years of age to operate a forklift or for anyone OVER 18 years of age who is not properly trained and certified to do so.**

**<https://www.osha.gov/dts/shib/shib093003.html>**

- ▼ Forklifts, also known as lift trucks, are used to raise, move, lower, or remove large and small objects on pallets or in boxes, crates, or other containers.
- ▼ The hazards that go along with forklifts differs depending on the vehicle type and the facility where the truck is operated. **Different trucks create different potential operational hazards.** For example, a seated, 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 is able to lift a load considerably higher than the hand truck. **Workplace conditions also create different hazards.** For example, retail establishments tend to face greater challenges in maintenance of pedestrian safety.
- ▼ **OSHA mandates that forklifts be examined daily** or multiple times daily before being placed in service. Forklifts used on a round-the-clock basis must be examined after each shift. **[29 CFR 1910.178(q)(7)]**
- ▼ The forklift operator must conduct a **pre-start check** with the key off and then an operational check when the engine is running to guarantee safe use.
- ▼ **Remember!** A vehicle that is in need of repair or is unsafe in any way, should not be driven and must be taken out of service to be fixed immediately. All issues should be reported on the appropriate forms and to a supervisor.

## PRE-START INSPECTION:

**Before starting your vehicle, a pre-start inspection could include the following (sourced from OSHA):**

- Fluid levels – water, hydraulic fluid and oil.
- Visible defects such as leaks or cracks. NOTE: Operators shouldn't place hands inside of the mast. Use a stick or similar device to check chain tension.
- Tire pressure and condition, check for issues such as cuts and gouges.
- State of the forks, including the top clip retaining pin and heel.
- Load backrest extension.
- Finger guards.
- Safety nameplates and decals. Check that all warning decals and plates are in place and able to be read. The nameplate information must match the model, serial numbers and attachments.
- Operator manual must be on truck and legible.
- Operator compartment should be checked for debris and grease.
- All safety devices are working properly, such as the seat belt.

**Along with these guidelines, other items should be checked based on the forklift type. See additional items [\[HERE\]](#).**

## OPERATIONAL INSPECTION:

**Once finished the with pre-operation inspection, complete an operational inspection with the engine running. This inspection includes (sourced from OSHA):**

- |                                      |                               |
|--------------------------------------|-------------------------------|
| • Accelerator linkage                | • Hoist and lowering control  |
| • Inch control (if equipped)         | • Attachment control          |
| • Brakes                             | • Horn                        |
| • Steering                           | • Lights                      |
| • Drive control: forward and reverse | • Back-up alarm (if equipped) |
| • Tilt control: forward and back     | • Hour meter                  |

### **Additional Information**

See additional Sample Daily Checklists for Powered Industrial Trucks.

Note: Checklists are provided as a guide only and are not a substitute for complying with OSHA standards.

**[Checklists for internal combustion and electric trucks](#)**

**[Checklists for various truck types and sample generic checklist](#)**

## POTENTIAL HAZARDS WHILE DRIVING:

Be aware of potential hazards while driving, such as:

- Mechanical breakdown
- Fire
- Overheating
- Leakage

## REQUIREMENTS AND RECOMMENDED PRACTICES:

The OSHA powered industrial truck standard [29 CFR 1910.178] lists the different conditions under which a forklift is required to be removed from service. If the operator notices these conditions while driving, the operator must stop, park, and get assistance.

- Any powered industrial truck not in safe operating condition shall be removed from service. All repairs shall be made by authorized personnel. [29 CFR 1910.178(q)(1)]
- Defects when found must be immediately reported and corrected. [29 CFR 1910.178(q)(7)]
- Any vehicle that emits hazardous sparks or flames from the exhaust system shall immediately be removed from service, and not returned to service until the cause for the emission of such sparks and flames has been eliminated. [29 CFR 1910.178(q)(8)]
- When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated. [29 CFR 1910.178(q)(9)]
- No truck shall be operated with a leak in the fuel system until the leak has been corrected. [29 CFR 1910.178(p)(4)]



## MAINTENANCE:

Remember, scheduled maintenance is tremendously important to guarantee safe operation of forklift vehicles. Never operate a forklift that needs maintenance, and report repair issues immediately to your supervisor. Follow all company procedures.

## POTENTIAL HAZARDS:

- Forklift skidding or sliding due to grease, leakage, spills.
- Mechanical breakdown due to poor maintenance.
- Accidents and injuries due to improperly working equipment.



## REQUIREMENTS AND RECOMMENDED PRACTICES:

- Never operate a vehicle that requires maintenance or is in any way unsafe. [29 CFR 1910.178(p)(1)]
- Remove from service any powered industrial truck not in safe operating condition. All repairs must be made by authorized personnel. Do not attempt to fix it yourself unless you are trained and authorized to do so. [29 CFR 1910.178(q)(1)]
- Perform preventive maintenance according to manufacturer's scheduled recommendations.
- Keep industrial truck in clean condition, free of lint, excess oil, and grease. [29 CFR 1910.178(q)(10)]
- Use non-flammable cleaners for trucks.
- High flash point (at or above 100° F) cleaners can be used. Do not use low flash point (below 100° F) cleaners.
- Take suggested precautions concerning fire hazards, toxicity, and ventilation.

\*sourced from OSHA

## TRAINING REQUIREMENTS:

### What does the OSHA standard require?

The standard requires employers to develop and implement a training program based on the general principles of safe truck operation, the types of vehicle(s) being used in the workplace, the hazards of the workplace created by the use of the vehicle(s), and the general safety requirements of the OSHA standard. Trained operators must know how to do the job properly and do it safely as demonstrated by workplace evaluation. Formal (lecture, video, etc.) and practical (demonstration and practical exercises) training must be provided. Employers must also certify that each operator has received the training and evaluate each operator at least once every three years. Prior to operating the truck in the workplace, the employer must evaluate the operator's performance and determine the operator to be competent to operate a powered industrial truck safely. Refresher training is needed whenever an operator demonstrates a deficiency in the safe operation of the truck. Training shall 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. [29 CFR 1910.178(l)(2)(ii)].

\*sourced from OSHA

For details about training and proper training materials to ensure your forklifts are operated properly, click [[HERE](#)].

