Quick hits: Mechanical hazards

Forklifts

Forklifts

OSHA's 1910.178 regulation applies to all persons who use powered industrial trucks for such things as lifting, pulling, stacking, and moving materials. The regulation does not apply to compressed air or nonflammable compressed gas-operated industrial trucks, nor to farm vehicles, nor to vehicles intended primarily for earth moving, or over-the-road hauling.

Action Steps

- ❒ Select appropriate and approved equipment.
- ❒ Make sure name plates and markings are adequate.
- ❒ Use only approved equipment for the particular area.
- ❒ Store and handle fuels safely.
- ❒ Change, charge, and store batteries properly.
- ❒ Provide emergency response equipment for flushing and neutralizing spilled electrolyte, for fire protection, for protecting charging apparatus from damage by trucks, and for adequate ventilation for dispersal of fumes from gassing batteries.
- ❒ Set brakes of highway trucks and chock wheels when they are boarded with powered industrial trucks.

- ❒ Ensure forklift operators are competent and have completed training.
- ❒ Certify operator training.
- ❒ Ensure proper operation and loading of forklifts.
- ❒ Inspect trucks daily before each shift.
- ❒ Perform appropriate maintenance.
- ❒ Remove damaged equipment from use.

Training action plans

Training must 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.

Training should cover the following topics:

- Safe operation
- Truck-related topics:
  - operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate
  - differences between the truck and the automobile
  - 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

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- 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

Refresher training must be given when needed and employers must perform a triennial evaluation of forklift operators.

Tips

- Use seatbelts if they are available.
- Do not jump from an overturning, sit-down type forklift. Stay with the truck, holding on firmly and leaning in the opposite direction of the overturn.

- Do not raise or lower the forks while the forklift is moving.
- Do not allow passengers to ride on forklift trucks unless a seat is provided.
- Do not drive to another location with the work platform elevated.

FAQs

Are forklifts required to have seatbelts?

In October 1996, OSHA issued an enforcement policy clarifying that, when a forklift vehicle is equipped with a seatbelt, the operator must wear it. Also, if the vehicle has no seatbelt and the manufacturer offers a retrofit kit, the employer must purchase the kit, install the seatbelt, and ensure that the operator wears it. OSHA cites employers under the General Duty Clause when seatbelts are not worn by forklift operators because there is no regulation at this time. OSHA may, however, cite under 1910.178(l)(i)(M) in the forklift operator training requirements if a vehicle has a seatbelt and the employer fails to train on its use.

Who can train and certify forklift operators?

OSHA requires that the person doing the powered industrial truck training have the knowledge, training, skills, and experience to train operators and evaluate their competence. It is the employer's responsibility to determine who has the knowledge, training, skills and experience. OSHA does not think that it is necessary to require accreditation of the trainer, stating that trainers and evaluators with different backgrounds can achieve the level of ability necessary to teach and evaluate trainees.

Must we retrofit our powered industrial trucks with seatbelts if they were not manufactured with them?

In a letter of interpretation dated 03/08/2002, OSHA says that employers may be cited for the lack of seatbelt use on powered industrial trucks, when OSHA can document that an employer has been specifically notified about and offered a retrofit program by the manufacturer but has not retrofitted an applicable powered industrial truck.

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How long must you keep forklift daily inspection records?

Federal OSHA's powered industrial truck standard does not require that you keep a written record of the daily inspections. The regulation requires that an inspection be made "at least daily," or "after each shift" when the vehicle is being used around the clock. Maintaining copies of your inspection logs is a good way to document that the required inspections are occurring — both for your company records and for OSHA, should you have an inspection. Therefore, because it is not a regulatory requirement, you may keep inspection records for any time period that you specify.

Does OSHA require powered industrial truck operators to have a valid driver's license?

Federal OSHA has no requirement that a forklift operator have a valid driver's license. OSHA does require that every forklift operator be trained and certified to operate the powered industrial truck in the workplace, and that the operator's performance be evaluated on the provisions of 1910.178(1)(3) every three years. The employer must have a record documenting that the driver has successfully completed the training.

When must powered industrial truck refresher training be given?

While stating that operators shall be evaluated every three years, the standard does not require any specific frequency of refresher training. Rather, it states that refresher training must be provided when:

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

Are safety platforms attached to the forks of a forklift considered aerial lifts?

According to OSHA, aerial devices (aerial lifts) are covered under 1910.67, Vehicle-mounted Elevating and Rotating Work Platforms, and are any vehicle-mounted device that telescopes, articulates or both, which is used to position personnel. A platform attached to the forks of a forklift would not be considered an aerial lift.

Do powered industrial trucks have to have backup alarms or warning lights?

OSHA does not have a requirement that forklift vehicles be equipped with a backup alarm or warning light (although these features are standard on most new equipment).

A forklift must have, at minimum, some type of sound-producing device that an operator can use at cross aisles and blind intersections where vision is obstructed to warn pedestrians and other forklift drivers that they are approaching.

Checklist

Forklift operations

- ❒ Are the forklifts in your facility correctly designated for your type of operation (based on atmosphere, hazards of materials handled, etc.)?
- ❒ Are the brakes on each industrial truck capable of bringing the vehicle to a complete and safe stop when fully loaded?
- ❒ Is directional lighting provided on each industrial truck that operates in an area with less than 2 footcandles per square foot of general lighting?
- ❒ Will the industrial truck's parking brake effectively prevent the vehicle from moving when unattended?
- ❒ Are the required lift truck operating rules posted and enforced?
- ❒ Are industrial trucks equipped with flashing lights, horn, overhead guard, and name plate (load limits)?

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Cranes

Fueling

- ❒ Are fueling operations done in such a manner that the likelihood of spillage will be minimal?
- ❒ Is filling fuel tanks prohibited while engines are running?
- ❒ When spillage occurs during fueling operations, are measures taken to control vapors before restarting the engine?

Training

- ❒ Are only trained personnel allowed to operate industrial trucks?
- ❒ Have you documented what methods you use to train forklift operators?

Maintenance and inspection

- ❒ Are your forklifts inspected before being placed in service? Inspections should be at least daily, or after each shift, if used around the clock.
- ❒ Are adequate inspection and maintenance records kept?
- ❒ Are all industrial trucks not in safe operating condition removed from service?
- ❒ Are repairs to fuel and ignition systems conducted only in areas specifically designated for them?

Cranes

If you use industrial cranes or derricks in your workplace, then the regulations at 1910.179 through .181 apply. Among other things, these regulations require that only designated personnel must operate the equipment, and only authorized representatives should perform equipment repairs.