

Appendix 6145-T1 Forklift Use Practices

Operators must perform a preoperational inspection of the forklifts and attachments in accordance with the equipment operating manual. They will immediately report any equipment deficiencies to the Jefferson Lab Material Handling Safety Representative (MHSR).

Jefferson Lab has electric, diesel, and propane powered forklifts on-site. It is important for operators to use the appropriate Operator's Daily Checklist for preoperational inspections. The following forms, found in this appendix, are used for inspection:

- Operator's Daily Checklist—Electric Fork Trucks (for electrically powered forklifts)
- Operator's Daily Checklist—Internal Combustion Engine Fork Trucks (for propane and diesel powered forklifts)

Daily Preoperational Inspection

Prior to operating the forklift, check all of the following items on the checklist:

- horn
- lights
- battery
- tire condition/inflation
- brakes
- steering mechanism
- operating controls

- ❖ If at any time a forklift is in need of repair, is defective, or shows any condition adversely affecting the safety of the vehicle, the condition shall be reported immediately to the responsible staff. The unit shall be taken out of service until it has been restored to safe-operating condition.
- ❖ Notify the MHSR of any unsafe situations.
- ❖ The forklift operator assumes the responsibility for the safe operation of the forklift.
- ❖ Inside buildings or on graveled surfaces, travel no faster than normal walking speed (approximately 3.5 mph [5.6 km/h]).
- ❖ Never drive within 10 feet of a person working on a ladder or aerial work platform. The person must step down before you may drive past the ladder.
- ❖ Forklifts must not be operated on public highways unless the forklift is accompanied by an "escort vehicle" directly behind the forklift. The escort vehicle must have its emergency (yellow) flashers operating.

**Do not walk under
suspended forks.**

Operating on and off roadways:

- ✓ Forklifts with solid-type tires may only be operated on asphalt or concrete surfaces.
- ✓ Forklifts with pneumatic-type tires may be operated only on asphalt, concrete, or improved (graveled) surfaces.

- ❖ Know the capacity of the forklift before using the equipment.
- ❖ Know the size and weight of the load before starting operation.
- ❖ Do not operate forklift loads directly over personnel or unprotected work areas.
- ❖ Carry all loads within 4 to 6 inches of the ground while traveling.
- ❖ Walking under suspended forks is prohibited.
- ❖ **Sound the horn** before moving a forklift through doorways, around corners, when approaching personnel, or before backing up.
- ❖ Drive the forklift in reverse if the load obscures the operator's forward view—unless the operator has a spotter. If a spotter is used, the operator must be able to see the spotter at all times to continue the forklift movement.
- ❖ Spotters must remain away from the raised load. As a rule of thumb, spotters should be at least one foot away from the load per foot the load is raised.
- ❖ Concentrate on the operation of the forklift. When distracted, the operator should stop the movement of the forklift.
- ❖ Lower forks to the ground, set brake, and turn ignition off before leaving the forklift unattended (that is being 25 ft. or more away from the vehicle, or the vehicle is out of view).
- ❖ Raised loads shall not be left unattended.
- ❖ Personnel other than the operator are prohibited from riding on a forklift.
- ❖ Hard hats should be worn by operators and spotters.
- ❖ Park forklifts in designated locations to minimize the trip hazard presented by the forks.
- ❖ Electric forklifts must be parked indoors when not in use.
- ❖ The indoor use of propane and diesel fueled forklifts must be kept to a minimum. For example, you may move a load in or out of a building, but not move loads extensively within a building.





Example of a propane powered forklift found at Jefferson Lab.

- ❖ The propane tank valve must be turned off when not in use.



This is a propane tank, found on a propane powered forklift. The valve is located on top of the tank.

- ❖ Forklift operators are responsible for fueling the forklift.
- ❖ Fork extensions should not be longer than 150% of the supporting fork's length. Fork extensions must be attached to prevent unintentional disengagement from the forks. Caution: the use of extensions gives you a lower load lifting capacity.
- ❖ Jib booms are only authorized on specified forklifts and must not be used unless authorized by the manufacturer. They must be securely attached to the fork back rest with the chain provided. Extreme care must be used to prevent overloading. Contact the MHSR for forklifts authorized to use a jib boom.

When lifting personnel in an approved “OSHA” safety cage:

- ❖ A 8,000 lb capacity forklift or greater required.
- ❖ Cage must be attached appropriately to the forklift
- ❖ The operator must be in the control position.
- ❖ Cordoning the area should be considered.
- ❖ Other personnel must be kept clear of cage work area.
- ❖ Personnel in the cage must wear a body harness and lanyard attached to the cage.
- ❖ The mast must be in the vertical position and never tilted.
- ❖ Movement of the forklift, while personnel are in the cage, must not be greater than creep speed.
- ❖ Personnel should be at least one foot away from the cage per foot the cage is raised.

Special lifts

The Jefferson Lab MHSR or designee shall be notified to arrange observation of unusual lifts before operating a forklift with any of the following situations:

- Lifting personnel with a safety cage or platform
- Complex or unusual lifts
- “Potentially High Consequence Lifts”

Operating in Tunnel and End Stations

- ❖ Never travel at a speed greater than normal walking speed—approximately 3.5 mph [5.6 km/h].
- ❖ Forklift travel on the tunnel incline between the Beam Switchyard and Hall B is prohibited unless specifically approved by the MHSR. When traversing down the incline, authorized operators must drive at a “creep speed” because of the steep slope (approximately 15°).
- ❖ When driving through the truck-access ramps into the End Stations, operators must keep the load on the “up-side” of the ramp and drive at a “creep speed.”
- ❖ Keep all body parts inside of truck frame.
- ❖ Use extreme caution of swing when turning.
- ❖ Use extreme caution when moving a wide load.
- ❖ Be aware of possible consequences of striking any accelerator component.
- ❖ Be aware of load height and overhead obstacles.
- ❖ Forklifts and related equipment must be stored in the Access Building hatch areas of the tunnel (labyrinth) to prevent radiation exposure.
- ❖ Electric forklifts will be charged in only approved charging areas. Must have an eye wash station located nearby.
- ❖ Operators must immediately replace any barrier ropes taken down for travel.

Portable Loading Ramp

Only authorized forklift operators are permitted to use the portable loading ramp, and they must comply with the following requirements:

- ❖ Operator must be thoroughly familiar with the ramp operating instructions.
- ❖ The ramp must not be overloaded.
- ❖ The ramp must be chained to the back of the trailer, ramp, and truck chocked, to prevent unintentional movement and possible separation of the trailer and ramp.
- ❖ The lip of the ramp must be fully seated onto the trailer bed.
- ❖ The weight of the ramp must be on the trailer bed and bottom base plate of the ramp (ground). The weight must be taken off the ramp wheels (the wheels are only for relocating the ramp).
- ❖ Operators must maintain a safe distance from the edge of the ramp and drive at a “creep speed.”
- ❖ Operator must keep the load on the “up-side” when traversing the ramp.
- ❖ The ramp must not be transported with a load resting on the ramp.
- ❖ The ramp must not be transported over public highways without approval from the MHSR.

Forklift Breakdown

When a forklift breaks down or is damaged in an accident, it shall be tagged and locked out of service by the division/section responsible for the forklift. The Jefferson Lab MHSR (ext. 7406 or pager 584-7406) must be notified.

OPERATOR'S DAILY CHECKLIST FORKLIFT

Electric Fork Truck

Truck No. _____ Date _____

Time or Hour Meter Reading: Start _____ End _____

Inspect Each Item	Check One		Unsatisfactory Items Explanation—include any actions taken
	SAT	UNSAT	
Equipment			
Horn			
Lights Head Tail and Warning			
Battery Charge			
Battery Plug Connection			
Tires			
Fork Blades (Tines)			
Hour Meter			
Operating Controls			
Gauges			
Steering			
Hydraulic Controls			
Brakes Service and Parking			
Other			

Operator qualifications

Yes No NA

Currently holds a motor vehicle license?

Training up to date?

Personnel Protective Equipment required?

Personnel Protective Equipment in use?

Operator's Signature _____

Department/Division _____

OPERATOR'S DAILY CHECKLIST FORKLIFT

Internal Combustion Engine Fork Truck

Truck No. _____ Date _____

Time or Hour Meter Reading: Start _____ End _____

Inspect Each Item	Check One		Unsatisfactory Items Explanation—include any actions taken
	SAT	UNSAT	
Equipment			
Engine Oil Level			
Fuel Level			
Horn			
Lights Head Tail and Warning			
Battery - Water Level			
Tires			
Fork Blades (Tines)			
Hour Meter			
Operating Controls			
Gauges			
Steering			
Hydraulic Controls			
Brakes Service and Parking			
Other			

Operator qualifications

Yes No NA

Currently holds a motor vehicle license?

Training up to date?

Personnel Protective Equipment required?

Personnel Protective Equipment in use?

Operator's Signature _____

Department/Division _____