**Module N Answer Key Forklifts, tcfh2-3-14, rev1.0**

**Read the following and review it with your supervisor. Take the corresponding test. Email it to billy.ernst@angeltrax.com A 100% score will earn 2.0 credit hours in the safety and loss prevention program. This module will be accompanied with a field operation test of the operator including a review of the operators test with supervision. The operator will earn 1 hour of credit with successful completion of the field operation test**

**FORKLIFTS**

AngelTrax

**Forklifts**

**29 CFR 1910.178,** [***Powered Industrial Trucks***](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&amp;p_id=9828)

FORKLIFTS OVERVIEW

This program has been developed to make our truck operators aware of the hazards associated with motorized truck use as well as to provide guidance for safe truck operations.

Persons will be authorized to operate our forklifts only after they have successfully demonstrated their understanding of proper procedures for truck inspection, use, and refueling/recharging. Operators will demonstrate their truck knowledge and abilities by passing a written test and performing designated truck maneuvers. All truck operators will be evaluated by the Forklift Program Administrator or a designated competent person.

Because of their power; weight; size; restricted visibility; and, often, high center of gravity, operation of industrial trucks takes skill and attention to detail. One moment of inattention can lead to a major mishap in an instant. Additionally, the load presents potential hazards if not properly secured, balanced, and/or properly placed on the truck.

In accordance with paragraph (b)12, 29 CFR 1910.178, *Powered Industrial Trucks*, the Program Administrator or other competent person will determine whether the atmosphere or location in which our industrial trucks will operate is hazardous or non-hazardous and, after further assessing our needs, will determine which types of trucks are appropriate and allowed for our specific operations.

In the unlikely event that unsafe industrial motor truck operations are observed, retraining will be given with emphasis on correcting the improper behavior. To prevent the possibility of severe injury to the operator (or a bystander), our forklifts must be operated in a professional manner and anything less will not be tolerated.

All truck operators will have ready access to this program, appropriate OSHA standards, and the truck owner/operator manuals.

FORKLIFTS

Forklifts are designed to move items quickly, safely, and cleanly. Forklift training would also apply to numerous types of powered industrial trucks such as: tractors; platform lift trucks; motorized hand trucks; and other specialized industrial trucks powered by electric motors or internal combustion engines.

While many safety features are designed into forklifts, accidents still happen and they are generally the result of operator error. According to  *Modern Materials Handling*, pg. E-18, Jul 97, powered industrial vehicles are involved in approximately 68,000 accidents annually, causing 90,000 injuries and 100 deaths.

There is a general agreement among safety professionals, as well as OSHA, that requiring training for all persons (including part-time, seasonal, and temporary employees) who operate forklifts will significantly reduce the above accident and injury rate.

GENERAL REQUIREMENTS

All truck operators must be thoroughly familiar with the truck, itself. This includes knowing:

1. instinctively what each and every control does.
2. how to perform a truck safety check.
3. the truck’s limitations such as maximum load, height and width, visibility, stability, and surface requirements.
4. the truck’s stopping and turning ability and its effect on loads.

The below safety rules and guidelines to which one must adhere while operating a forklift have been established. These rules are designed to protect the operator and/or persons adjacent to truck operations.

Specifically:

* 1. No person shall operate one of our trucks unless authorized in writing.
     1. Prior to authorization, the operator will have read this program, received training, passed a quiz on truck operations, and been evaluated on operational skills.
     2. Authorization to operate one type of truck does not automatically authorize a person to operate all trucks. Different power sources, visibility restrictions, controls, and capacities may dictate, in the judgment of the Program Administrator, that a separate certification process may be required for a different type of truck. There may be instances where a new vehicle does not necessitate new training and a demonstration of proficiency. A newer model of a currently used truck may be identical to the truck the operator is qualified on as far as safety and operations are concerned. As a general rule, each **type** of truck has its own characteristics, limitations, and idiosyncrasies -- each **model** of a type of truck may or may not be unique.

1. FORKLIFTS
   1. No riders are allowed on our forklift unless:
      1. the truck is specifically designed for such use.
      2. the rider is authorized by the Program Administrator.

NOTE: Forklifts are generally designed to move product, supplies and equipment, not personnel.

* 1. The Program Administrator will revoke the authority to operate a truck if unsafe acts are observed or it is apparent that the operator has not retained the knowledge and job skills necessary to safely perform truck operations.
     1. an operator who has lost his authorization to operate a truck will be retrained, reevaluated, and, if appropriate, re-certified.
  2. At the beginning of each shift, the operator will inspect the truck using our Forklift Daily Checklist.
     1. If deficiencies relating to safety are found, the deficiencies will be noted on the Checklist and reported to the Program Administrator or other designated person. The vehicle will not be used until safety defects are repaired.
     2. If cosmetic damage is discovered during the daily check, it will be noted on the Checklist, however, the truck will be used. Cosmetic faults will not delay our operations.

HAZARDS

The major personal safety hazards involved in truck operation include:

1. physically hitting a person/object with the truck or load.
2. having a load fall and hit the operator or other person.
3. having the truck tip and crush the operator or other person.
4. fire or explosion during refueling/recharging.

Below are rules and guidelines to control the hazards identified and reduce the likelihood of accident/injury. While some of the procedures may seem too obvious to mention or just plain common sense, remember this — serious, even fatal, accidents have occurred because for one split second an operator forgot or ignored a basic safety rule.

HITTING A PERSON/OBJECT

1. Never drive up to a person standing in front of a fixed object.
2. When possible, stay within delineated travel lanes or aisles.
3. Be seen and/or heard.
4. Ensure that adequate lighting is available.
5. AngelTrax

FORKLIFTS

1. Maintain a clear view of travel. If the load blocks or restricts the view, the operator will drive with the load trailing (backwards).
2. Slow down, sound horn, and do not pass where vision is restricted.
3. Operate the truck at speeds that will allow it and the load to be stopped in a safe, smooth, manner.
4. Be aware of floor conditions. Remove loose objects that have found their way to the truck travel lanes. Operate the truck at slower speeds on wet or slippery floors.
5. Of course, stunt or reckless driving is prohibited.
6. Be aware of the height of the truck and, if equipped, its mast and load. Carelessness can damage ceiling, lights, pipes, etc..
7. Never allow anyone to stand or pass under an elevated portion of any truck at any time.

FALLING LOADS

1. Know your load -- do not “overstack”. Because practically all loads lifted or hauled by a forklift are not secured to the truck, ensure the load is properly stacked. Cartons generally should be interlaced or banded.
2. If lifting a load or pallet, get the forks (or other engaging means) as far under the load as possible.
3. Travel with the load in the lowest position for stability as well as prevention of hitting objects overhead. If using forks, tilt the load backward for stabilization.
4. Do not exceed the truck’s rated capacity or stack loads too high.
5. Do not make “jerky” movements such as slamming the brakes or high speed turns.
6. A load backrest extension will reduce the possibility of part of the load falling rearward.
7. When using a fork lift, the forks may be tilted forward only for picking up or setting down a load.

TIPPING

Forklifts are, by design, narrow allowing them greater access within the work setting. Unfortunately, a narrow track offers less stability. Tipping or falling off an edge (or dock) is a preventable accident by following the

guidelines below. If your truck tips, keep your body and limbs within the safety of the cage. Wear a seat belt if the truck is so equipped.

1. stay within travel lanes.
2. if entering a trailer, ensure:
   1. the trailer brakes are engaged.
   2. the trailer is secured from movement by means of chocks and/or a locking mechanism.
   3. the tractor is either shut off or removed from the trailer.
   4. the trailer is squared up with the dock opening and dock plates are secure.
   5. the trailer floor is capable of supporting the forklift and its load.
   6. the lighting within the trailer is adequate.

NOTE: Falling off a dock edge because a trailer has moved is invariably a serious accident. Do not count on the tractor-trailer driver to lock his brakes or even trust that his brakes work. Physically check and ensure that the trailer into which you are taking your forklift is flush against the dock. If possible, the trailer should be actually attached to the dock, but in all cases, it should be chocked.

1. travel with the load in the lowest possible position and avoid sharp turns at higher speeds as well as abrupt truck movements.
2. be aware of the surface on which you are traveling -- its traction, ability to hold weight, slope, and surface.

FIRE/EXPLOSION DURING REFUELING/RECHARGING

Refueling accidents are not common experiences, however should they occur, they would be sudden and possibly catastrophic. Follow the manufacturer’s owner’s manual and local fire laws.

1. There is absolutely NO SMOKING or open flame during any portion of the refueling/recharging process.
2. At least an 8B:C rated fire extinguisher, 29 CFR 1910.g(14), must be readily available when refueling propane. Facilities for quick drenching of the eyes and body must be readily available.

OTHER CONCERNS

The program deals primarily with the personal safety of our forklift operators. However, when discussing truck operations, we would be remiss if it were not pointed out that improper truck operations could also result in physical damage to products, trucks, and/or facilities. Proper truck

operation will reduce personal injury accidents, and, as an added benefit, prevent general damage.

OPERATOR PROTECTION

A hazard assessment of forklift operations will be conducted by the Program Administrator. Particular attention will be given to hand, head, eye, and foot protection as well as environmental conditions such as atmospheres, heat or cold. If the truck is equipped with a seat belt, it must be worn when the truck is moving.

Keep your limbs within the running lines of the truck and keep your hands and fingers away from moving parts -- particularly the mast on a fork lift truck.

The Program Administrator will perform a hazard assessment of our truck operations and determine what, if any, personal protective equipment (PPE) requirements are appropriate. If PPE (examples: steel toed boots, leather gloves, hard hat, eye protection, etc.) is required, it must be worn.

FORKLIFT OPERATIONS

In addition to safety operating practices previously identified in this manual, the following will be considered general operating procedures:

1. fire aisles, access to stairways, and fire equipment must be kept clear.
2. operators leaving their trucks must ensure the load is fully lowered, controls neutralized, and brakes set. On an incline, the wheels must be blocked. If the operator is 25 feet or more from the truck or does not have a clear view of the truck, the power to the truck must be shut off.
3. a safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, platform or freight car.
4. trucks shall not be used for opening or closing freight doors.
   1. trucks, like all items of equipment, will be used for the purpose for which they were designed.
5. be aware that if the operator of a semi-trailer has placed the rear wheels in a far forward position, the trailer may act as a “teeter- totter” when a heavy forklift enters the trailer. When a trailer is not coupled to a tractor, fixed jacks may be necessary to support the semi-trailer during loading or unloading.
6. be aware that the overhead guard (used as protection against falling objects) is designed to prevent injury from the impact of small

packages, boxes, bagged material, etc. -- it is not necessarily designed to withstand the impact of a falling capacity load.

1. in the event persons are lifted by a truck, a lifting platform must be securely attached to the lifting mechanism and the persons on the safety platform must have means of shutting off power to the truck.
2. if more than one truck is operated, they must be separated by a safe distance (at least three truck lengths) and they may not pass each other in intersections, blind spots, or other dangerous locations. The right of way shall be yielded to other trucks in emergency situations.
3. trucks traveling in the same direction shall not be passed at all.
4. driving on grades:
   1. grades shall be ascended or descended slowly.
   2. when ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.
5. motorized hand trucks must enter confined areas with the load end forward.

MAINTENANCE

While the operator is responsible for checking the truck before use, actual mechanical maintenance must be performed by an authorized person.

1. if at any time a forklift is found to be in need of repair, defective, overheating, or in any way unsafe, the truck shall be taken out of service until it has been restored to safe operating condition.
2. forklifts should be kept reasonably clean and free of excess oil and grease.

DUTIES OF THE FORKLIFT ADMINISTRATOR

The duties of the Forklift Program Administrator include:

1. operator training and certification.
2. hazard assessment of our truck operations.
3. identification of truck operator’s who, through their performance have demonstrated a lack of retained knowledge or ability to safely operate a powered truck. These persons will receive retraining.
4. keeping abreast of developments in the materials handling field with an emphasis on safety.

Additionally, the administrator will ensure that all truck operators have ready access to 29 CFR 1910.178, *Powered Industrial Trucks*, this program, and the individual truck’s Operator/Owner Manual.

TRAINING

The Program Administrator will administer the training portion of this program.

Interactive training will be given by a competent (one with knowledge, training, and experience) person with ample opportunity to ask questions and clarify all aspects of truck operation relating to safety.

Prior to actual truck operation on the job, all truck operators will become familiar with the contents of this program as well as the operator’s manual applicable to the specific powered truck they will operate. Each operator will demonstrate an understanding of truck operations and complete a driving test which will include truck inspection, maneuvering, and fueling/charging.

The Program Administrator will ensure that all truck operators have a complete understanding of the below listed topics:

TRUCK-RELATED TOPICS:

1. operating instructions, warnings, and precautions for the type of truck the operator will be authorized to operate.
2. differences between the truck and the automobile.
3. truck controls and instrumentation: where they are located, what they do, and how they work.
4. engine or motor operation.
5. steering and maneuvering.
6. visibility (including restrictions due to loading).
7. fork and attachment adaptation, operation, and use limitations.
8. vehicle capacity.
9. vehicle stability.
10. any vehicle inspection and maintenance that the operator will be required to perform.
11. refueling and/or charging and recharging of batteries.
12. operating limitations.
13. 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:

1. surface conditions where the vehicle will be operated.
2. composition of loads to be carried and load stability.
3. load manipulation, stacking, and unstacking.
4. pedestrian traffic in areas where the vehicle will be operated.
5. narrow aisles and other restricted places where the vehicle will be operated.
6. hazardous (classified) locations where the vehicle will be operated.
7. ramps and other sloped surfaces that could affect the vehicle's stability.
8. closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
9. other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

New truck operators may operate powered trucks in a training capacity:

1. when they are under the direct supervision of persons who have the knowledge, training, and experience to train and evaluate their competence.
2. where such operation do not endanger themselves or others.

The Program Administrator will certify the training/evaluation has been accomplished per the following schedule:

If the employee was hired: Initial training and evaluation completed:

Before December 1, 1999 By December 1, 1999.

After December 1, 1999 Before the employee is assigned to operate

a forklift.

Recertification of power industrial truck training must be accomplished every three years.

Refresher training will be given:

1. if unsafe truck operations are observed.
2. after an accident or near-accident.
3. if the operator is to be assigned to drive a different type of truck.
4. if workplace changes could affect safe operation of the truck.