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HANDLE WITH CARE

For Class I-V Trucks

INSTRUCTOR'S MANUAL

Operator Training is an important part of any materials handling operation. With properly trained operators, a company can reduce product damage and personal injuries, while at the same time gain an increase in productivity and profitability. That's why it is important that operators are trained properly and effectively. Once they are trained, they will come to realize that operator training isn't just for the company's benefit, but also for their well being.

When the Occupational Safety & Health Administration (OSHA) enacted its most current forklift training regulations (codified at 29 CFR 1910.178(l)), mandatory full employer compliance became effective in December, 1999. Those same regulations remain in effect today. Their intent is to reduce the number of injuries and deaths that occur as a result of inadequate operator training. They apply to all industries (general industry, construction, shipyards, marine terminals, and longshoring operations) in which the trucks are being used (except agricultural operations).

These provisions mandate a training program that bases the amount and type of training required on:

- the operator's prior knowledge and skill;
- the types of powered industrial trucks the operator will operate in the workplace;
- the hazards present in the workplace;
- the operator's demonstrated ability to operate a powered industrial truck safely.

Refresher training is required if:

- the operator is involved in an accident or a near-miss incident;
- the operator has been observed operating the vehicle in an unsafe manner;
- the operator has been determined during an evaluation to need additional training;
- there are changes in the workplace that could affect safe operation of the truck;
- the operator is assigned to operate a different type of truck.

An evaluation of each operator's performance is required as part of the initial and refresher training. Evaluation is to be at least once every three years.

As the instructor of Operator Training, your role is to provide guidance on how to properly operate a forklift truck. OSHA mandates that "all training and evaluation must be conducted by persons with the necessary knowledge, training and experience to train powered industrial truck operators and evaluate their competence." (**1910.178(l)(2)(iii)**

Before you begin developing your operator training program you should become familiar with the OSHA standard for powered industrial trucks and any operator's manual pertinent to the equipment you have in your workplace. You can locate a copy of the standard by visiting the U.S. Department of Labor web site at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9828.

Next, you will need to determine the employees that are required to operate powered industrial trucks in the workplace. This step needs to be done regardless if you work for the employer and have been tasked to train at your place of employment or if you have been contracted by another employer to train that employer's operators. If an employee has other duties, but sometimes operates a powered industrial truck, training must still be provided.

Following the identification of operators, you must identify the types of powered industrial trucks that will be used in the workplace. There are many different types of powered industrial trucks. For our purposes, we will be focusing on Class I, II, III, IV and V forklift trucks. Some trucks are fitted with attachments. The use of these attachments may affect the manner in which the truck is handled; therefore training on the use of the attachment will also be required. If the employees are expected to operate several different types of powered industrial trucks, then training is required on the unique handling characteristics of each type of truck.

Once you have identified your truck operators and types of trucks you have in the workplace, you should determine the methods of training you will use.

Training must consist of a combination of formal instruction and practical training. Using both methods is the only way to ensure that the trainee receives and comprehends the instruction and uses the information to safely operate a forklift truck. Note that the formal training need not take place in a classroom. Discussions can consist of the trainer talking to the trainee and explaining the training material, either in the workplace or in another location. The training must, however, include an explanatory element as well as a practical element.

Formal instruction may include lectures, conferences, classroom discussions, demonstrations, and written or oral tests. To enhance the training and make it more understandable to the employee, the video that is included as a major part of this training package is intended to support your delivery.

Practical training must occur at the operator's workplace (site specific) using the actual truck(s) that the individual will operate (truck specific.)

Because each type (make and model) of a forklift truck has different operating characteristics, limitations, and other unique features, a good training program for powered industrial truck operators should be based upon the type of truck that the operator will be trained and authorized to operate. The training should also emphasize the workplace's characteristics that will affect how the truck must be operated. Finally, the training should include the general safety rules applicable to operating any powered industrial truck.

The following is an outline of a generic powered industrial truck operator training program. It can be found at the following U.S. Department of Labor web site location: http://www.osha.gov/dte/library/pit/develop_trng.html

1. Characteristics of the powered industrial truck(s) the employee will be allowed to operate:
   a. Differences from the automobile;
   b. Controls and instrumentation: location, what they do, and how they work;
   c. Engine or motor operation;
   d. Steering and maneuvering;
   e. Visibility;
   f. Fork and/or attachment adaption, operation, and limitations of their use;
   g. Vehicle capacity;
   h. Vehicle stability;
   i. Vehicle inspection and maintenance the operator will be required to perform;
   j. Refueling or charging and recharging batteries;
   k. Operating limitations; and
   l. Any other operating instruction, warning, or precaution listed in the operator's manual for the type of vehicle the employee is being trained to operate.
2. The operating environment:
   a. Floor surfaces and/or ground conditions where the vehicle will be operated;
   b. Composition of probable loads and load stability;
   c. Load manipulation, stacking, unstacking;
   d. Pedestrian traffic;
   e. Narrow aisle and restricted place operation;
   f. Operating in classified hazardous locations;
   g. Operating the truck on ramps and other sloped surfaces that would affect the stability of the vehicle;
   h. Other unique or potentially hazardous environmental conditions that exist or may exist in the workplace; and
   i. Operating the vehicle in closed environments and other areas where insufficient ventilation and/or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
3. The requirements of the OSHA Standard.

   After the training program has been completed, the employer must evaluate the trainee's knowledge and skills and determine whether the employee is competent to operate the truck safely.

When the operator completes the training exercises and prior to operating the truck in the workplace, an evaluation of the operator must be performed. This evaluation will determine the adequacy of training and the ability of the operator to perform truck operations safely in the workplace. The OSHA standard also requires that an evaluation of the operator's performance be conducted at least once every three years and after refresher training. Conditions that warrant refresher training appear above under the heading of OSHA'S Powered Industrial Truck Standard.

Upon conclusion of the training, you should complete a certification of training record containing the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation. The employer must retain these records as proof of certification.

Management Commitment

One key to a successful program is getting management to give their stamp of approval and set the ground rules at the beginning of the session. Ask a management representative to present a short introduction, stressing the training program's purpose and importance to the company, to the operator, and to the operator's family. At this time it should also be noted that to qualify as a lift truck operator, each trainee must satisfactorily complete the training. Management should also indicate to the trainees the acceptable score on the classroom and driving evaluations. Anyone who cannot or will not complete the course in a satisfactory manner will not become an operator.

Professional Presence

A trainer's attitude and enthusiasm may have the biggest impact on whether or not the training session is effective. The trainer must look presentable and must enter the session with a positive outlook.

1. Have each trainee introduce themselves and tell a little about where they work and their responsibilities. This helps you to relate to different workplace applications and builds camaraderie.
2. Encourage trainees to participate in the program, rather than sit back and listen to you lecture. Participation makes training experiential and enjoyable.
3. Treat all trainees with respect and as professionals.
4. Call each of them by name.
5. Be careful what you say and how you say it. Some of your classes may include both men and women and different ethnic groups with varied religious beliefs. Make sure that you do not make any offensive comments.
6. Ask questions often. It helps keep both you and the trainees alert.
7. Don't give them the idea that you're a "know it all" and they don't know anything. This is one of the fastest ways to lose your audience.
8. Repeat important points often. It's better to repeat yourself than to understate important points the trainees might miss the first time.
9. Give full attention to individual questions and comments.
10. When answering a question, repeat it and answer loud enough so that everyone can hear.
11. Impress upon them that safety is not just important, but necessary for them to keep their jobs.
12. Whenever possible, add stories or anecdotes from your own experience to highlight particular points or make something clearer. This technique adds interest to the program.
13. Maintain eye contact, moving from one person to the other, even when answering a question asked by one particular individual. This is an effective way to keep your entire audience engaged in the learning process.
14. Use visuals; people remember things they see.
15. Plan regular breaks, perhaps after each major discussion or exercise. Limit a routine break to five minutes and coffee breaks to ten minutes.

Trainer's Check List

A professional trainer must be prepared mentally and have the proper tools. Classroom aids such as handouts, AV equipment, tools, props, and other necessary items must be available when needed. It is the trainer's responsibility to verify whether or not the employer will be providing materials or if you need to make arrangements for these support items.

An ideal training environment will consist of the following:

1. Enough seats for all trainees
2. Nametags (large one for the table and a small one to be worn)
3. Flip chart and markers
4. Pencils and note pads
5. Properly operating DVD equipment including a large screen and speakers
6. Hand-outs
7. Pointer
8. Coffee and refreshments (if appropriate)
9. A member of management to answer questions about specific plant safety guidelines
10. Podium or speaker's stand
11. Table next to podium
12. Copies of the agenda
13. 25' tape measure (to layout driving course)
14. Clipboard (for use during driving session)

Personal Appearance

How you dress and how you act largely determine your image as an instructor. You can make your personal appearance an asset or a liability. Set the tone of the meeting by always looking professional and business like.

Pay particular attention to the type of clothes you wear. There are times you may choose to wear a suit, sport coat, or casual clothes. If your session is to be very informal, work in your shirtsleeves. There are also times when work shoes and coveralls may be appropriate.

Sufficient Trainers for a Reasonable Number of Trainees

Limit the number of trainees per session. This allows you better control of the group, and the ability to get things accomplished within the time allotted.

The ideal group of trainees per instructor is 10-12 people. More than one group can be trained at once by alternating the use of equipment and facilities; however, as few as 4-5 people or as many as 20 people may be trained by one instructor.

The number of trainees depends on the type of agenda being used for the session. If it is one that requires a lot of hands-on activity, the class size should be restricted to a smaller number of trainees, to allow everyone a chance to participate equally.

After the size of the training session is determined, you will need to decide how many assistant trainers will be necessary. One person cannot always handle the session alone and do an effective job. Normally, if there are more than ten people, additional support may be needed especially when a driving course is involved.

Knowledge of Safety Concerns and Policies

Before you put on a training session, see if it would be possible to tour the facility. This will allow you to observe, first hand, any site specific issues that may affect safe lift truck operation.

Talk to management and find out what company policies are related to lift truck operation, handling of loads and materials, pedestrians, etc. By doing this, you will be better positioned to relate to your audience and the things they encounter on a day-to-day basis.

Program Familiarity

All materials to be used should be reviewed before the training session begins. Make notes, highlight points that you want to emphasize and personalize your presentation. Practice your presentation. Try to speak naturally. Know your audience and their application. Most customer applications have a set of rules in place, and by knowing them ahead of time, you can be better prepared and more credible. For example, hard hats may be a requirement, something your program does not cover, but you should know about it.

Anticipate the questions that may be asked of you and make sure that you can explain the answers (e.g., plugging, inching).

The Training Agenda

Create an agenda with times and subjects. Your training agenda should be thorough, so there is no question as to what is going to be covered and when. The agenda should be agreed upon with the employer well in advance of the actual training session.

When you begin your session, review the agenda with the trainees. It gives your audience a sense of where you're heading with the program.

Evaluating Procedures

There should be separate evaluations for the classroom and hands-on sessions. The classroom evaluation is based on the program presentation content; the hands-on evaluation is based on the actual operation of the truck.

It is the employer's responsibility to determine and inform the instructor as to what is an acceptable score at the completion of the evaluation.

It is the instructor's responsibility to make sure the employer is furnished with all records of the training session.

These are to include:

1. Operator names
2. Date of training session
3. Date of the evaluation and results
4. Identity of person(s) performing the training or evaluation

The employer should also be informed that records should be kept at least three years and if evaluations are more frequent, the most recent one should be maintained.

Knowing What Questions to Ask and When

In addition to soliciting questions from the audience, be prepared to ask appropriate questions throughout the program to keep the audience engaged and thinking. Open-ended questions require more than a simple yes or no answer and are a good way to keep the group active and involved in the program.

Here are some questions you may want to use to generate discussion during your program.

1. ***What is the primary responsibility of the operator?***

   To use the forklift truck safely and properly, following the instructions provided in the training program and by company policy.

   Other acceptable answers may include:

   Know the work area
   a) Layout of plant
   b) Aisle widths
   c) Other activities in the plant
   d) Floor and rack strength
   e) Clearances
   f) Ramps/elevators

   Know the truck
   a) Capacity plate information
   b) Maintenance checks
   c) Gradeability
   d) Recommended aisle widths for truck

   Follow safety guidelines
   a) Drive slowly
   b) Look out for others
   c) Perform daily checks
   d) No unauthorized operators
   e) No one on forks
   f) No riders
   g) Observe pinch-points

2. ***What is the OSHA requirement for operators of powered industrial trucks?***

   OSHA requires that only trained and authorized persons shall be permitted to operate a powered industrial truck. Operators of powered industrial trucks shall be qualified as to visual, auditory, physical, and mental ability to operate the equipment safely and properly.

3. ***What are some similarities and differences between a lift truck and an automobile?***

   Similarities include engine, drive train, accelerator, brake and, on some trucks, a clutch.

   Differences include: Some lift trucks have a combination accelerator and directional control combined in one pedal. Most lift trucks have a mast and forks to lift and maneuver loads. Lift trucks operate in reverse 50% of the time. Most lift trucks have rear wheel steering and steer differently. Lift trucks are not designed to carry passengers. Forklifts are very maneuverable. Many will turn at extreme angles compared to an automobile.

4. ***Where can you find information on the operation of your lift truck?***

   Information can be found in the Operating Manual supplied with the lift truck you are operating. It should be kept with the truck at all times.

5. ***What are some of the major components of the lift truck?***

   Some major components include: overhead guard, mast, carriage, load backrest and, on most trucks, forks.

   Other acceptable answers may include:
   a) Frame
   b) Engine
   c) Motors
   d) Hydraulic controls
   e) Brake

6. What is free-lift?

Free-lift is the maximum height to which the forks can be elevated before the overall height of the mast is increased. It is measured from the floor to the top surface of the forks with the mast vertical. Free lift is the fork height above which the elevating upright sections of the mast begin to move upward or the load back rest extends above the stationary mast. High free lift is required most frequently on trucks operating inside buildings where overhead clearance is restricted or when tiering loads inside a boxcar or highway trailer.

7. What are the basic tire types and how are they different?

Basic tire types include pneumatic, which is an air filled tire, and cushion, which is a solid tire. There are also pneumatic-shaped solid tires. On some forklifts used in warehouse operations, the tires are solid rubber molded onto the wheel or occasionally, steel wheels.

8. What information is found on the Data Plate?

Information includes: truck model, serial number, rated lifting capacity, maximum and minimum battery weight, and size on electric trucks. If applicable, tire type, size, and pressure, in addition to any fork or attachment data. If a data plate does not have the correct truck configuration (e.g. data plate says forks, but there is a paper clamp fitted to the truck), contact your supervisor.

9. What is the center of gravity?

The center of gravity is the point about which an object is balanced in all directions.

10. What is the load center?

Load center is the distance from the center of gravity of the load, to the face of the forks or attachment.

11. What is the fulcrum?

The fulcrum is the centerline of the trucks front wheels, the truck axis of rotation.

12. What is the area of support for a lift truck?

The area of support is called the Stability Triangle.

13. What are some factors that affect stability?

Some factors include: load weight size and type, height the load is to be lifted, and whether load is to be side shifted. Other factors include accelerating, braking, turning, and operating on an incline or uneven surfaces.

14. Are there any restrictions on mast lift heights?

Yes! Some mast lift heights require a special width drive axle with wide tread or dual drive tires. This is necessary to keep the center of gravity or, if loaded, the combined center of gravity within the stability triangle.

15. How does an attachment affect the capacity of a lift truck?

An attachment may increase the capabilities of a lift truck, but at the same time it will also change the rated capacity. The capacity is normally de-rated with an attachment. Even something as minor as fork extensions will affect the capacity.

16. If you are uncertain as to the pre-shift checks required on the truck you are operating, where can you find the information?

The information can be found in the Operating Manual.

17. What are some of the things that need to be done after the pre-shift check and before operating the truck?

Things that need to be done include:

a) First, get on the lift truck, fasten your seatbelt, set the controls in neutral, and make sure the parking brake is on.

b) Turn the key to the “On” position.

c) Make sure the weight of the load does not exceed the truck’s capacity as specified on the data plate.

d) Check the type, size, and shape of the load. Also make sure the load is stable and won’t shift during transport.

e) If the load is too tall or comprised of items that may be unstable when traveling, fasten the load together or to a pallet with shrink-wrap or other banding. If you are still unsure about the size or composition of the load, see your supervisor.

f) Make sure the work surface is safe for traveling and that your lift truck tires are the correct types for that surface, especially outdoors.

g) Check to make sure the area is clear of pedestrians.

18. What should you do when coming to an intersection?

Things to do include: approaching slowly, watching for pedestrians and other trucks, coming to a full stop, checking for oncoming traffic and pedestrians, and sounding the horn and proceeding with caution.

19. When traveling with an empty truck where should the forks be positioned?

The mast should be lowered and the forks should be approximately four to six inches off the ground or work surface.

20. When lifting a load, the forks should support how much of the load?

The forks should support at least two-thirds of the load length.

21. How should a load be positioned on the forks?

The forks should be spread out as far as possible for the load to be lifted and the load centered on the forks.

22. After entering a load on a stack, what is the correct procedure from that point to the point of transporting?

a) Make sure the load is stable before you attempt to lift it.

b) Once you verify that the load is centered on the forks, that it's resting against the face of the forks or attachment, and that it's stable for travel, lift the load just enough so that it won't catch on anything as you back away.

If the forks are longer than the load's length, follow these steps:

- Inch the lift truck forward until the fork tips are even with the back edge of the load, and then lift the load from the surface.
- Look in reverse and back out just far enough to set the load in a stable position, then inch forward until the load is against the face of the forks or attachment.
- Lift the load carefully.
- Look in reverse and back out until the load clears the stack, and then lower the load.
- Once you verified that the load is centered on the forks and is back against the load face of the forks or attachment, you are ready to travel with the load.
- Tilt the mast back slightly to stabilize the load.
- Check behind the lift truck for pedestrians and obstacles, and back out carefully. Remember; always face the direction of travel. Driving with a load elevated is very dangerous, so make sure you lower the load as soon as you are clear of the stack. Make sure not to turn the lift truck while the forks are raised. If your forward vision is obstructed, travel in reverse.

23. What is "Tail Swing"?

Tail swing is the swift outward movement of the rear of the truck, as the truck is turning or maneuvering into position with or without a load. Tail swing occurs with Class I, II, IV & V. It does not occur with Class III. Class III trucks are operated similar to a wagon, with the operator pulling, or if it is a rider type, traveling with the steering mechanism forward.

24. When traveling up or down a ramp or incline with a load, what should be the position of the load?

The load should be upgrade except for Class III. With Class III, the load should always be downgrade and you should never attempt more than a 5-degree grade.

25. When traveling up or down a ramp or incline without a load, what should be the position of the counterweight?

The counterweight should be upgrade except for Class III. With Class III, the forks should always be downgrade and you should never attempt more than a 5 degree grade.

26. What things should be done before entering a trailer with a lift truck?

a) Make sure highway truck or railcar brakes are set. The railcar should be disconnected from engine with the wheels blocked and the brakes set.

b) Chock the wheels of the trailer on both side of the wheel.

c) Apply fixed jacks, if necessary, to support the front and rear of the trailer.

d) Check the driving surface of the trailer for cracks or weak spots.

e) Make sure the dock board capacity rating will support the weight of the truck with load and that it is secured and in good working condition.

f) Make sure the vertical clearance of the trailer or railcar is great enough to allow for the height of the mast.

27. What are the requirements for elevating people with a lift truck, if no other method is available?

If no other method is available, an approved safety platform must be used.

The platform must:

a) Be equipped with fall protection, safety railings, a solid floor, and a screen or bars separating the platform and the moving parts of the mast.

b) Be secured to the lift truck.

Before allowing anyone to ascend on the platform, test the mast to make sure it is functioning correctly. Do not travel with people elevated on the platform.

Make sure the parking brake is on, the truck is in neutral, and the key switch is in the off position when the platform is elevated.

28. What procedure should be followed for shutting down a truck?

a) Stop the truck.

b) Apply the parking brake.

c) Fully lower the forks or carriage.

d) Tilt the mast forward until the tips of the forks touch the ground.

e) Make sure the direction control is in the neutral position.

f) Turn the key switch to the off position.

g) Remove the key.

h) If the truck you are operating is powered by LPG fuel, make sure to turn off the flow of gas from the tank.

i) Never park your lift truck so that it limits access to fire aisles, stairways or fire equipment.

j) Never park on ramps or inclines.

PROGRAM BENEFITS

There are several benefits that can be realized by providing professional level operator training. A well-trained operator, normally, will have fewer accidents than an untrained operator will. The result is reduced product damage, personal injury, and possibly reduced insurance premiums. Another benefit is the probability of increased efficiency and productivity. Equipment maintenance costs can be reduced when the mandatory pre-shift checks are carried out on a consistent basis, as required by OSHA regulations.

DRIVING COURSE

The type of truck being used on the driving course will determine the dimensions of the course. Once the course is set up, try it out yourself to make sure the truck can maneuver through it. Concentrate on one layout during the session. However, to thoroughly train new operators, it is recommended that more time be allotted for them to practice other exercise layouts that apply to their particular operation. If it's an internal combustion truck, make sure the trucks being used have plenty of fuel. If you are going to be using an electric truck, make sure the battery is fully charged. Also, there must be an Operating Manual with the truck. Make sure there are no obstructions that could cause a problem. The truck must be in fully operational, safe condition. It must have all safety equipment such as operator restraint, overhead guard, load backrest extension, nameplate, decals, etc.

DRIVING COURSE CHECKLIST

A checklist for each trainee will be necessary in order to determine what phases of lift truck operation need to be worked on. You can easily design your own checklist, have it typed, and photocopy it.

Your checklist should include:

1. Employer name at the top of the list.
2. A place for the trainees name, department, clock number and date of training.
3. List of things to be checked while driving on the course
4. Columns to indicate the performance. (Example: 4=Excellent, 3=Good, 2=Fair, 1=Unsatisfactory)

See the next page for example:

EMPLOYER:_____

NAME:_____CLOCK#:_____

DEPARTMENT:_____DATE:_____

TIME:_____:_____a.m. / p.m. TRUCK CLASS:_____

EVALUATOR:_____ TOTAL SCORE:_____

Procedure	4	3	2	1
1. Performed pre-shift check properly.				
2. Checked rated lifting capacity of the truck.				
3. Checked load weights before handling.				
4. Approached load properly.				
5. Forks under at least 2/3 of the load length.				
6. Load back against the face of the forks.				
7. Load balanced properly.				
8. Lifted load properly.				
9. Shows familiarity with truck controls.				
10. Maneuvered properly.				
11. Traveled with load at proper height.				
12. Slowed down at intersections.				
13. Sounded horn at intersections.				
14. Kept a clear view of direction of travel.				
15. Checked bridge plates/ramps when applicable				
16. Obeyed signs.				
17. Yielded to pedestrians.				
18. Drove under control and within proper traffic aisles.				
19. Turned corners correctly - was aware of tail swing.				
20. Stops smoothly/completely.				
21. Lowered load smoothly/slowly.				
22. Placed loads within marked area.				
23. Stacked loads evenly and neatly.				
24. Drove in reverse when required.				
25. Placed fork tips on the floor when parked, controls neutralized, brakes were set and power off.				

HANDS-ON ACTIVITY

The instructor should explain carefully the activities that will be performed during the hands-on session, which include driving the lift truck through a test course.

Activities include:

1. Demonstration of how to do pre-shift checks
2. Explanation and demonstration of truck components, how they operate and any differences
3. Demonstration of proper method of starting a lift truck
4. Demonstration of “inching”
5. Demonstration of “plugging” if truck is electric
6. Demonstration of traveling without a load
7. Demonstration of removing and placing a load on a stack or rack
8. Demonstration of traveling with a load, with and without forward visibility obstructed
9. Demonstration of going up and down a ramp or incline with and without a load
10. Demonstration of proper procedure for parking truck

DRIVING COURSE EVALUATION

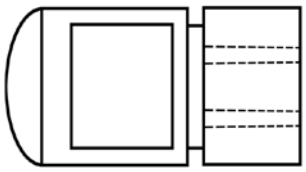
1. The driving evaluation should be truck and site specific. The course should be already set up and approved by management, with the type of trucks that will be operated.
2. The evaluator should be familiar with the right procedures in order to grade each maneuver.
3. Explain of the test course layout and what is expected to successfully complete the driving test through the course.
4. Explain that driving through the test course is not a speed test, but a test of basic ability and operating techniques.
5. Explain the Driver Check Sheet to be used with the test course.
6. Demonstrate proper method of driving through test course.
7. Ask for questions.

DRIVING COURSE DIAGRAMS

On the next few pages, you will find six diagrams. These are examples of course layouts that could be used or modified to suit the type of trucks being operated. They can be set up with single loads at ground level, positioned in racks or placed on stacks. It is up to you and the employer to determine the driving course layout that best represents the type of application(s) and conditions the operator(s) will be required to work.

COURSE “A”

NOTE: The width of course “A” is determined by the outside width of the drive tires, or load, whichever is widest. There should be four inches of clearance on each side of the truck and or load. Outside barriers can be pylons, painted lines or pallets, whichever is acceptable.



Point “A” **Point “B”**

1. Driver picks up load at point “A”, drives forward and places the load at point “B.” (This can be on a stack or the ground.)
2. After placing the load at point “B,” the operator then backs out of the load and drives in reverse back to point “A.”
3. The operator again drives forward to point “B,” retrieves the load and returns it to point “A” while driving in reverse.
4. Each operator should go through the same procedure.

COURSE “B”

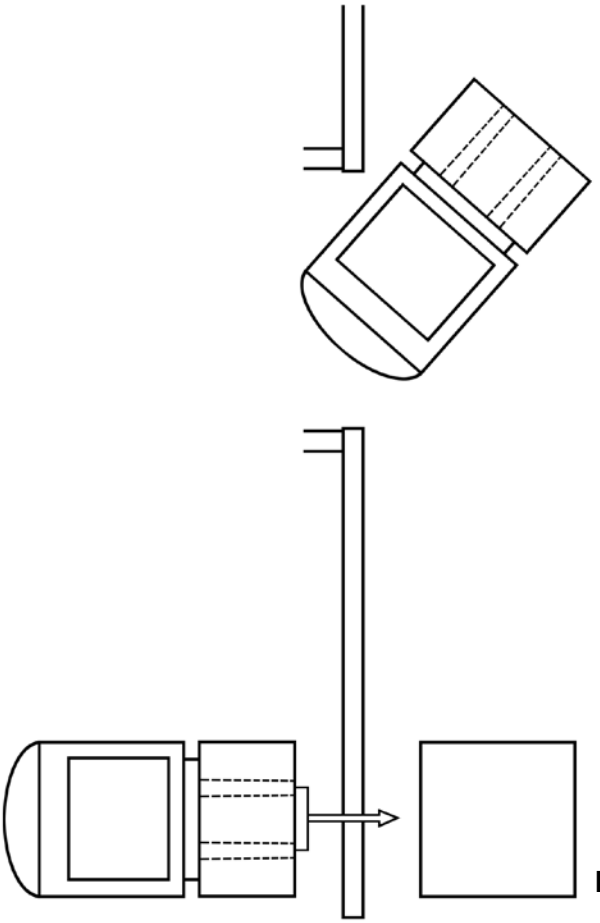
NOTE: The pylons on course “B” should be spaced at least eleven feet apart, with six to eight feet on each side.

Point “A”

Point “B”

1. Starting out driving forward at point “A” with a load, the operator carefully weaves around each pylon to point “B.” The operator then circles the last pylon and returns to point “A” still driving in the forward direction.
2. This course can also be run by driving forward to Point “B,” then driving in reverse back to point “A,” or driving the complete course in the forward direction and then driving it in reverse.
3. Each operator should go through the same procedure.

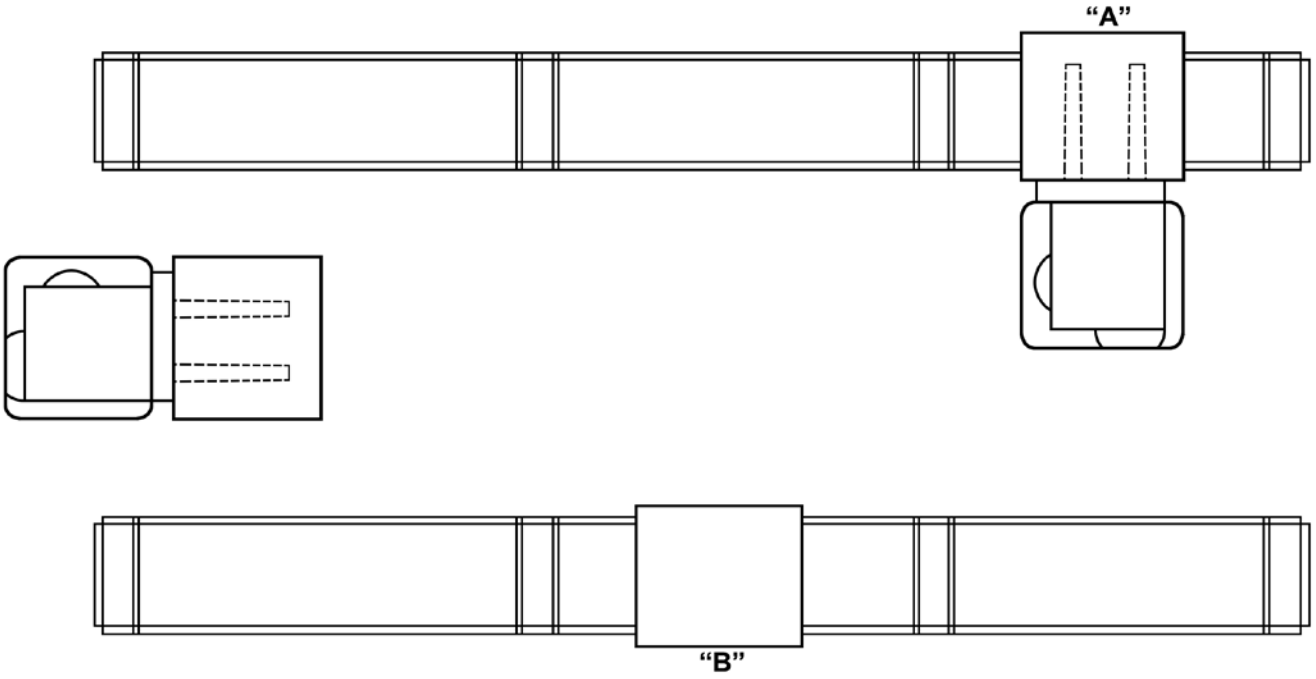
COURSE “C”



NOTE: Loads should be placed at the start of the course and at point “A” or “B.”

1. The operator drives forward with the load, makes a 90-degree turn to point “A” or “B,” whichever one does not have a load placed and deposits the load. The operator then backs up around the corner and proceeds to pick up the load placed at the other location. Once the load is picked up, the operator backs up around the corner and drives in reverse back to the starting position.
2. Each operator should go through the same procedure.

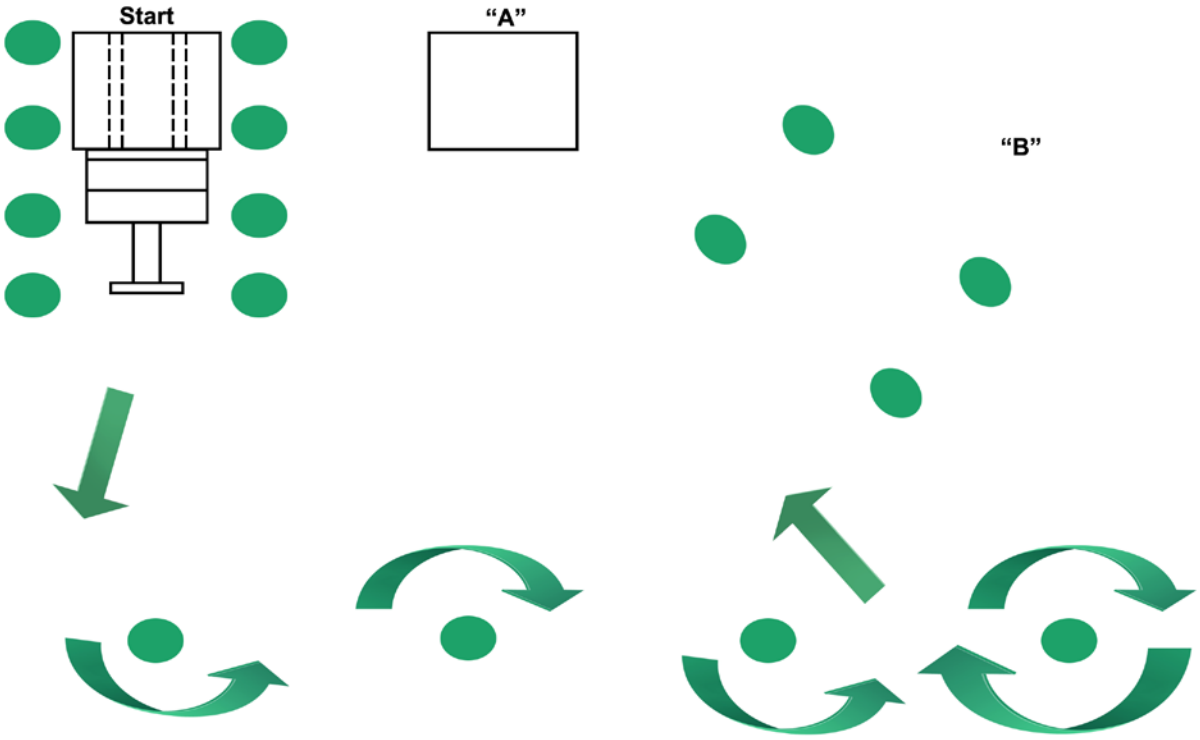
Course “D”



NOTE: Loads should be placed at the start of the course and at either point “A” or “B”

1. The operator drives forward with the load, makes a 90-degree turn to point “A” or “B”, whichever one does not have a load placed and deposits the load. The operator then backs out of the load and proceeds to pick up the load placed at the other location. Once the load is picked up, the operator backs out with the load and drives back to the starting position.
2. Each operator should follow the same procedure.

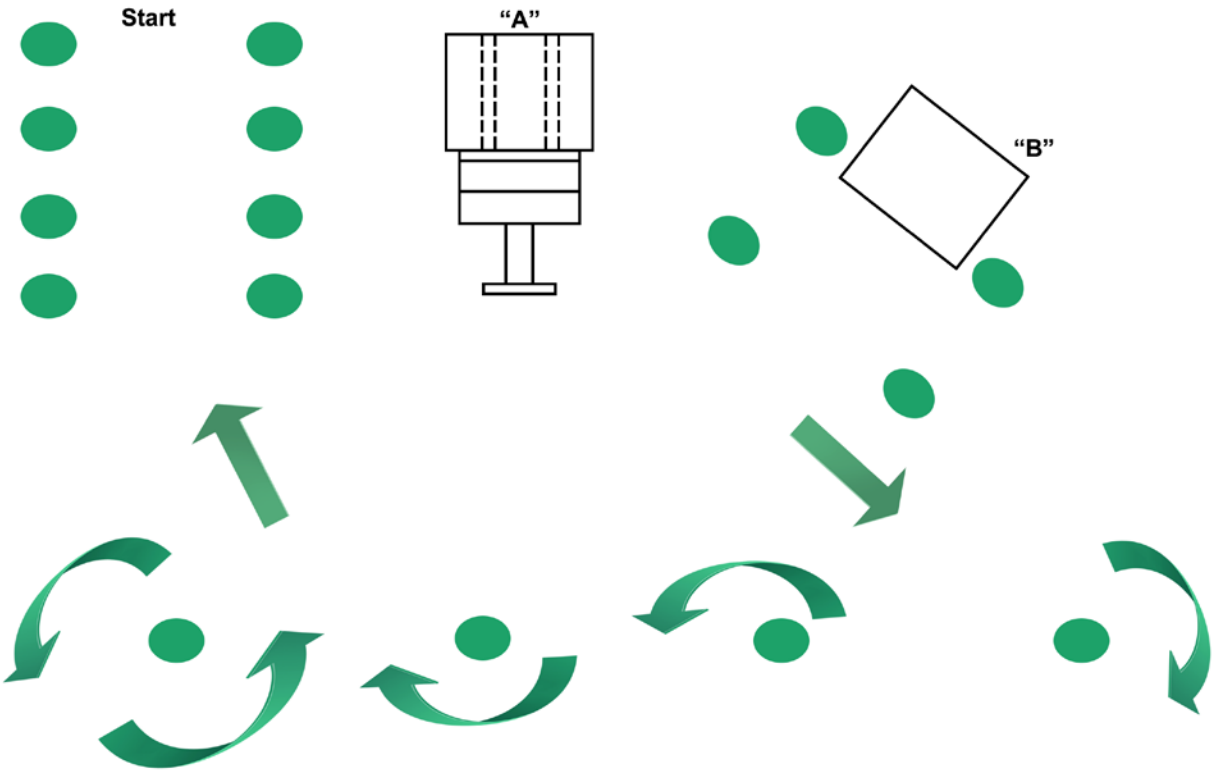
Course “E” (Start)



NOTE: Loads should be placed at the start and either point “A” or “B”.

1. The operator lifts the load, travels forward around the outside of the first pylon and proceeds around each as shown in the diagram.
2. The operator is to completely circle the last pylon, then place the load at point “A” or “B”.

Course “E” (Return)



3. After the load is placed at point “A” or “B”, the operator should exit the load and proceed to the waiting load, which will be at either point “A” or “B”.
4. Once the load is engaged and ready for travel, the operator should travel back through the course in the reverse direction as shown in the diagram. Starting with the last pylon.
5. The operator again should completely circle the last pylon as shown, and place the load in position for the next operator.

REFRESHER TRAINING AND EVALUATION FORM (Example Only)

On this _____ day of _____ (month) _____ (year), _____ was notified that refresher training has been requested by management in the following categories, in order to conform to OSHA regulations 29 CFR 1910.178, Subpart N (1)(4)(ii), and is required to complete the refresher training on the_____ day of _____(month) _____(year) starting at _____AM/PM, in the Company Training Center.

A. ☐ The operator has been observed to operate the vehicle in an unsafe manner;

Actual Violation / Date:

1 _____
2 _____
3 _____

B. ☐ The operator has been involved in an accident or near-miss incident;

Actual Incident / Date:

1 _____
2 _____
3 _____

C. ☐ The operator has received an evaluation that reveals that the operator is not operating the truck safely;

Actual Evaluation Type / Date:

1 _____
2 _____
3 _____

D. ☐ The operator is assigned to drive a different type of truck;

E. ☐ A condition in the workplace has changed in a manner that would affect safe operation of the truck.

Evaluation performed by: _____ Date: _____
Passing Score: _____ Actual Score: _____ Pass: ____ Fail: _____

ANSWER KEY: TOTAL COURSE CLASS I–V

Multiple Choice

1. The primary responsibility of the operator is to _____.

   a) use the powered industrial truck safely and properly
   b) make sure all loads are in place at the end of the shift
   c) move as much material as possible in order to increase profits
   d) all of the above

2. OSHA requires that operators of powered industrial trucks be_____.

   a) trained and evaluated
   b) at least 21 and have a current driver's license
   c) experienced
   d) all of the above

3. You should never attempt to operate a powered industrial truck unless _____.

   a) you have been trained, evaluated and certified by your employer, or in the process of being trained, with a trainer observing
   b) no one else is around, the load needs to be moved and you have operated a lift truck before on your previous job
   c) the regular operator says that it is OK

4. The "Walkie" is _____.

   a) front steering
   b) operated with the load trailing
   c) Class III
   d) all of the above

5. The _____ trucks include cushion sit-down tire rider trucks of the counterbalanced type that are powered by internal combustion engines.

   a) Class IV
   b) Class V
   c) Class III
   d) none of the above

6. The_____ trucks include pneumatic tire sit-down rider trucks of the counterbalanced type that are powered by internal combustion engines.

   a) Class I
   b) Class IV
   c) Class V
   d) none of the above

7. Lift trucks may operate in reverse____ of the time.

   a) 50% or more
   b) 25%
   c) 15%
   d) none of the above

8. The distance the forks can be lifted before any part of the mast inner channels, carriage or load backrest extension extends above the top of the outer mast channel is called _____.

   a) maximum lift height
   b) overall lowered height
   c) free-lift
   d) none of the above

9. _____ can cause the stability of a lift truck to change.

   a) Turning
   b) Accelerating
   c) Stopping
   d) Operating on an incline
   e) all of the above

10. On the data plate you will find _____.

    a) truck model
    b) serial number
    c) lifting capacity
    d) all of the above

11. A lift truck's fulcrum is _____.

    a) at the center line of its front wheels
    b) between the front and rear wheels
    c) at the front edge of its carriage
    d) none of the above

12. The stability of a lift truck is affected by several factors such as _____.

    a) load weight
    b) load size
    c) load type
    d) height the load will be lifted
    e) all of the above

13. If a lift truck fails any part of the inspection you should _____.

    a) tag it
    b) remove the key
    c) take it out of service and report the problem to your supervisor
    d) all of the above

14. When approaching an intersection you should _____.

    a) always approach slowly, keeping an eye out for pedestrians and other trucks
    b) come to a full stop, once each traffic lane is fully visible
    c) check for oncoming traffic, then sound the horn and proceed with caution.
    d) all of the above

15. _____ is the movement of a lift truck that allows a slow travel speed while allowing full operation of the lift mechanism.

    a) Plugging
    b) Inching

16. _____ is the method most commonly used for routine stopping and direction changing with many electric trucks.

    a) Inching
    b) Plugging

17. When traveling make sure the mast is _____.

    a) raised about 24"
    b) lowered with forks about 4"– 6" above the work surface
    c) tilted forward
    d) none of the above

18. The forks must support at least _____ the length of the load.

    a) 1/3
    b) 1/2
    c) 2/3
    d) none of the above

19. When traveling up or down a ramp or incline with a loaded lift truck, the load is to be kept_____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

20. When traveling up or down a ramp or incline without a load, the counterweight is to be kept_____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

21. _____lift trucks should not turn on an incline.

    a) Class I
    b) Class II
    c) Class III
    d) Class IV
    e) Class V
    f) all of the above

22. When traveling over a railroad crossing with a lift truck, you should cross _____.

    a) straight-on
    b) in reverse
    c) at a 45˚ angle
    d) none of the above

23. An approved safety platform must be equipped with _____.

    a) safety railings
    b) solid floor
    c) screen or bars separating the platform and the moving parts of the mast
    d) all of the above

24. When parking a lift truck, _____.

    a) stop the lift truck and apply the parking brake
    b) fully lower the forks or carriage and tilt the mast forward
    c) put the directional control in neutral
    d) turn the key to the off position and remove the key
    e) if the truck is powered by LPG fuel, make sure to shut off the flow of gas at the fuel tank
    f) all of the above

True & False

25. **T**/F Some lift trucks have a combination accelerator and directional control combined into one pedal.

26. **T**/F An Operating Manual is supplied with every lift truck and it should be attached to the truck.

27. **T**/F The lift truck and load each have a separate center of gravity.

28. T/**F** Class V trucks include electric sit-down and some stand-up counterbalanced trucks. **(Answer: Class I)**

29. T/**F** Class III trucks include Electric stand-up Narrow Aisle Reach / Straddle and Order Picker trucks. **(Answer: Class II)**

30. T/**F** Class II trucks include pedestrian led electric motor trucks. **(Answer: Class III)**

31. T/**F** Most lift trucks have front wheel steering. **(Answer: rear)**

32. **T**/F The carriage, located on the front of the truck, within the mast, has a load backrest extension secured to it to help stabilize the load and keep the load from falling backward into the operator compartment.

33. T/**F** All masts are designed without free-lift capabilities.

34. T/**F** Pneumatic type tires are usually filled with air and used mostly for indoor applications. **(Answer: outdoor)**

35. T/**F** It is OK to operate a lift truck without a data plate as long as you are careful. **(Answer: No! A data plate must be on the truck before being operated.)**

36. T/**F** The fulcrum is the single point around which the object is balanced in all directions. **(Answer: center of gravity)**

37. **T**/F When the lift truck picks up a load, the balance point of the combined weight of the lift truck and load is located at a point called the combined center of gravity.

38. **T**/F Capacity is the maximum load a lift truck can safely handle.

39. T/**F** The fulcrum is the distance from the center of gravity of the load to the face of the forks or attachment. **(Answer: load center)**

40. T/**F** If an attachment is added to the truck, the rated lifting capacity of the truck will not be affected. **(Answer: attachments will affect the rated lifting capacity)**

41. **T**/F The position of the weight on each side of the fulcrum, or pivot point, is just as important as the weight.

42. **T**/F If you carry an over-capacity load, or a load forward on the forks, it can dangerously affect the stability of the lift truck.

43. T/**F** The area of support for lift trucks is called the fulcrum. **(Answer: stability triangle)**

44. **T**/F If the truck should tip, do not jump off. Brace your feet, grip the steering wheel firmly, and lean forward and away from the point of impact.

45. **T**/F The capacity of a truck is rated at one or more specified mast lift heights.

46. **T**/F An improperly inflated tire may cause the lift truck to become unbalanced and tip over when cornering or handling loads.

47. T/**F** Operating on an incline does not affect the stability of the lift truck if you are careful. **(Answer: Careful or not, any time you operate on an incline the stability is going to be affected because the center of gravity is affected.)**

48. **T**/F Addition of an attachment changes the capacity of the truck.

49. **T**/F OSHA requires that a pre-shift truck inspection be made before operating your lift truck.

50. **T**/F When picking up a load, you should line your truck up with the center of the load.

51. T/**F** Loads should always be carried elevated and tilted back.

52. T/**F** If your visibility is obstructed by the load, blow your horn and proceed slowly. **(Answer: use a spotter or travel in reverse)**

53. **T**/F An operator must watch for “tail swing” when turning a corner or simply maneuvering a counterbalanced truck into position.

54. **T**/F Tail swing is the swift outward movement of the rear of the truck, as the truck is turning or maneuvering into position with or without a load with Class I, II, IV & V trucks.

55. **T**/F Class III trucks or Motorized Electric Walkie trucks, should always be operated on an incline with the forks and load facing downhill.

56. T/**F** An operator should always use a mirror when backing up. **(Answer: A mirror should be used for reference to tail swing area and not when backing up.)**

57. T/**F** An unloaded lift truck is less likely to tip over sideways. **(Answer: An unloaded lift truck is more likely to tip sideways because of the position of the center of gravity within the stability triangle which would be higher and back towards the narrow part of the triangle.)**

58. **T**/F An unloaded lift truck is less likely to tip over in the forward direction.

59. **T**/F If a data plate does not have the correct truck configuration you should contact your supervisor.

60. T/**F** Forklift trucks operate in reverse only 25% of the time.

Answer Key: Class I, IV, V

Multiple Choice

1. The primary responsibility of the operator is to _____.

   a) use the powered industrial truck safely and properly
   b) make sure all loads are in place at the end of the shift.
   c) move as much material as possible in order to increase profits.
   d) all of the above

2. OSHA requires that operators of powered industrial trucks be _____.

   a) trained and evaluated
   b) at least 21 and have a current driver's license
   c) experienced
   d) all of the above

3. You should never attempt to operate a powered industrial truck unless _____.

   a) you have been trained, evaluated and certified by your employer, or in the process of being trained, with a trainer observing
   b) no one else is around, the load needs to be moved and you have operated a lift truck before on your previous job
   c) the regular operator says that it is OK

4. The _____ trucks include cushion sit-down tire rider trucks of the counterbalanced type that are powered by internal combustion engines.

   a) Class IV
   b) Class V
   c) Class I
   d) none of the above

5. The _____ trucks include pneumatic tire sit-down rider trucks of the counterbalanced type that are powered by internal combustion engines.

   a) Class I
   b) Class IV
   c) Class V
   d) none of the above

6. Lift trucks may operate in reverse ____ of the time.

   a) 50% or more
   b) 25%
   c) 15%
   d) none of the above

7. The distance the forks can be lifted before any part of the mast inner channels, carriage or load backrest extension extends above the top of the outer mast channel is called _____.

   a) maximum lift height
   b) overall lowered height
   c) free-lift
   d) none of the above

8. _____ can cause the stability of a lift truck to change.

   a) Turning
   b) Accelerating
   c) Stopping
   d) Operating on an incline
   e) all of the above

9. On the data plate you will find _____.

   a) truck model
   b) serial number
   c) lifting capacity
   d) all of the above

10. A forklift's fulcrum is _____.

    a) at the center line of its front wheels
    b) between the front and rear wheels
    c) at the front edge of its carriage.
    d) none of the above

11. The stability of a lift truck is affected by several factors such as _____.

    a) load weight
    b) load size
    c) load type
    d) height the load will be lifted
    e) all of the above

12. If a lift truck fails any part of the inspection you should _____.

    a) tag it
    b) remove the key
    c) take it out of service and report the problem to your supervisor
    d) all of the above

13. When approaching an intersection you should _____.

    a) always approach slowly, keeping an eye out for pedestrians and other trucks.
    b) come to a full stop, once each traffic lane is fully visible
    c) check for oncoming traffic, then sound the horn, and proceed with caution.
    d) all of the above

14. _____ is the movement of a lift truck that allows a slow travel speed while allowing full operation of the lift mechanism.

    a) Plugging
    b) Inching

15. _____ is the method most commonly used for routine stopping and direction changing with many electric trucks.

    a) Inching
    b) Plugging

16. When traveling make sure the mast is _____.

    a) raised about 24"
    b) lowered with forks about 4"– 6" above the work surface
    c) tilted forward
    d) none of the above

17. The forks must support at least _____ the length of the load.

    a) 1/3
    b) 1/2
    c) 2/3
    d) none of the above

18. When traveling up or down a ramp or incline with a loaded lift truck, the load is to be kept _____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

19. When traveling up or down a ramp or incline without a load, the counterweight is to be kept _____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

20. _____ lift trucks should not turn on an incline.

    a) Class I
    b) Class IV
    c) Class V
    d) all of the above

21. When traveling over a railroad crossing with a lift truck, you should cross _____.

    a) straight-on
    b) in reverse
    c) at a 45° angle
    d) none of the above

22. An approved safety platform must be equipped with _____.

    a) safety railings
    b) solid floor
    c) screen or bars separating the platform and the moving parts of the mast
    d) all of the above

23. When parking a lift truck, _____.

    a) stop the lift truck and apply the parking brake
    b) fully lower the forks or carriage and tilt the mast forward
    c) put the directional control in neutral
    d) turn the key to the off position and remove the key
    e) if the truck is powered by LPG fuel, make sure to shut off the flow of gas at the fuel tank
    f) all of the above

True & False

24. **T**/F Some lift trucks have a combination accelerator and directional control combined into one pedal.

25. **T**/F An Operating Manual is supplied with every lift truck and it should be attached to the truck.

26. **T**/F The lift truck and load each have a separate center of gravity.

27. T/**F** Class V trucks include electric sit-down and some stand-up counterbalanced trucks.

28. T/**F** Most lift trucks have front wheel steering.

29. **T**/F The carriage, located on the front of the truck, within the mast, has a load backrest extension secured to it to help stabilize the load and keep the load from falling backward into the operator compartment.

30. T/**F** All masts are designed without free-lift capabilities.

31. T/**F** Pneumatic type tires are usually filled with air and used mostly for indoor applications.

32. T/**F** It is OK to operate a lift truck without a Data Plate as long as you are careful.

33. T/**F** The fulcrum is the single point around which the object is balanced in all directions.

34. **T**/F When the lift truck picks up a load, the balance point of the combined weight of the lift truck and load is located at a point called the combined center of gravity.

35. **T**/F Capacity is the maximum load a lift truck can safely handle.

36. T/**F** The fulcrum is the distance from the center of gravity of the load, to the face of the forks or attachment.

37. T/**F** If an attachment is added to the truck, the rated lifting capacity of the truck will not be affected.

38. **T**/F The position of the weight on each side of the fulcrum, or pivot point, is just as important as the weight.

39. **T**/F If you carry an over-capacity load, or a load forward on the forks, it can dangerously affect the stability of the lift truck.

40. T/**F** The area of support for lift trucks is called the fulcrum.

41. **T**/F If the truck should tip, do not jump off. Brace your feet, grip the steering wheel firmly, and lean forward and away from the point of impact.

42. **T**/F The capacity of a truck is rated at one or more specified mast lift heights.

43. **T**/F An improperly inflated tire may cause the forklift to become unbalanced and tip over when cornering or handling loads.

44. T/**F** Operating on an incline does not affect the stability of the lift truck if you are careful.

45. **T**/F Addition of an attachment changes the capacity of the truck.

46. **T**/F OSHA requires that a pre-shift truck inspection be made before operating your lift truck.

47. **T**/F When picking up a load, you should line your truck up with the center of the load.

48. T/**F** Loads should always be carried elevated and tilted back.

49. T/**F** If your visibility is obstructed by the load, blow your horn and proceed slowly.

50. **T**/F An operator must watch for "tail swing" when turning a corner or simply maneuvering a counterbalanced truck into position.

51. **T**/F Tail swing is the swift outward movement of the rear of the truck, as the truck is turning or maneuvering into position with or without a load with Class I, IV & V trucks.

52. T/**F** An operator should always use a mirror when backing up.

53. T/**F** An unloaded lift truck is less likely to tip over sideways.

54. **T**/F An unloaded lift truck is less likely to tip over in the forward direction.

55. **T**/F If a data plate does not have the correct truck configuration you should contact your supervisor.

56. T/**F** Forklift trucks operate in reverse only 25% of the time.

57. **T**/F When a lift truck is carrying a load, that load may restrict an operator's line of sight. If it does, travel in reverse.

58. **T**/F Trained professional operators know that it is their responsibility to make sure that the load is secure and correctly placed on the forks.

59. T/**F** Class IV includes sit-down counterbalanced, pneumatic tire trucks that are powered by an internal combustion engine.

60. **T**/F Never let anyone ride either on the forks or in the cab of your lift truck.

Answer Key: Class II

Multiple Choice

1. The primary responsibility of the operator is to _____.

   a) use the powered industrial truck safely and properly
   b) make sure all loads are in place at the end of the shift.
   c) move as much material as possible in order to increase profits.
   d) all of the above

2. OSHA requires operators of powered industrial trucks be_____.

   a) trained and evaluated
   b) at least 21 and have a current driver's license
   c) experienced
   d) all of the above

3. You should never attempt to operate a powered industrial truck unless _____.

   a) you have been trained, evaluated and certified by your employer, or in the process of being trained, with a trainer observing
   b) no one else is around, the load needs to be moved and you have operated a lift truck before on your previous job
   c) the regular operator says that it is OK

4. Lift trucks may operate in reverse____ of the time.

   a) 50% or more
   b) 25%
   c) 15%
   d) none of the above

5. The distance the forks can be lifted before any part of the mast inner channels, carriage or load backrest extension extends above the top of the outer mast channel is called _____.

   a) maximum lift height
   b) overall lowered height
   c) free-lift
   d) none of the above

6. _____ can cause the stability of a lift truck to change.

   a) Turning
   b) Accelerating
   c) Stopping
   d) Operating on an incline
   e) all of the above

7. On the nameplate plate you will find _____.

   a) truck model
   b) serial number
   c) lifting capacity
   d) all of the above

8. A forklifts fulcrum is _____.

   a) at the center line of its front wheels
   b) between the front and rear wheels
   c) at the front edge of its carriage.
   d) none of the above

9. The stability of a lift truck is affected by several factors such as _____.

   a) load weight
   b) load size
   c) load type
   d) height the load will be lifted
   e) all of the above

10. If a lift truck fails any part of the inspection you should _____,

    a) tag it
    b) remove the key
    c) take it out of service and report the problem to your supervisor
    d) all of the above

11. When approaching an intersection you should _____.

    a) always approach slowly, keeping an eye out for pedestrians and other trucks
    b) come to a full stop, once each traffic lane is fully visible
    c) check for oncoming traffic, then sound the horn, and proceed with caution
    d) all of the above

12. _____ is the method most commonly used for routine stopping and direction changing with many electric trucks.

    a) Inching
    b) Plugging

13. When traveling make sure the mast is _____.

    a) raised about 24"
    b) lowered with forks about 4-6" above the work surface
    c) tilted forward
    d) none of the above

14. The forks must support at least _____ the length of the load.

    a) 1/3
    b) 1/2
    c) 2/3
    d) none of the above

15. If operating up or down a ramp or incline with a loaded Narrow Aisle truck, the load should be _____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

16. If traveling up or down a ramp or incline with an unloaded Narrow Aisle truck, the load engaging means should be _____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

17. An approved safety platform must be equipped with _____.

    a) safety railings
    b) solid floor
    c) screen or bars separating the platform and the moving parts of the mast
    d) all of the above

18. When parking a lift truck, _____.

    a) stop the lift truck and apply the parking brake
    b) fully lower the forks or carriage and tilt the mast forward
    c) put the directional control in neutral
    d) turn the key to the off position and remove the key
    e) all of the above

19. _____ trucks are considered very narrow aisle trucks.

    a) Order Picker
    b) Narrow Aisle
    c) Turret

True & False

20. **T**/F An Operating Manual is supplied with every lift truck and it should be attached to the truck.

21. **T**/F The lift truck and load each have a separate center of gravity.

22. T/**F** Most lift trucks have front wheel steering.

23. **T**/F The carriage on Narrow Aisle trucks has a load backrest extension secured to it to help stabilize the load and keep the load from falling backward into the operator compartment.

24. T/**F** All masts are designed without free-lift capabilities.

25. T/**F** It is OK to operate a lift truck without a Nameplate as long as you are careful.

26. **T**/F You should not turn a Class II truck on an incline. **(Also, not on Class I, III, IV or V)**

27. T/**F** The fulcrum is the single point around which the object is balanced in all directions.

28. **T**/F When the lift truck picks up a load, the balance point of the combined weight of the lift truck and load is located at a point called the combined center of gravity.

29. **T**/F Capacity is the maximum load a lift truck can safely handle.

30. T/**F** The fulcrum is the distance from the center of gravity of the load, to the face of the forks or attachment.

31. T/**F** If an attachment is added to the truck, the rated lifting capacity of the truck will not be affected.

32. **T**/F The position of the weight on each side of the fulcrum, or pivot point, is just as important as the weight.

33. **T**/F If you carry an over-capacity load, or a load forward on the forks, it can dangerously affect the stability of the lift truck.

34. T/**F** The area of support for lift trucks is called the fulcrum.

35. **T**/F The rated lifting capacity of a truck is at one or more specified mast lift heights.

36. T/**F** Operating on an incline does not affect the stability of the lift truck if you are careful.

37. **T**/F Addition of an attachment changes the capacity of the truck.

38. **T**/F OSHA requires that a pre-shift truck inspection be made before operating your lift truck.

39. **T**/F When picking up a load, you should line your truck up with the center of the load.

40. T/**F** Transporting a load elevated and tilted back will not have an affect on stability.

41. T/**F** If the load obstructs your visibility, blow your horn and proceed slowly.

42. **T**/F An operator must watch for tail swing when turning a corner or simply maneuvering a truck with rear wheel steering into position.

43. **T**/F Tail swing is the swift outward movement of the rear of the truck, as the truck is turning or maneuvering into position with or without a load.

44. **T**/F Order Pickers and Man-up Turret trucks are designed to restrict travel speed when the operator's compartment is raised above 24".

45. **T**/F Spacing for two trucks passing in an aisle should measure at least their combined width plus an additional six inches.

46. **T**/F When traveling with or without a load while operating a Man-up or Man-down turret truck, the forks should always be turned to the left or right.

47. **T**/F An auxiliary mast with carriage and forks, on the Man-up and Man-down turret trucks is able to rotate to 180° to allow placement of loads on either side of an aisle.

48. T/**F** Order Picker trucks can be used in narrow aisles and for applications requiring right angle stacking in racks.

49. **T**/F Class II trucks are designed for use where space is a premium and the work surfaces are flat.

50. **T**/F The capacity plate must be legible, and must be accurate.

Answer Key: Class III

Multiple Choice

1. The primary responsibility of the operator is to _____.

   a) use the powered industrial truck safely and properly
   b) make sure all loads are in place at the end of the shift
   c) move as much material as possible in order to increase profits
   d) all of the above

2. OSHA requires operators of powered industrial trucks be_____.

   a) trained and evaluated
   b) at least 21 and have a current driver's license
   c) experienced
   d) all of the above

3. You should never attempt to operate a powered industrial truck unless _____.

   a) you have been trained, evaluated and certified by your employer, or in the process of being trained, with a trainer observing
   b) no one else is around, the load needs to be moved and you have operated a lift truck before on your previous job
   c) the regular operator says that it is OK

4. Lift trucks may operate in reverse____ of the time.

   a) 50% or more
   b) 25%
   c) 15%
   d) none of the above

5. The distance the forks can be lifted on a High-lift Walkie before any part of the mast inner channels, carriage or load backrest extension extends above the top of the outer mast channel is called_____.

   a) maximum lift height
   b) overall lowered height
   c) free-lift
   d) none of the above

6. _____ can cause the stability of a lift truck to change.

   a) Turning
   b) Accelerating
   c) Stopping
   d) Operating on an incline
   e) all of the above

7. On the nameplate plate you will find _____.

   a) truck model
   b) serial number
   c) lifting capacity
   d) all of the above

8. A forklift's fulcrum is _____.

   a) at the centerline of its front wheels
   b) between the front and rear wheels
   c) at the front edge of its carriage
   d) none of the above

9. The stability of a lift truck is affected by several factors such as _____.

   a) load weight
   b) load size
   c) load type
   d) height the load will be lifted
   e) all of the above

10. If a lift truck fails any part of the inspection you should _____,

    a) tag it
    b) remove the key
    c) take it out of service and report the problem to your supervisor
    d) all of the above

11. When approaching an intersection you should _____.

    a) always approach slowly, keeping an eye out for pedestrians and other trucks
    b) come to a full stop, once each traffic lane is fully visible
    c) check for oncoming traffic, then sound the horn, and proceed with caution
    d) all of the above

12. _____ is the method most commonly used for routine stopping and direction changing with many electric trucks.

    a) Inching
    b) Plugging

13. When traveling with a High-lift Walkie, make sure the mast is _____.

    a) raised about 24"
    b) lowered with forks about 4"– 6" above the work surface
    c) tilted forward
    d) none of the above

14. The forks must support at least _____ the length of the load.

    a) 1/3
    b) 1/2
    c) 2/3
    d) none of the above

15. If operating up or down a ramp or incline with a loaded Walkie truck, unless the load restricts visibility or requires the load backrest to retain the load, travel with the load end _____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) none of the above

16. If traveling up or down a ramp or incline with an unloaded Walkie truck, the load engaging means should be _____.

    a) downgrade
    b) raised at least 24"
    c) upgrade
    d) either up or downgrade

17. _____lift trucks should not turn on an incline.

    a) Class I
    b) Class II
    c) Class III
    d) Class IV
    e) Class V
    f) all of the above

18. An approved safety platform must be equipped with _____.

    a) safety railings
    b) solid floor
    c) screen or bars separating the platform and the moving parts of the mast
    d) all of the above

19. When parking a Walkie High-lift truck, _____.

    a) bring the truck to a complete stop
    b) make sure the forks are retracted, lowered and tilted forward
    c) put the controls in neutral and apply the brake
    d) turn the key to the off position and remove the key
    e) all of the above

20. You should never attempt to use a Walkie or Walkie Rider truck that you have not been_____ by your employer to operate.

    a) trained
    b) evaluated
    c) certified
    d) all of the above
    e) none of the above

True & False

21. **T**/F Class III Walkie and Walkie Rider lift trucks have a combination accelerator and directional control combined into the handle.

22. **T**/F An Operating Manual is supplied with every lift truck and it should be attached to the truck.

23. **T**/F The lift truck and load each have a separate center of gravity.

24. T/**F** All Walkie and Walkie Rider lift trucks have rear wheel steering.

25. **T**/F The carriage on a Walkie High-lift truck has a load backrest extension secured to it to help stabilize the load and keep the load from falling rearward toward the operator.

26. T/**F** All masts are designed without free-lift capabilities. **(Answer: Most are designed with free-lift capabilities.)**

27. T/**F** It is OK to operate a lift truck without a Nameplate as long as you are careful. **(Answer: No it is not OK! A Nameplate must be on the truck before being operated.)**

28. T/**F** The fulcrum is the single point around which the object is balanced in all directions. **(Answer: center of gravity)**

29. **T**/F When the lift truck picks up a load, the balance point of the combined weight of the lift truck and load is located at a point called the combined center of gravity.

30. **T**/F Capacity is the maximum load a lift truck can safely handle.

31. T/**F** The fulcrum is the distance from the center of gravity of the load, to the face of the forks or attachment. **(Answer: Load Center)**

32. T/**F** If an attachment is added to the truck, the rated lifting capacity of the truck will not be affected. **(Answer: Any attachment will affect the rated lifting capacity.)**

33. **T**/F The position of the weight on each side of the fulcrum, or pivot point, is just as important as the weight.

34. **T**/F If you carry an over-capacity load, or load forward on the forks it can dangerously affect the stability of the lift truck.

35. T/**F** The area of support for lift trucks is called the fulcrum. **(Answer: Stability Triangle)**

36. **T**/F The rated lifting capacity of a High-lift Walkie truck is at one or more specified mast lift heights.

37. T/**F** Operating on an incline does not affect the stability of the lift truck if you are careful. **(Answer: Careful or not, any time you operate on an incline the stability is going to be affected, because the center of gravity is affected.)**

38. **T**/F Addition of an attachment changes the capacity of the truck.

39. **T**/F OSHA requires that a pre-shift truck inspection be made before operating your lift truck.

40. **T**/F When picking up a load, you should line your truck up with the center of the load.

41. T/**F** Transporting a load elevated with a High-lift Walkie will not have an affect on stability. **(Answer: With the load elevated, the combined center of gravity is pushed upward increasing the possibility of tip-over.)**

42. **T**/F If you are transporting a load with a Walkie Low-lift, High-lift or Walkie Rider in the proper manner, it should not obscure your forward visibility.

43. **T**/F An operator of a Walkie or Walkie Rider while operating the truck with the load engaging means trailing has to be aware of turning corners too sharply, or, “front-end swing”.

44. **T**/F When an operator is facing a load and positioning the load into place, the operator has to be aware of “tail-swing”, which is the swift movement outward of the tiller end of the truck.

45. **T**/F When operating a Walkie or Walkie Rider equipped with a coasting system feature engaged, you must be on a level surface free of debris.

46. T/**F** It is all right to operate a Walkie or Walkie Rider equipped with a coasting system feature engaged in a pedestrian walkway as long as you are careful. **(Answer: No! The truck should not be operated in a pedestrian aisle with this feature engaged.)**

47. **T**/F Spacing for two trucks passing in an aisle should measure at least their combined width plus an additional six inches.

48. **T**/F Normally, Class III Motorized Low and High-Lift Walkie trucks are equipped with hard composite load wheels intended for use on smooth, indoor surfaces.

49. **T**/F Walkie trucks should never be operated at speeds faster than normal walking speed.

50. **T**/F Class III trucks are designed for use on flat work surfaces.

RESOURCES

http://www.osha.gov/dcsp/products/etools/pit/index.html

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9828

http://www.osha.gov/dcsp/products/etools/pit/assistance/index.html