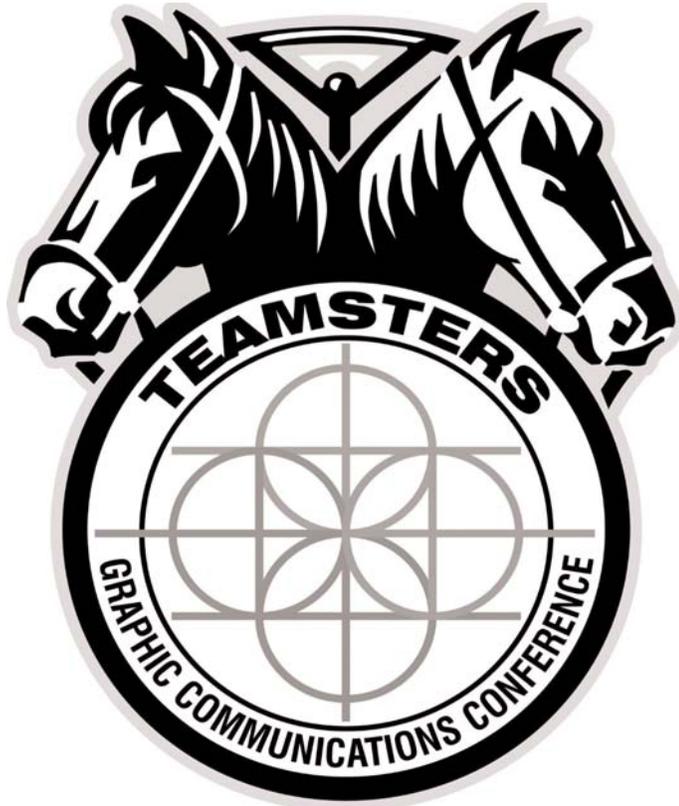


GCC/IBT/Labor Institute
**Powered Industrial Trucks (PIT) Driver's
Safety Training: Driver's Course Layout and
Discussion Point**



Compiled by The Labor Institute and the
Graphic Communications Conference of International
Brotherhood of Teamsters (GCC/IBT)
OSHA Grant #SH-18793-09-60-F11
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June 2009

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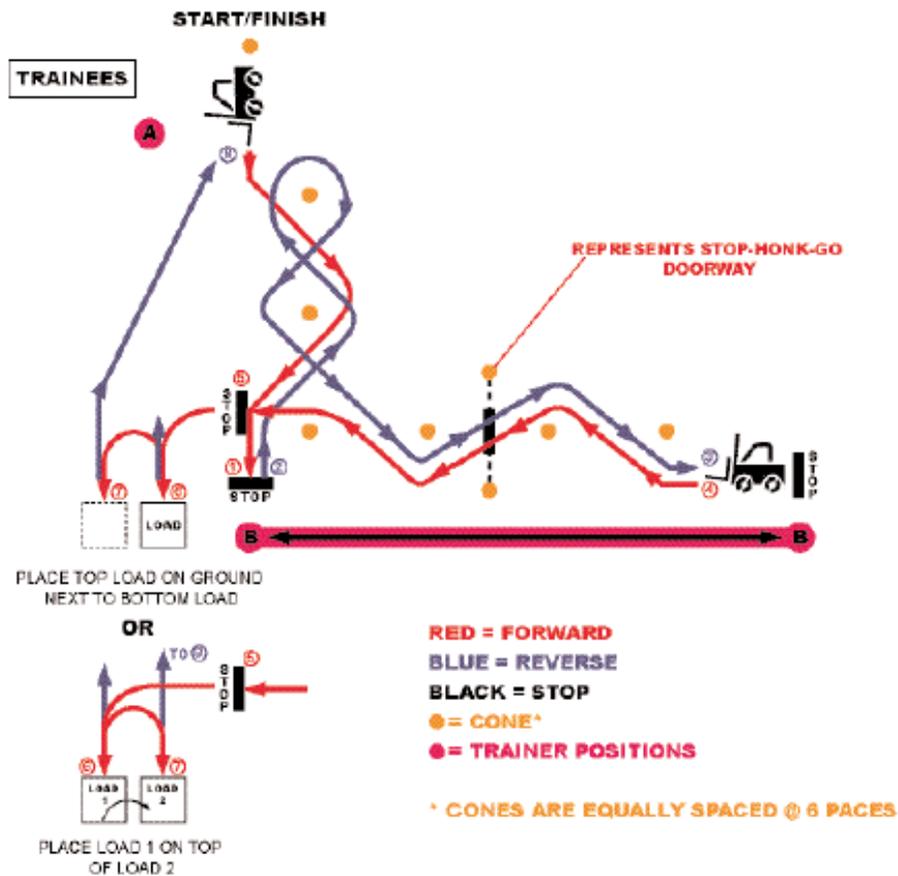
This book is written and produced by The Labor Institute, a nonprofit organization (36 East 12th Street, Suite 702, New York, NY 10003, 917-606-0511), and the Graphic Communication Conference of the International Brotherhood of Teamsters (1900 L Street, NW, Washington, D.C. 20036-5007, 202-462-1400). The primary structure, writing, editing, layout and illustration are the responsibility of The Labor Institute staff, members of the USW-United Steelworkers, USW Local 4-149.

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GCC/IBT Powered Industrial Truck Safety Training Driver's Course Layout and Discussion Points



Course Layout:

- The above illustration represents the entire driver course as it is to be laid out and performed.
- Should you need to modify the course please keep in mind we are trying to accomplish the tasks on the attached Appendix A.
- The 3 down / 4 across cone set-up can be modified to 2 down / 3 across to accommodate space restrictions.
- The Trainer will demonstrate the entire process, including inspections and course performance. (Not a student)

continued

Trainer Locations and Instructions:

- The letters A (START/FINISH) and B (COURSE) as illustrated on the map indicate Trainer Locations.
 - Trainer at Location A will work with the Driver being tested covering:
 - Truck and Course Inspection
 - Course Layout START
 - Layout assuring proper stopping at FINISH cone with truck's rear against cone
 - Trainer at Location A will work with the Drivers and observing Trainees:
 - Continual observation of current driver
 - Asking observers what is done well
 - Soliciting improvements from observers that could be achieved by driver
 - Providing specific instruction, feedback and tips to observers and driver on how to operate PIT and driving techniques
 - Trainer at Position B will work with the Drivers:
 - Providing specific instruction for driving the course
 - Providing specific instruction, feedback and tips to driver on how to operate PIT and driving techniques
- On average each driver will take approximately 15 minutes to complete the course in its entirety
- If an individual fails any task on Appendix A it is recommended that they redo the task(s) after all drivers have completed the training until they are successful in its completion
- If an individual fails the driver portion (less than 70% success) it is required that they retake the entire driving portion until completed 100% successfully.
- We will not recommend anyone who does not achieve 100% success
- We do not certify drivers.
- PIT Driver certification is issued by the employer.
- The GCC/IBT PIT training program recommends an additional 4 – 6 hours of on-the-job training specific to equipment and processes before an individual is certified by the employer

have unique data plate designs, however most will have the same basic information on them. As an operator it is very important to understand all of the information given on the data plate. A data plate must have all the proper information listed and it must be legible.

- **Discuss fork height**—Forks must be low as possible when traveling except when entering or leaving a ramp. On those occasions, raise the fork only enough to be sure you have clearance.

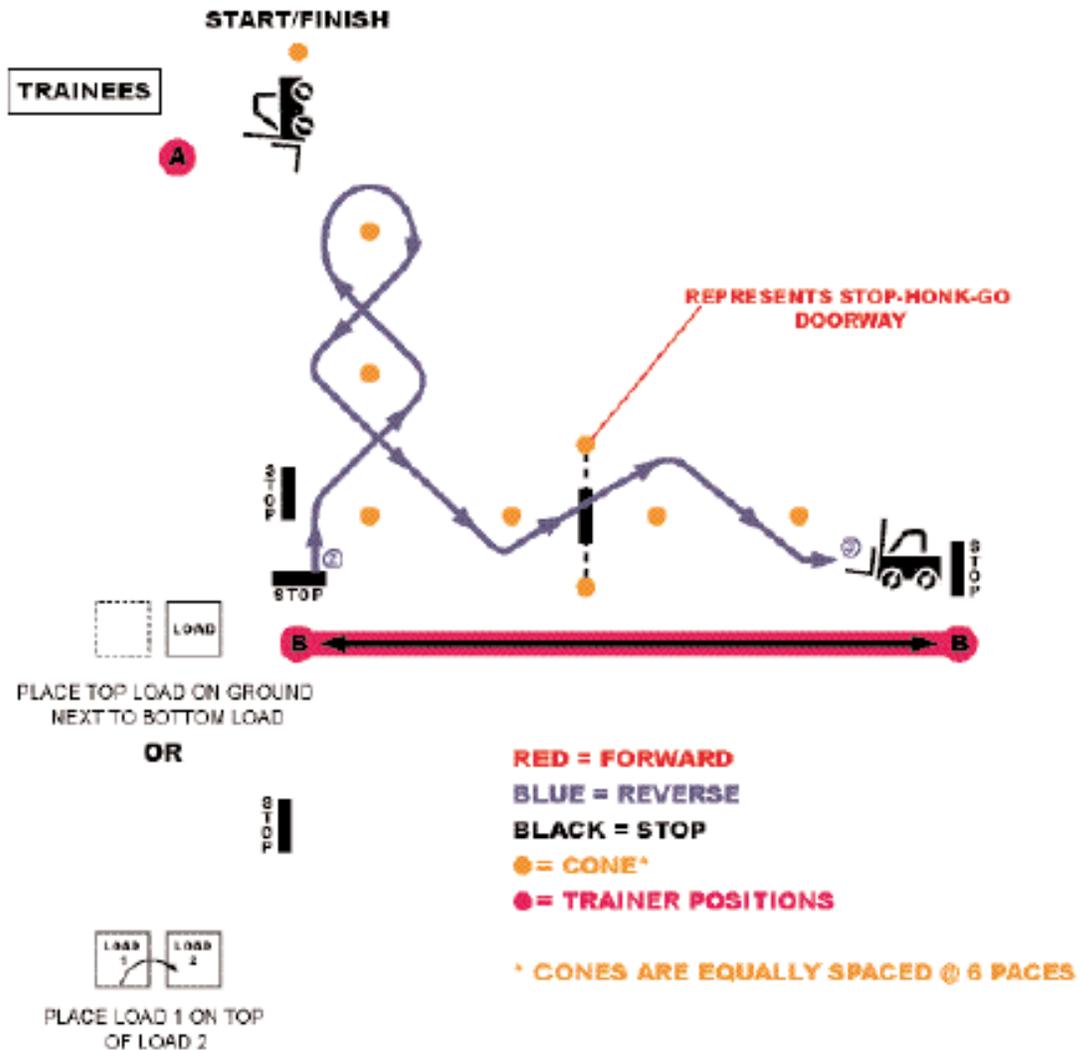
Whether your forklift is loaded or empty, always raise or lower the forks to not more than 6 inches from the floor before traveling. Never travel with the load in a raised position.

- **Safe travel**—Slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs the forward view, the driver must travel with the load trailing behind
- **Safety related to:**
 - **Mounting** – 3 Points of Contact
 - **Seat belts** - The occupant restraints are designed to keep the operator in the seat and to help prevent any injuries that could result if a mishap occurs. You must wear the safety belt whenever you are operating the forklift.
 - **Overhead Guard** - The overhead guard is standard equipment from the manufacturer and must be included on the forklift. The overhead guard is not meant for roll over protection it is only intended to offer protection from the impact of small packages, boxes, and bagged material representative of the job application. The guard will not withstand the impact of a falling capacity load.
 - **Hand placement**—The operator must keep arms, hands and feet inside the forklift and away from the hoist mechanism.
 - **Horn**—All forklifts must be equipped with a horn. The horn is used as a warning device. The operator of a forklift must know where to locate the horn. They must test it to see if it is in good working condition before putting the forklift into operation.
 - **Back-up alarm** - The alarm is designed as a warning signal that the forklift is moving in reverse. This is to alert other forklift drivers as well as pedestrians of a potential hazard. This alarm does not relieve the forklift driver of the responsibility of looking in the

direction of travel when backing. If your forklift is equipped with a backup alarm, it must be kept in operable condition.

- **Lights** - Flashing lights or strobes are optional equipment on a forklift. They are designed to alert anyone around of the forklift's presence. If the forklift has flashing lights, these must be kept in good working order. It is recommended that lights be turned whenever the truck is in use.
 - **Stopping/Starting (brakes, transmission, horn)** - The parking brake is a safety device used to prevent the forklift from moving. It should be used whenever the operator stops the truck (momentarily or for extended periods) or leaves the truck. It is required that forks be lowered to the ground, controls be neutralized and brakes set when stopped.
 - When a driver is going beyond 25 feet or does not have a clear view, additional requirements for powering down the PIT are to be followed.
- Trainer A at Position START/FINISH will provide verbal instruction and direction to begin driving portion as follows:
- From the START/FINISH cone:
 - Walk with driver to first cone assuring driver proceeds past the first cone on the right-hand side (as illustrated in RED)
 - Provide instruction on how to use inside front tire as point of reference for making turn
 - Allow driver to continue to slalom through remaining cones to Trainer B at Position 1
 - Trainer B at Position 1 will:
 - Visually guide driver to STOP position (Confirm at STOP position that emergency brake is set, forks are lowered and the vehicle is neutralized and shut down for the safety of the instructor.) (You may want to discuss shutting down if stopped for long periods)
 - Discuss Doorways / Passageways: STOP-HONK-GO
 - Provide instruction on performing reverse slalom (as illustrated in BLUE) from Position 2
 - Trainer B will provide feedback if needed

continued

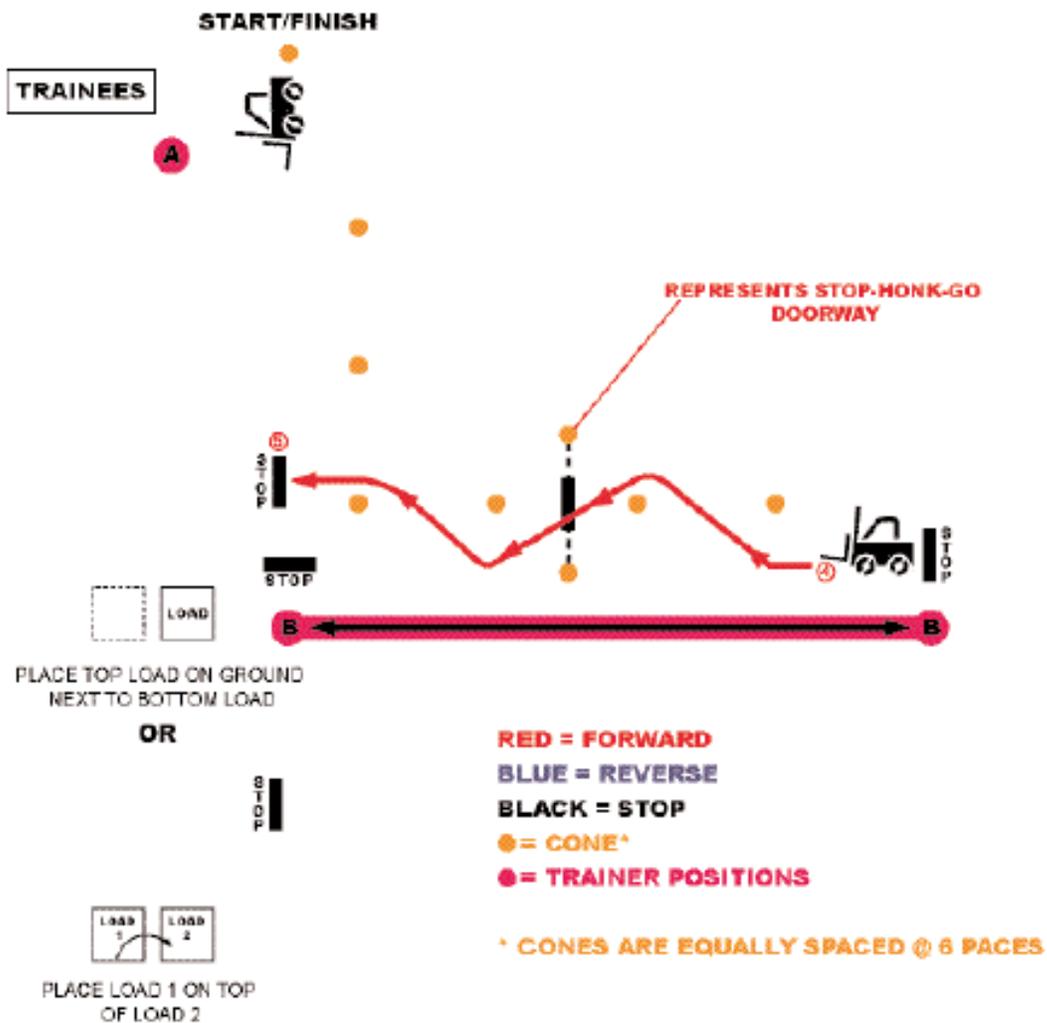


Activity 2/3 – REVERSE SLALOM

- Trainer B at Position 1/2 will provide verbal instruction and direction to continue driving portion as follows:
 - Assure horn is honked prior to proceeding.
 - Walk with driver to first cone assuring driver proceeds with the first cone on their left-hand side (as illustrated in BLUE).
 - **Driver will slalom through cones to Trainer A and circle the last cone.**
 - Trainer A will guide Driver around last cone to assure continuation.

- Trainer A will continue slalom through remaining cones and continue through course to Position 3 (as illustrated in BLUE) following visual and auditory commands from Trainer B.
- Trainer B will confirm that Driver performs STOP-HONK-GO at DOORWAY.
- Trainer B will walk with Driver to Position 3 and STOP Driver.
- Trainer B will confirm at STOP that emergency brake is set. (Confirm at STOP position that emergency brake is set, forks are lowered and the vehicle is neutralized and shut down for the safety of the instructor.) (You may want to discuss shutting down if stopped for long periods.)
- Trainer B will provide feedback if needed.

continued

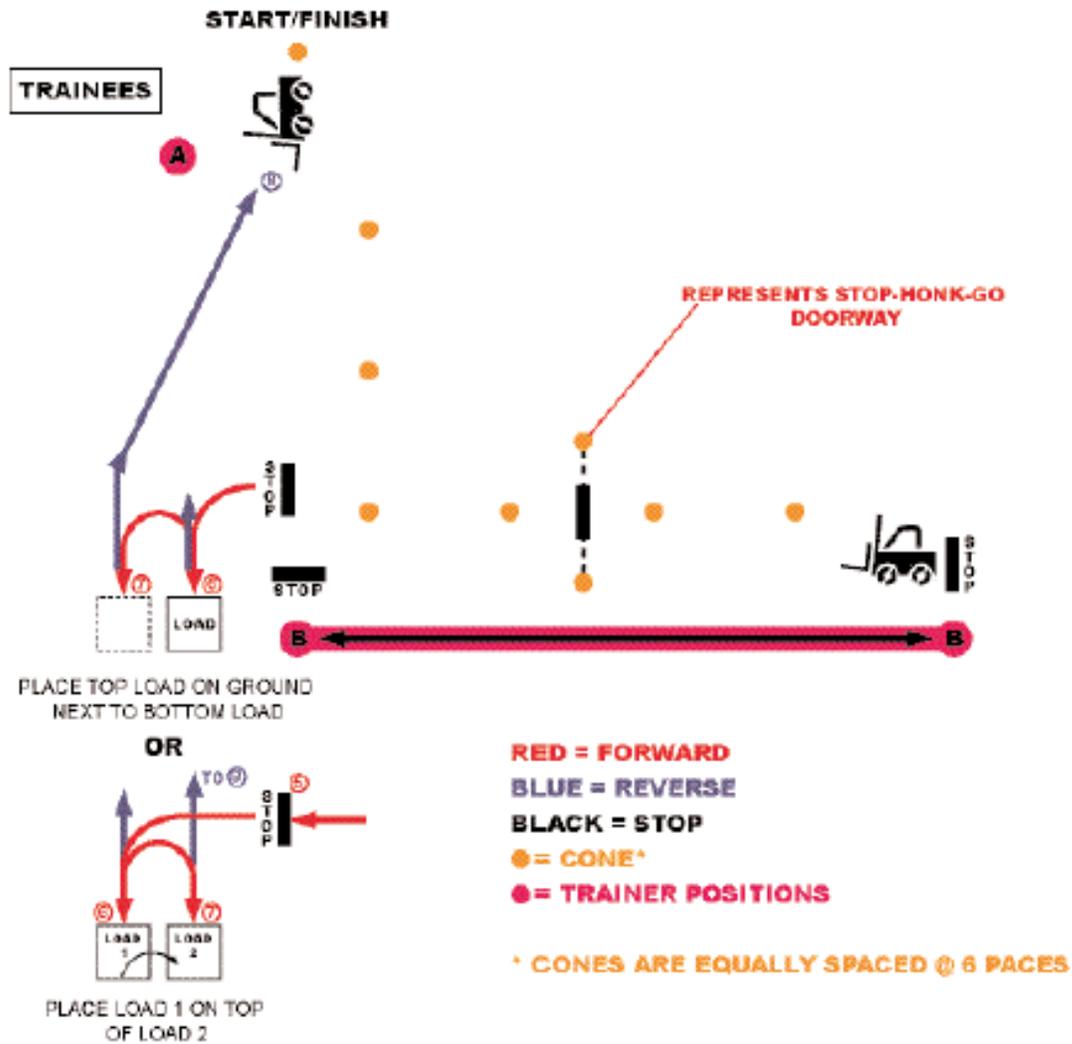


Activity 4/5 – FORWARD SLALOM

- Trainer B at Position 3/4 will provide verbal instruction and direction to continue driving portion as follows:
 - Assure horn is honked prior to proceeding.
 - Walk with driver to first cone assuring driver proceeds with the first cone on their right-hand side (as illustrated in RED).
 - B will confirm that Driver performs STOP-HONK-GO at DOORWAY.
 - Driver will continue slalom through remaining cones and continue through course to Position 5 (as illustrated in RED) following visual and auditory commands from Trainer B).

- Trainer B will walk with Driver to Position 5 and STOP Driver.
- Trainer B will confirm at STOP that emergency brake is set. (Confirm at STOP position that emergency brake is set, forks are lowered and the vehicle is neutralized and shut down for the safety of the instructor.) (You may want to discuss shutting down if stopped for long periods.)
- Trainer B will provide feedback if needed.
- Trainer B will provide instruction on handling a load:
 - Approaching load - Make sure the forklift is square to the bin or rack, and is completely stopped before you start to raise the load.
 - Fork placement in skid—The driver should check and know the size of each skid and their forks and insert the forks as far as possible without breaching the opposite side.
 - Fork depth in skid—Be sure you have your forks under at least 2 thirds (2/3) of your load for stability. While the full load is best it is not always possible. The driver should ultimately be concerned with the load balance.
 - Raising load— Slowly raise the load to a safe driving height that is as close to the ground as possible. Never let anyone walk under a raised load. Always lower the load when stopped.
 - Mast tilt pick-up and drop-off.
 - When the load has reached the correct height to clear any obstructions or other loads tilt the mast back for stability.
 - When the load has reached the correct height to clear any obstructions or other loads inch forward and tilt the mast forward to place it.
 - Lowering load—Lower the forks enough to release the pressure on the pallet and back the forklift until the forks are clear.
 - Skid size – Most use standard 48” skids. The driver should always check skid size.
 - Travel speed with load—Drive as slow as possible, 5 MPH or less is suggested.

continued



Activity 6/7—LOAD HANDLING

- Trainer B at Position 5 will provide verbal instruction and direction to continue driving portion as follows:
 - Assure horn is honked prior to proceeding
 - Driver will perform either Situation A or B
 - Situation A – Load-on-Top
 - Driver will pick up top load from Position 6 and
 - Place on ground at Position 7
 - Trainer will be checking for:
 - Approach;

- Fork placement;
- Fork depth;
- Raising load;
- Mast tilt;
- Lowering load; and
- Travel speed with load.

■ Situation B – Load-on-Ground

- Driver will pick up ground load from Position 7 and
- Place on top of load at Position 6
- Trainer will be checking for:
 - Approach;
 - Fork placement;
 - Fork depth;
 - Raising load;
 - Mast tilt;
 - Lowering load; and
 - Travel speed with load.
- Upon completion of load handling the driver will drive IN REVERSE to START/FINISH and park lift as close as possible to the cone without hitting it.

continued

Activity 8

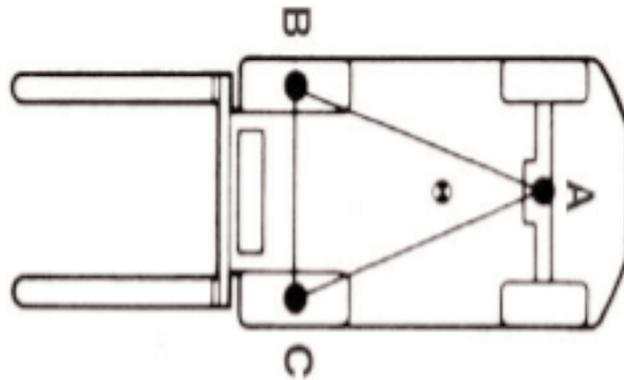
Trainer A at Position 8—START/FINISH will:

- Provide feedback regarding:
 - **Parking** (also remember 25' and no line of sight):
 - Forks down;
 - Mast tilted;
 - Transmission to neutral;
 - Set emergency brake;
 - Engine/Power off;
 - Keys out of ignition;
 - Dismount (3 point); AND
 - Be sure it does not block a fire door, fire exit, fire equipment or access to a switch box, sprinkler valve, and/or first aid or emergency equipment.
 - Once everyone has completed the driver portion the following should be discussed: (this can take place in the group classroom setting or at the driver training site)
 - **Review of Data Plate:**

Note that any attachments or mast change added after the purchase of the forklift must listed on the data plate. If your forklift data plate is missing, illegible or does not have the proper information, report it immediately.

 - Capacity rating
 - Load center - The forklift's load center and capacity are printed on the data plate. The overall capacity of a forklift is a function of load center and the weight being carried. The load center is the distance from the face of the mast to the center of your load. The standard industry pallet is 48" long. Therefore, most warehouse forklifts have a 24" load center. When the center of a capacity load exceeds a forklift's printed load center, the center of gravity moves within the stability triangle causing a tipping hazard.
 - Weight of PIT

- **Stability Triangle**—The stability of a forklift is most commonly referred to as the “Stability Triangle.” This is because a forklift is designed like a backwards tricycle. If you look under a four-wheel forklift, you will see a three-point suspension.
- **Center of Gravity** - On the Stability Triangle drawing, the dot indicates where the center of gravity is located on a forklift that is not in operation. If the center of gravity were to move outside of the triangle when carrying a load, then the forklift would tip over. The center of gravity shifts toward the base of the triangle when a load is added. It also shifts when traveling and stacking. If the center of gravity shifts to one side because of traveling on uneven ground or carrying an uneven load, the forklift could tip laterally. If the forklift makes too fast a turn, the center of gravity moves outside of the triangle, causing the forklift to tip over.
- **Shifting Load Center** - For example, a 4,500-pound capacity forklift based on a 24” load center carrying a 4,500 pound, 48” long load is within the safe operation guidelines. However, if the same forklift is carrying a 5,000 pound, 60” load it has a 30” load center. This exceeds the 24” load center of the forklift. This will cause the forklift to tip forward.



- **Trucks, Trailers and Docks**
 - **Wheel chocking** - Be sure that brakes are set and that chocks are placed against the truck, trailer or freight car wheels to prevent movements while you are loading or unloading.

It is the responsibility of the forklift operator (NOT THE TRUCK DRIVER) to make sure that the trailers they drive on are chocked.

continued

- Dock Locks
- Trailer floor and ramps - Before forklifts enter freight cars, trucks, and trailers, the flooring should be checked for breaks or weaknesses.

All dock boards and bridge plates have rated capacities. Be sure to verify the weight of the forklift and the load does not exceed the capacity of the dock board or bridge plate. All dock boards and bridge plates should be properly secured before they are driven over. Dock boards or bridge plates should be driven over carefully and slowly.

- Trailer capacity - Check the trailer capacity.
- Trailer tandems - Sliding tandems on trailers should be slid to the rear to support the tail of trailers as much as possible.

NOTES:

Mark STOP positions with masking tape if possible or chalk?

Performance Test

Employee: _____ Date: _____

Site: _____

Item Evaluated	P/F	Comments
Forklift Inspection		
Properly Mounted and Dismounted		
Put on seatbelt		
Demonstrates familiarity with controls		
Checked around forklift before moving		
Slowed down on turns		
Kept a clear view in direction of travel		
Turned corners correctly		
Sounded horn at starts		
Sounded horn at intersections		
Crossed RR Tracks Navigated Curb Entered Warehouse (where applicable)		
Travel with load at proper height		
Traveled with empty forks at proper height		
Drove backward properly		
Approached and lifted load properly		
Lifted and lowered load smoothly		
Stops smoothly and completely		
Followed proper parking procedure		
Understands use of attachment (where applicable)		
Special site specific situations or issues		
It is the recommendation of the GCC, that an additional 4-6 hours of in-plant on-the-job training specific to work processes and equipment be required prior to the employer's certification of drivers as per OSHA 1910.178(l)(3)(ii).		As the employer certifying agent, I am ensuring that each driver is found to be competent in each of the areas defined under CFR 1910.178(l).

Employee Rating Pass/Fail (Circle One)

Employer Certifying Agent (Sign): _____ Date: _____

Employer Certifying Agent (Print): _____ Position: _____

GCC/IBT Trainer (Print): _____ Date: _____

