Positive Control of Truck and Trailer Movement

Whether the tractor remains attached to the trailer or the trailer is dropped and the tractor removed, positive action must be taken to ensure the trailer cannot move during the loading or unloading process either by unintended departure or creeping.

Because of the significant potential risk at loading docks, more layers of safety protection are necessary. This is especially true when a tractor remains attached and the driver remains in the cab while the vehicle is loaded or unloaded. A procedure should be established to guarantee that truck/tractor trailer drivers do not pull away from the dock without approval from designated facility personnel.

To protect against unintended departure, **two safe methods for positive control should be applied.** One must be a primary method; the second can be either another primary or an appropriate secondary method designed as a visual communicator.

Primary Methods (illustrations of these methods are located below)

- Use of a mechanical restraint dock hook secured to the rear impact guard and used in conjunction with signal lights for both the tractor driver and unloading operator
- Use of a mechanical restraint wheel locking system
- Mechanically disconnecting the glad hand, locking out the airline to trailer brakes (additional details below) and chocking the wheels
- Tractor/truck driver key surrender which requires the keys to be removed from the tractor/truck.
    - The most reliable method is to have a lockbox for the tractor driver's keys. The facility operator places a personal lock on the lockbox before entering the trailer. When the trailer loading/unloading is complete and the facility operator has exited the trailer, the personal lock is removed from the lockbox and the tractor driver retrieves keys and exits the facility.

Secondary Method (additional communication)

- Tall stop sign placed in front of the tractor driver's side window "STOP – LOADING IN PROGRESS." This method is typically used when the tractor driver remains in the cab but can be used for any application.
- Magnetic sign placed over the driver's door handle "STOP – SEE FACILITY CONTACT BEFORE RE-ENTERING TRUCK." This method is used when the tractor driver has exited the cab and will remain out until which time as the magnetic sign is removed.
- Red flag on the driver's side mirror "DANGER – DO NOT MOVE THIS VEHICLE." This method is used when the tractor driver has exited the cab and will remain out until which time as the red flag is removed.

Other Precautions (additional safety precautions)

- Chocks are devices designed for placement under the tires of a truck/trailer to aid in preventing the truck/trailer from moving (additional instructions below). The most reliable method is to use chocks as an additional safety precaution anytime the trailer is being loaded or unloaded.
- Truck driver's safety rules and procedures should be visible and placed in the loading/unloading area. Verbiage on signs should align to the core safety requirements for readying a truck for loading/unloading.

Mechanical Trailer Restraints

A variety of devices intended to physically couple a trailer to a dock are available. These restraints typically are mounted on the face of the dock and secure the trailer by means of a hook or arm that grabs the trailer's ICC bar. The primary risk involved with mechanical constraints is failure to properly secure the trailer. This can occur due to a variety of reasons, such as improper restraint installation, damaged equipment, damaged or missing trailer ICC bars, or the trucks ICC bar does not properly align with the locking mechanism (delivery vans, straight trucks). Therefore, visual inspection of the hook or locking mechanism is required each time the restraint is engaged (prior to loading/unloading). Do not merely rely on the lock system warning lights!

In addition to the physical locking mechanism, each mechanical restraint system will be provided with a warning light system that includes a red and a green light on the inside of the dock as well as on the outside (truck side). When engaged, the light inside the facility should show green indicating entry into the trailer is allowed. The light outside the facility will show red indicating to the driver that the truck/trailer must not be moved. When the inside light is red the trailer must not be entered. It is also recommended that signs reading forward and in reverse (mirror image) be placed outside the dock area to alert truck drivers to the light system.

Disconnecting the glad hand and locking out the coupling

Instead of a mechanical trailer restraint, requesting the truck driver to disconnect the glad hand and having the forklift driver lock it out will provide an additional margin of safety (a glad hand is an air hose coupling that can be disconnected to interrupt air transfer). In this process, the truck driver would be responsible for disconnecting and ultimately reconnecting the outside (driver's side) glad hand air brake connection. The forklift driver would be responsible for locking the glad hand out and then retaining the key in his/her direct possession until the trailer was once again ready to be moved.

Straight Trucks

Generally, mechanical trailer restraints cannot be utilized with straight trucks. The truck driver can surrender his/her keys to the forklift driver during loading/unloading activity as a primary control. The secondary control methods discussed earlier must also be used for improved visibility/communication.

Trailers with Air Suspension Systems

A significant number of trailers on the road today are equipped with air suspension systems. A problem can exist when such a trailer is spotted at a loading dock, the tractor is disconnected and wheels chocked (without the presence of a mechanical trailer restraint). If air is allowed to remain in the suspension system, the resulting flexibility can allow the trailer to "walk" away from the dock, especially as the suspension is loaded and unloaded by the weight of a forklift entering and leaving. This "walking" can create a gap between the dock and the trailer, even though the trailer wheels are chocked. The resulting gap can be sufficiently large as to allow a dock board to fall or trap the wheels of the forklift.

Identification of air suspension trailers is relatively easy. Normal suspension consists of large leaf-type metal springs mounted between the rear axles and the trailer body while air suspension will have large rubber bladders (bags) in place of the springs.

If the trailer is to be chocked only (not restrained by a mechanical trailer restraint) several options are available to help minimize the possibility of the trailer "walking".

1. Ensure that trailer with air suspension systems are relocated to docks that have available mechanical trailer restraint systems.
2. Request that the tractor remain attached to the trailer to add additional weight (resistance to movement) and then follow the additional safety precautions discussed in the “Trailers – Tractor Attached” section above. If the facility has a tractor (switch tractor) used for relocating trailers, this unit could be utilized if the original over-the-road tractor must be disconnected.
3. Determine if the suspension system is equipped with manual or automatic "dump" valves. Ensure the dump valves are in working condition, that they are open and that the suspension has settled to its lowest point. These valves are designed to exhaust the air from the suspension when it is parked, allowing the trailer to settle firmly on the axle which helps eliminate the "walking" hazard. Manual dump valves will generally be found on the outside bottom edge of the trailer body, near the center, or over the rear wheel carriage; automatic dump valves will normally be located on or near the rear doors and should activate when the doors are opened. After finding manual dump valve (if closed), request truck driver to release air.

Chocks

Chocks are devices designed for placement under the tires of a truck/trailer to aid in preventing the truck/trailer from moving (walking or inching forward). It is a reliable method to use any time we are entering a trailer. However, they should be used in addition to and are <u>not</u> designed to meet either a primary or secondary control method described within.

- Only commercially manufactured chocks may be utilized (the use of boards, stones, bricks, etc. is prohibited).
- Chocks must have a minimum width of 7".
- Generally, asphalt surfaces should have steel, aluminum or magnesium chocks with gripping cleats on the bottom while hard rubber chocks may be more appropriate for concrete. The particular surface and weather conditions at the location will determine the proper type of chock. Wood chocks must not be used.
- Chocks should be placed in front of the rear wheels (between dual wheels). It is recommended that chocks be placed on both sides of the trailer.
- Regardless of who is responsible for placing the chocks (the truck driver or facility personnel) any employee that will be entering the truck/trailer bed has the ultimate responsibility for visually inspecting for the presence of chocks prior to entry.
- Chocks utilized as part of the unloading SOP at a dock should be secured (such as with a long chain) to ensure they will be available when needed.
- Chocks should be inspected on a regular basis and if the chock is deformed or otherwise visually damaged to the point that is suspect for providing adequate protection, the chock must be removed from service, discarded and a new chock installed.
- Chocks should be utilized regardless of the slope of the apron.

Trailer + Tractor remains attached requires 2 safe methods for positive control.

PRIMARY OPTION 1

PRIMARY OPTION 2

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PRIMARY OPTION 3

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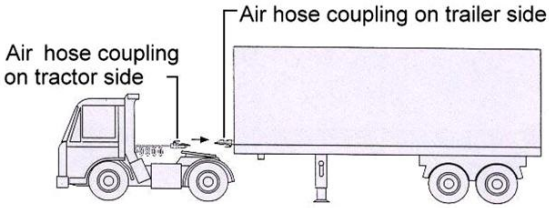
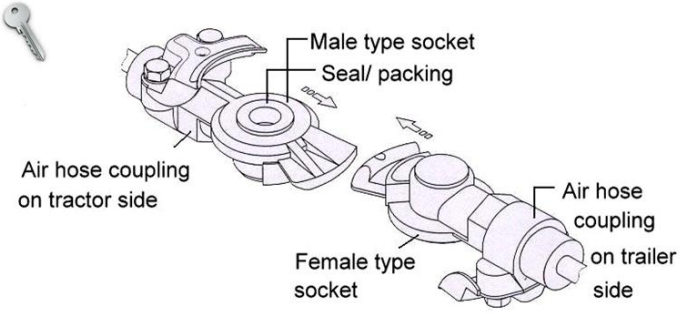
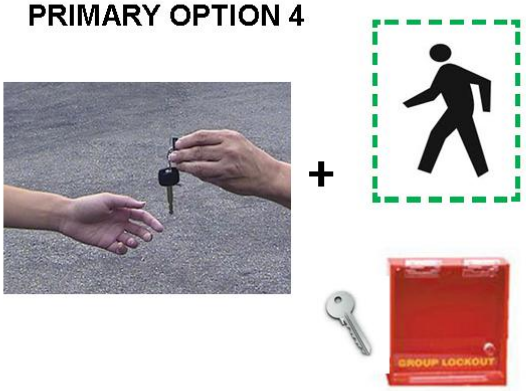




PRIMARY OPTION 4



Key Surrender:

- The most reliable method is to have a lockbox for the tractor driver's keys. The facility operator places a personal lock on the lockbox before entering the trailer. When the trailer loading/unloading is complete and the facility operator has exited the trailer, the personal lock is removed from the lockbox and the tractor driver retrieves keys and exits the facility.

SECONDARY OPTIONS