PETROLEUM LOADING AND UNLOADING PROCEDURES

Top Loading

The loading and unloading of petroleum is a complex and potentially dangerous operation. Following basic safety practices can help to reduce the risk of an incident. The guidelines below are not exhaustive, and a loader’s actions should always be informed by current safe practice and all of the conditions of present in the loading area.
Petroleum Loading and Unloading Procedures
Top Loading

A. Before Loading Transport Vehicle
1. Walk Around Inspections: A driver must conduct a walk around inspection. You must visually check for any unusual odors, noise, or physically defective equipment, such as broken springs, over heated tires, misalignment of axles, leaks, smoke, etc.

2. Before loading each load, verify that every compartment is empty. This is crucial when loading K-1 Kerosene. Do not load K-1 into a compartment that previously contained gasoline. Load K-1 only after a distillate. Draining the compartment of all residual products before loading K-1 is mandatory safe practice.

B. Top Loading Procedures
1. Position the tank truck at the proper loading spot. Set brakes and leave in low gear. Shut off the truck motor. Tank truck should be positioned so that the drop tube, when extended into the dome opening, is as near vertical as possible. The bottom of drop tube must touch the bottom of the compartment being filled.

2. Connect grounding interlock before opening any dome cover. Make sure compartment safety valves are closed.

3. Insert bill of lading ticket in meter printer. This is optional if product is measured by gauge, compartment marker, or weight.

4. Open only the dome cover for the compartment being loaded. Keep all other dome covers closed.

5. Prior to loading always touch the end of the loading spout to the top of the tank at a point at least three feet away from the open hatch, in order to ground any possible static charge.

6. Insert downspout, extending it near the bottom of the compartment. Physical contact must be maintained between the loading arm and the compartment being filled.

7. Set meter stop for quantity desired. (Optional, depending on equipment at rack). Be sure you do not exceed compartment capacity. Adequate outage (vacant space) must be provided to allow for thermal expansion of the liquid.

8. Start flow of product by opening the loading valve. To avoid overfilling stay with valves as long as product is flowing.

9. Load only one compartment at a time. Loading valves will not be tied down or wedged in open position.

10. Close loading valve. Allow one minute before removing drop tube from compartment, making sure to drain the tube into the compartment. Close and latch dome cover.
11. Repeat the proper steps for filling each compartment. To properly reach all compartments it may be necessary to reposition the truck. All dome covers must be closed during repositioning of truck and attention should be given to bonding cable, making sure it will reach the new position without being damaged.

12. When loading all compartments is completed, swing downspout into proper idle position. Seal dome covers and valves as required.


14. When loading kerosene, turbine fuel, jet fuel, diesel fuel, or heating oil, in addition to the steps mentioned above, the following procedure should be followed:

   a. Upon opening the loading valve to start loading the compartment with any of the above products, the valve should be opened slowly and regulated to 120 gallons per minute maximum rate until the product covers the bottom 6 inches of the drop tube. When the bottom 6” of drop tube is covered by the product, the loading valve can be opened to full flow. To avoid overfilling, stay with the valve as long as product is flowing.

   b. Some terminals are equipped with automatic slow starting rates.

   c. This initial slow loading is necessary since electricity is generated by oil flowing through piping and equipment, by splashing or spraying of oils, and by turbulence in the truck during loading. The hazard from static build up is controlled by slow initial loading and positioning the drop tube so that it rests on the bottom of the truck. Switch loads are particularly hazardous and safety rules must always be closely observed when loading diesel fuel or heating oils into compartments previously containing gasoline.

15. Give unit a visual check (domes closed, grounding interlock disconnected, etc.) Then promptly move the tank truck from loading spot when other units are waiting to load.

16. Complete bill of lading and distribute all copies as directed.

17. Report any malfunction to your supervisor.

18. In the event a problem develops or an error occurs in completing a delivery advise your supervisor.