

SOLVENT TANK CAR LOADING PROCEDURE

1988

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1. Secure rack by closing derails and setting up blue flags. Chock cars and set handbrakes.
2. Check cars for the following:
 - a. Four placard holders
 - b. Proper stenciling, i.e., gallon capacity, DOT NO., tare weight, weight capacity.
 - c. Test dates and test location for tank and safety relief valve must be on car. Tank test and safety relief valve interval is 10 years. Year tested and year due should be stenciled on car. Initial tank test is due 12-31-XXXX (20 years from year built). Initial SRV test is due in 10 years. (See AAR Rule 88)

EXAMPLE: SRV TESTED - 1988 DUE - 1998 PPG L.C. LA
TANK TESTED - 1988 DUE - 1998

3. Check the interior of the tank car using the high intensity light source. Report any lining failures or abnormal conditions to Foreman before proceeding.

Any trash, moisture, or chemicals which would contaminate or react with solvents must be removed from tank car before it is loaded.

4. Check the piping and valves on the tank car.

The tank car must have, for each compartment, a primary valve. A secondary outlet valve in the discharge piping is preferred if certain rail clearances are met (see #5 b.) Each discharge outlet must be capped or plugged for shipment. Plug must be attached to the valve on the car by a chain. If the chain is missing, attach a new one.

- a. The primary valve is referred to as the internal valve or main bottom outlet valve and is located at the compartment discharge opening.
 - b. The secondary valve is at the end of the discharge piping for each compartment.
5. Check the discharge valves for operation. Loading must be done with secondary valve in open position.

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a. Primary outlet valve must operate and must not leak through more than a dropping.

b. Before car is loaded, use the metal gauge provided to check height of the secondary valve to see that proper clearance is maintained from top of rail.

If bottom of plug of secondary valve is lower than the required 12" from the top of rail, you must shorten the valve assembly to comply with regulations.

c. If height requirements cannot be met, remove the secondary valve assembly and ship with the primary valve capped or plugged.

6. Check eduction valve, gas valve, dome gasket, dome lid bolts, and safety relief valve.

Change out or repair any defective valve and equipment found in this inspection.

Some cars are equipped with rupture discs. Check and replace if necessary. Rupture disc pressure rating must be equal to but not exceed tank test pressure of car. Car must be stenciled "NOT FOR FLAMMABLE LIQUIDS".

7. Refer to PPG order copy or Foreman's instruction form. Determine product to be loaded, quantity, and special instructions.

Check SKU number on the PPG order copy to determine the proper material to be loaded.

8. Check the levels in the shipping storage tanks each morning. If the levels are not adequate, call Operations to have the tanks filled.

a. If product must come from operations unit, call the operator in unit and request transfer of product needed.

b. If product is available in shipping tank, open appropriate shipping tank, open appropriate valves to loading pump, line up to rack and start pump.

Always have recirculation valve to tank open slightly to protect pump seal when discharge valve is closed on rack.

- c. Check pumps for seal leaks, excessive vibration, noise, or low oil levels. Oil should be added by the Tankerman and all other problems reported to Foreman.
- 9. Eduction piping or loading pipe must be used to load car to meet proper submerged filling requirements.
 - a. If car has eduction piping, connect loading hose to eduction valve in order to load car through eduction piping.
 - b. If car has no eduction piping, connect a stainless steel loading pipe to hose and position in car through opened hatch.
- 10. Flush several gallons of product through discharge piping of car to remove hidden trash or moisture that may be present.

Spills must be avoided. Flush must be directed to flush collection system.

- 11. Make final preparation for loading as follows:
 - a. Check hose connections to make sure they are secure and there are no leaks.

If leaks occur, discontinue loading, clear the hoses, and replace any gaskets or make necessary repairs to prevent leaks.
 - b. Check product line-up.
 - c. Check outage gauge setting.
 - d. Make sure ^{Dome Lid}~~hatch cover~~ is open.
 - e. Close primary discharge valve of car.
 - f. Open secondary discharge valve of car.

Leave secondary discharge valve open during loading in order to check primary valve for leakage. If the primary valve begins to leak after the car is partially loaded, discontinue loading and notify the Leadman or Foreman.

- 12. Open loading valve on rack slowly. Look for leaks at those connections. Correct any leaks found. Load car.

a. Use caution when gauging car. Slight loading over proper outage may result in car being too heavy to ship.

b. Goggles should be worn in case leaks occur.

13. For Ethylene Dichloride Shipments Only:

Connect grounding leads to tank car prior to loading product. Connect one lead from rack to car and one lead from the loading line upstream of the discharge valve to the loading pipe. Check the grounding on both ends with a continuity meter. Car must have an SRV - rupture disc are not allowed for "Flammables".

Grounding must be performed in order to reduce static electricity buildup while loading flammable products.

14. Monitor level of product in car, hose connections, and discharge piping of car frequently during loading.

This is required so that car will not be overfilled and any leaks or problems can be corrected abruptly. If leakage from discharge piping on car is noticed, stop loading car and notify Foreman.

15. After loading is complete, clear loading hose(s) into car using nitrogen or gravity drain.

16. Disconnect loading hose(s) from car and product line.

a. When loading from Shipping tanks, shutdown loading pump and secure the tank.

b. When loading from Operations unit, notify Operator the transfer is complete.

Wear goggles when disconnecting hoses.

17. Sample product in glass container. Properly identify sample and deliver to Main Lab for analysis.

a. Every shipment of solvents and ethylene dichloride must be sampled. Sample must be analyzed and cleared by Main Lab before shipment can be made.

b. Use quart clear glass bottle for solvents and quart amber stained bottle for ethylene dichloride.

18. Complete a leak test by pressurizing the car with nitrogen to 20 lbs. If any leaks are found they must be corrected.

a. Relieve the pressure from the car.

b. Insert and tighten the air and eduction valve plugs.

19. Attach product identification tag and seals to ~~hatch~~ ^{Dome Lid,} cover and discharge line of every loaded compartment of car.

It is a PPG policy that this identification be done before shipment is made. Use new tags for each shipment.

20. Placard car if necessary with four placards.

Product Placard Numbers:

Trichloroethylene - UN 1710
Ethylene Dichloride - UN 1184
Trichloroethane - UN 2831
Methylene Chloride - UN 1593
Perchloroethylene - Not Required

21. Complete paperwork in office by completing Shipping Department Record forms for loading and car inspection.
22. Disconnect grounding leads if used, remove chocks from tank car wheels and remove blue flags. Leave derails closed.

KEY POINTS

Hands on training will be provided by experienced personnel.