

STANDARD OPERATING PROCEDURE FOR SOLVENT TANK CAR LOADING

Steps

1. Secure rack by closing derrails and setting up blue flags. Chock cars.

2. Check cars

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.

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

5. Check the discharge valves for operation. Loading must be done with secondary valve in open position. Check height of secondary valve from top of rail.

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

Keypoints

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 for safety relief valve and tank - tank test interval and safety relief valve interval is 10 years. Dates tested and date due should be stenciled on car.

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

The tank car must have, for each compartment, a primary and secondary outlet valve in the discharge piping, and a cap or plug for each discharge outlet. The primary valve is referred to as the internal valve, or main bottom outlet valve, and is located at the compartment discharge opening.

The secondary valve is at the end of the discharge piping for each compartment.

Primary outlet valve must operate by does not have to be leak tight.

Secondary valve must operate and must not leak through.

Before car is loaded, check secondary valve to see that proper clearance is maintained from top of rail. To do this, use metal guage provided. If bottom of plug is lower than the required 12" from top of rail, you must shorten valve assembly to comply with regulations.

Change out or repair any defective valve.

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

Some cars are equipped with rupture discs. Check and replace if necessary.

Steps

Keypoints

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7. Refer to order copy or foreman's instruction form. Determine product to be loaded, quantity, and any special instructions.
 8. If product is available in shipping tank, open appropriate valves to loading pump, line up to rack, and start pump.

If product must come from operating unit, call the operator in unit and request transfer of product needed.
 9. If car had eduction piping, connect loading hose to eduction valve in order to load car through eduction piping.

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.
 11. Make final preparation for loading as follows:
 - 1) Check hose connections to make sure they are secure.
 - 2) Check product line-up.
 - 3) Check outage gauge setting.
 - 4) Make sure hatch cover is open.
 - 5) Close primary discharge valve of car.
 - 6) Open secondary discharge valve of car.
- Always have recirculation valve to tank open slightly to protect pump seal when discharge valve is closed on rack.
- Eduction piping, or loading pipe, must be used to load car to meet proper submerged filling requirements.
- Spills must be avoided. Flush must be directed to flush collection system.
- Leave open during loading in order to check primary valve for leakage.

Steps

Keypoints

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

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

Goggles should be worn in case leaks occur.

13. For Ethylene Dichloride Shipments Only

Connect one lead from rack to car, and one lead from the loading line to the car.

Connect grounding leads to tank car prior to loading product.

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. Shut down loading pump at shipping tank or report to operations, loading is complete.

Wear goggles when disconnecting hoses.

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

Every shipment of solvents and Ethylene Dichloride must be sampled. Sample must be analyzed and cleared by Main Laboratory before shipment can be made.

Use one-half gallon clear glass bottle for solvents, and one gallon amber stained bottle for Ethylene Dichloride.

18. Attached product identification tag to hatch cover and discharge line of every loaded compartment of car.

It is PPG policy that this identification be done before shipment is made.

19. Placard car, if necessary, with four placards.

Trichloroethylene - UN-1710

Ethylene Dichloride - UN-1184

20. Complete paperwork in office by completing shipping department record forms for loading and car inspection.

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Steps

21. Disconnect grounding leads, if used, remove chocks, open derail, and remove blue flags.

Keypoints

Car is ready to ship.