



VT-0004

004

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BBK

Purging LNG Vehicle Tanks

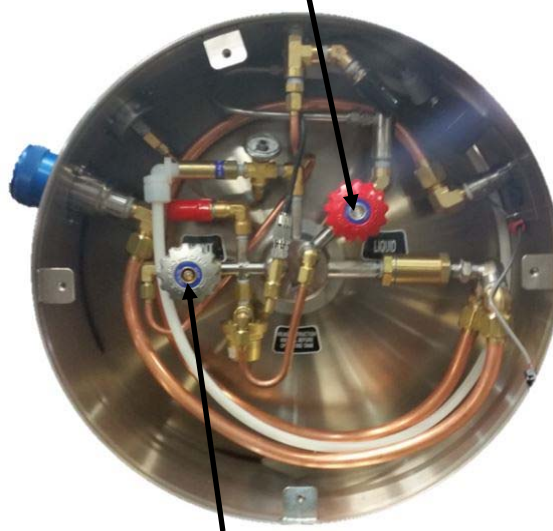
Safety Warning

Eye and hearing protection will be necessary when performing this procedure. Before performing the procedure make sure the truck is parked in a well-ventilated area (outside the shop) and at least 50ft/15m away from any ignition sources (power lines, electrical outlets, cords, cell phones, forklifts, other traffic etc.) Refer to Safety procedures VT-0001 for further details.

Procedure

Ensure the red (Liquid or use) and gray (vent) hand valves are closed (Clockwise) on the tank. If the truck has a dual tank system both tanks service valves will need to be closed.


Red (liquid/fuel supply) shut off valve



Gray (vent) shut off valve

Start the engine and let it run until it shuts down, this will evacuate the majority of remaining fuel from the supply piping between the tank and engine. Locate the bulkhead connectors located on the vehicle tanks shroud. Slowly loosen the fuel supply (Labeled as liquid) pipe or hose at the bulkhead connector, and allow any residual pressure in the hose or tubing to

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escape. After the hose or piping has evacuated to 0 psi/bars remove the pipe or hose from the bulkhead fitting.


If the tank has any pressure in it or is suspected of still having liquid in it, the proper de-fueling procedure must be followed prior to attempting to purge the tank. De-fueling can normally be accomplished by running the truck out of fuel, or manually defueling the remaining liquid. Refer to Chart bulletin VT-0017 for defueling procedures.

Before beginning the next step assure the tank is at 0 psi/bars and has been properly de-fueled. Plumb (via flexible hose) the flared end of the female vent receptacle (Chart PN 10538867 shown left side of photo below) to a regulated nitrogen (gas) source.



Set the nitrogen tanks supply regulator to 100 PSI/7 bars. Connect the female vent nozzle to the male vent receptacle (right side of photo above) on the tank. Open the control valve on the nitrogen source. Re-check the regulators pressure gauge to ensure the regulator is set at 100 PSI/7 bars.

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Slowly open the gray vent valve on the vehicle tank. Nitrogen gas should start to flow into the vehicle tank. Pressurize the vehicle tank to 50 PSI/3.5 bars, then close the gray vent valve (Use the pressure gauge on vehicle tank plumbing or shroud). Let the nitrogen sit in the tank for 5 minutes and recheck the vehicle tanks pressure gauge, if pressure has decreased open the gray vent valve and continue to pressurize the tank to 50 PSI/3.5 bars, then close the gray vent valve and let sit for another 5 minutes. After 5 minutes slowly open the liquid hand valve (red) on the vehicle tank and allow the nitrogen to escape from the tank. Bleed the tank pressure to 0 psi/bars and close red hand valve.

Open the gray vent valve to re-pressurize the vehicle tank to 50 PSI/3.5 bars. Once 50 PSI/3.5 bars close the gray vent valve and allow the tank to sit for 5 minutes. Recheck the vehicle tank pressure and add more nitrogen if the pressure has fallen below 50 PSI/3.5 bars. Allow the nitrogen to sit in the tank for 15 minutes. After 15 minutes open the red shut off valve on the vehicle tank and allow the tank pressure to reduce to 0 PSI/bars, and then close tank red shut off valve. The tank is now safe to work on as long as pressure in the tank is at 0 psi/bars.

If the tank will be shipped or removed from service

Re-pressurize the tank, but this time to only 30 PSI/2 bars and close vent (silver) shut off valve. Turn off the nitrogen supply control valve. Remove the vent connector. Leave 30 PSI/2 bars of nitrogen in the tank.

If returning the tank to service

If the tank is going right back into service open the red liquid valve to vent the nitrogen in the tank to 0 PSI/bars. Then fill it with LNG using the “hot tank” procedure. Reference the Chart LNG vehicle tank operations manual page 15 for the appropriate hot fill procedures.

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