



CNG Field Service Bulletin

OMB ESA Valve Defuel Procedure

ENP-661

February 23, 2018

1. Introduction

This service bulletin is specific to defueling systems equipped with the OMB ESA 24V solenoid valve **not** equipped with an excess flow device and is a supplement to the safe venting (defueling) guidelines in the Agility Fuel Solutions publication ENP-391, "Safely Working on CNG Fuel Systems."

The ESA valve includes a feature that acts as an excess flow valve. When defueling, the solenoid valve coil must be continuously energized (24V applied, opening the valve) during the defueling process.

Always remember, anyone operating or servicing any CNG system must be properly trained. Operating and service personnel are responsible for ensuring the fuel cylinder is handled in a safe and responsible manner at all times.

Personnel must check and comply with all local, state and city fire codes before starting the defueling process.

2. Tools and Materials Needed

- Common CNG fuel system hand tools for repair and maintenance.
- Source of 24V DC at approx. 2 amps minimum to energize the solenoid coil continuously during the defueling process.

Warning Messages Used in this Bulletin



Personal injury or death **will** occur if procedures are not followed.



Damage to equipment, fuel system or vehicle is possible if instructions are not followed.

3. Procedure



- A. Sources of ignition (e.g., fire, hot exhaust system components, arcing of electrical switches, static electricity) may result in fire or explosion of the natural gas and may result in serious injury.
- B. The residual gas in the cylinder after initial venting expands as the cylinder warms to its surrounding temperature. This will cause a buildup of

pressure if the cylinder is not allowed to vent throughout the process.
Allow 4 hours after venting before re-pressurizing the cylinder.

C. If re-pressurizing cylinders in cold environments, see ENP-649, Section 3.

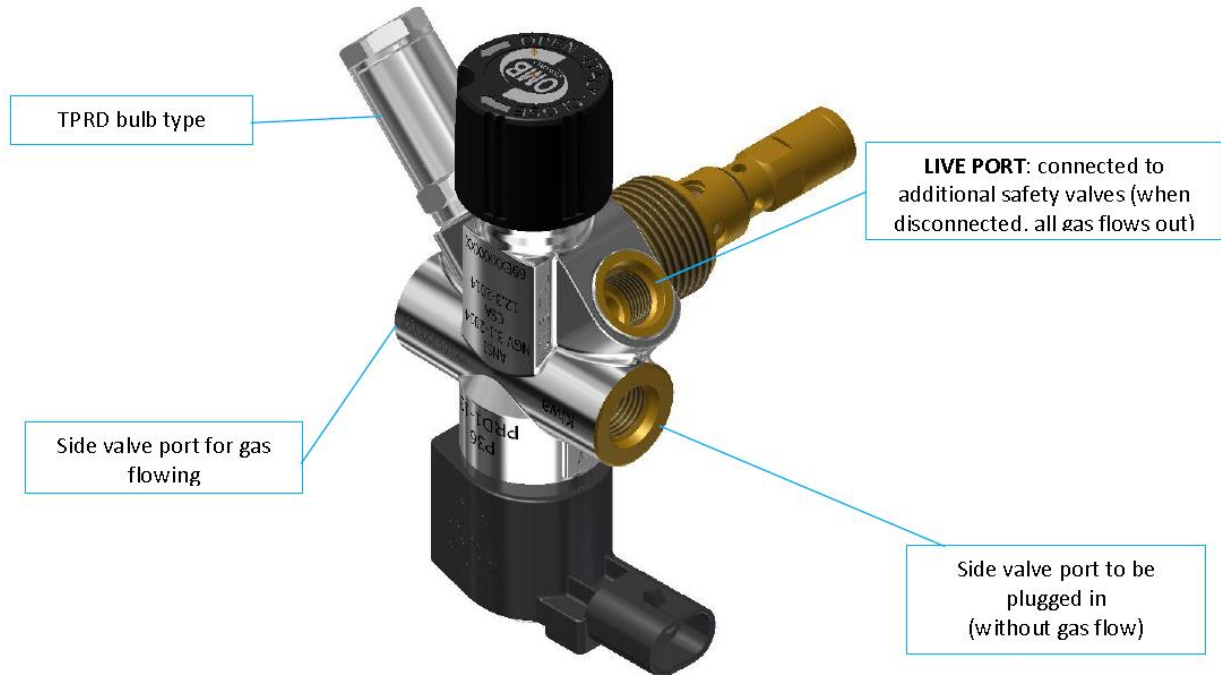


Figure 1. OMB ESA valve.

1. Before defueling any CNG system, it is always good practice to minimize pressure by driving the vehicle to near-empty, rather than venting to atmosphere. Defueling back into a fuel station is a good alternative, if the station is equipped to do so.
2. Chock the vehicle wheels to prevent movement.
3. Ground the vehicle to prevent static discharge and sparks.
4. The defueling hose must be rated and approved for high pressure natural gas.
5. Close the manual valve (turn the handle clockwise).
6. Ensure the power source is set at a constant 24V.
7. Apply power to the solenoid to activate (open) it.
8. If the cylinder is above 500 psi (above 3447 kPa), open the manual valve slightly. If flow stops, repeat steps 5 and 6.
9. Once the cylinder is at 500 psi or lower, the manual valve can be opened fully.

4. Other Useful Information When Defueling

- “Venting (Defueling) and Re-Filling Agility Fuel Solutions Cylinders, ENP-649

- Safely Working on CNG Fuel Systems, ENP-391
- Pony Tank Operation Manual, ENP-005
- Type 2 Pony Tank Operation Manual, ENP-249
- Truck and Tractor CNG Fuel System Operation Manual, ENP-516
- Service Facility Fuel Handling Equipment, ENP-380

5. Warranty Information

Does not apply.

If you have any questions, contact Customer Care at +1 949 267 7745 or toll free at +1 855 500 2445 or e-mail: support@agilityfs.com

Parts can be ordered via e-mail: parts@agilityfs.com

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