



Field Service Bulletin
New Pressure Relief Device (PRD)
Vent Tube Caps - Red

ENP-501
Rev. D: March 29, 2017

1. Introduction

Pressure relief device (PRD) vent lines must be capped to prevent moisture and debris from entering and causing damage to the PRD body. Agility Fuel Solutions installs UV-protected plastic caps over the ends of all PRD vent lines.

The PRD vent tube caps feature heat-activated adhesive which prevents loss from tree branch strikes, pressure washing, etc. The caps are red to help increase visibility for inspection.



- A. It is important to know and understand that simply replacing PRD vent caps is not enough to protect the CNG fuel system.
- B. A missing cap could be an indication of a leaking PRD.
- C. A missing cap allows moisture and debris to enter the PRD vent system, and may cause damage to the PRD body.
- D. When a cap is missing, the PRD vent line and PRD must be inspected for corrosion or water or debris.

This is not a recall or a service campaign.

2. Affected Units

All CNG vehicle fuel systems. Replace missing or worn PRD vent caps after visually inspecting the PRD vent lines and PRD bodies.



Figure 1 Various PRD vent caps. These can be left in place. There is no need to replace them unless they are missing or damaged.

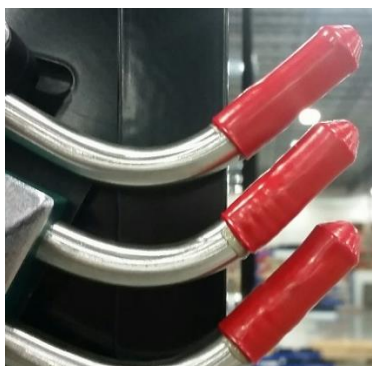


Figure 2 New red heat shrink PRD vent caps increase visibility. Remember: If a PRD vent cap is missing or damaged, you must inspect the PRD and vent lines – DO NOT simply replace the cap.

3. Corrective Action

1. If a PRD vent tube cap is missing, inspect and remove any water or other contaminants from the PRD vent tube.
2. Check the PRD body for rust or corrosion. If the PRD body shows signs of rust or corrosion, the PRD must be replaced.
3. After inspecting and cleaning, replace the PRD vent tube cap.

4. Tools, Parts and Materials

1. Common hand tools
2. Heat Gun with applicable reducing nozzle
 - a. Ungar 1095 Dual Temperature Heat Gun
 - b. Milwaukee Dual Temperature Heat Gun 8975-6 with Air Reduction Nozzle 46-80-0297 or Hook Nozzle 49-80-0292
3. Tube de-burring tool, if needed

NOTE: The “PRD Vent Line Water Removal Field Kit” is needed only if PRD vent lines are solid tubes (no weep holes).

QTY	DESCRIPTION	AGILITY PART NUMBER
1	Field kit, PRD vent line water removal, Figure 3.	24101125
As needed	PRD vent cap, red, for 3/8-inch and 1/2-inch lines	10712383

Note: The new PRD vent caps replace the old, non-heat shrinkable caps 10702028 (1/2-in.) and 1072030 (3/8-in.)



Figure 3 The field kit includes a syringe with a long tube. The actual item may vary from the pictures in this bulletin.

4. Procedure – PRD Vent Line Inspection and Remediation

⚠ DANGER

Be aware of the live, high pressure lines. Although PRD vent lines carry zero pressure, the fuel lines contain full cylinder pressure and cannot be isolated. Verify PRD vent lines by tracing them from the exit at the top of the system to the opposite end before starting work.

1. Look for water at the lowest point of the PRD vent line run.
2. A small amount of moisture is acceptable, the goal is to remove standing water which can cause damage to the PRD body at or below freezing temperatures.
 - a. **In most fuel systems, the PRD vent tube includes a weep hole** to drain moisture out of the vent tube.
 - i. Check for debris or blockage and clean out the weep hole
 - b. **If the PRD vent system caps are missing or standing water inside the vent tubes are suspected, perform the following:**
 - i. Figures 4 and 5 is a representation of the water removal process. If your system differs from the pictures or if you are unsure of the vent line plumbing, contact Agility Customer Care for assistance.
 - ii. Park the vehicle on an incline (vehicle ramp or driveway) with the valve end at the lowest point so water can migrate to an accessible place.
 - iii. Disconnect the PRD vent lines going to the tee fittings and the short vent tube exit.
 - iv. Insert a length of plastic tube into the PRD vent line where the tee used to be, and push it into the vent line so it reaches the bottom of the run.
 - v. Using the syringe for suction, withdraw the water from the lowest point in the PRD vent tube run.

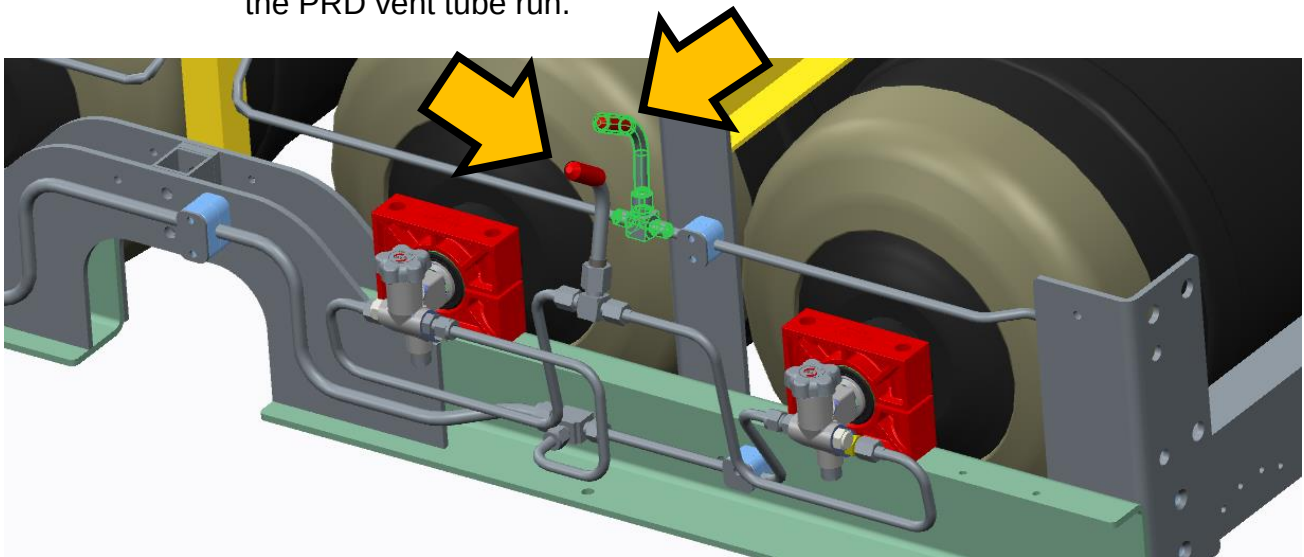


Figure 4 Closed PRD vent tubes are used in some roof mounted systems. PRD vent tube exits are usually located at the valve end of the system as shown.

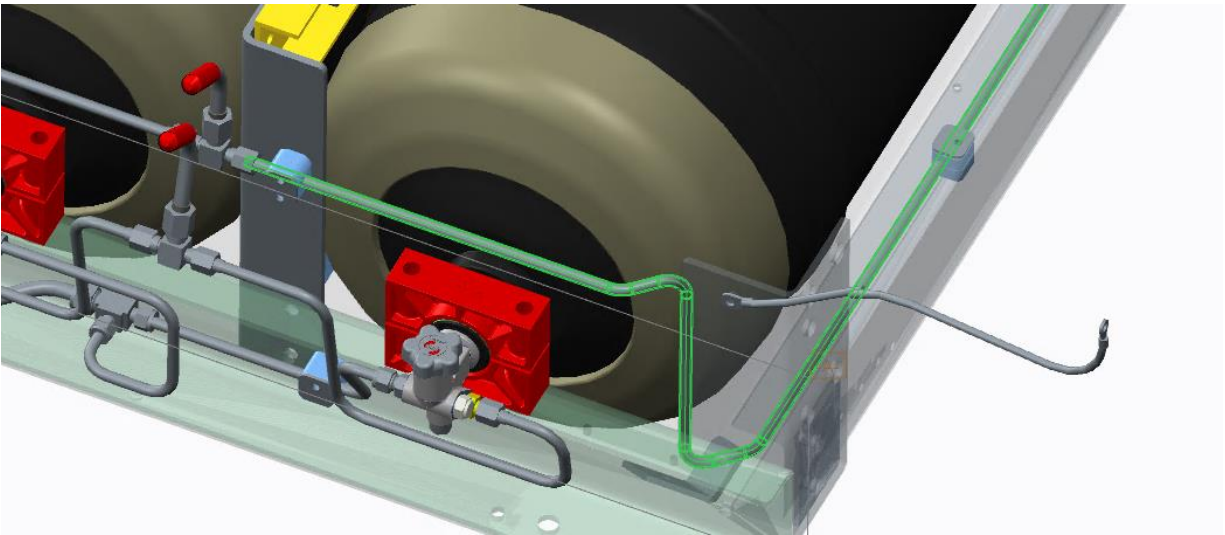


Figure 5 Safely park the vehicle at an incline so water in the PRD vent tube going to the plug end of the cylinders migrates toward the valve end.

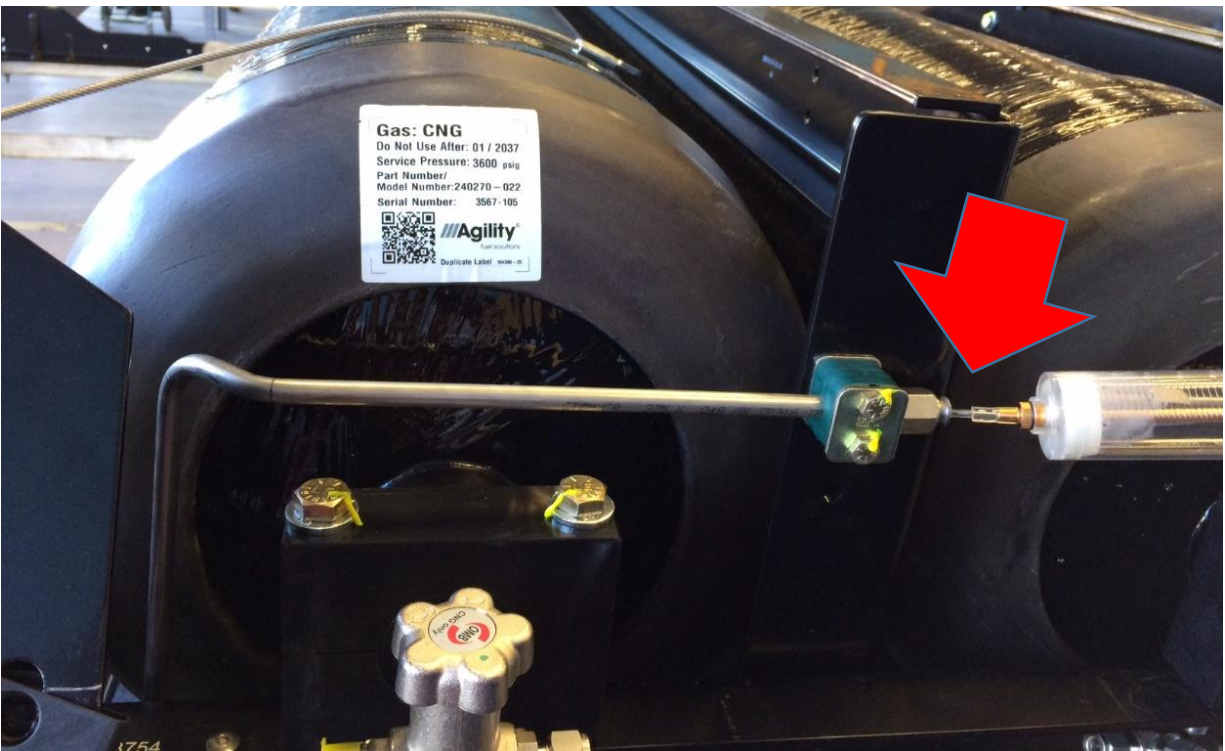


Figure 6 After removing the PRD vent tube tee fitting, insert the tube/syringe into the PRD vent tube as shown. The plastic tube must be pushed into the lowest point of the vent tube run.

3. Repeat steps in Section 2 b. for all PRD vent tubes.



Figure 7 Draw the water out, using suction from the syringe.

6. Procedure – PRD vent Cap Replacement

- a. The PRD vent tubes should be clean, smooth and burr-free. If not, clean and/or deburr the tubing ends.
- b. Insert the cap over the tube end as shown in Figures 2 and 8.

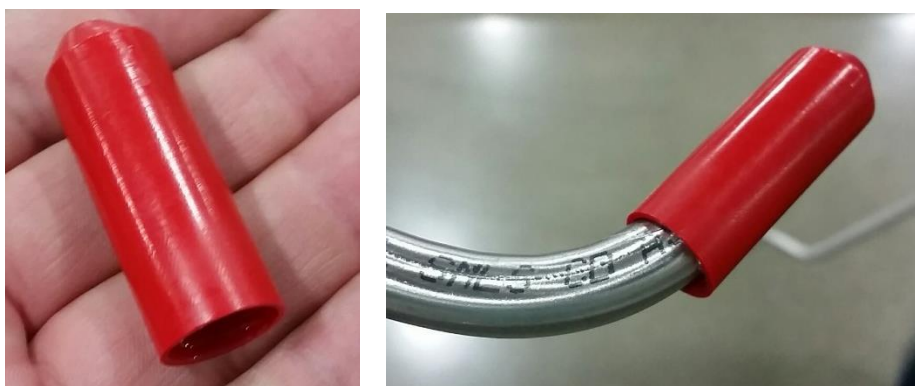


Figure 8 Vent cap installed prior to heating.

- c. Set the heat gun temperature to “Low.” There is no need to calibrate the temperature of the heat gun output.
- d. The best results are obtained when using a heat gun equipped with a reducer nozzle. A “hook” accessory is also acceptable, as shown in Figure 9.
- e. Make sure the heat gun is always moving as you heat the cap to prevent scorching and burning the cap or the fuel system cabinet.



Figure 9 Installation using an accessory “hook” nozzle.

- f. Heat until adhesive starts to flow from the edge of the cap. The required temperature at the surface of the cap is min. 275°F (135°C) to shrink the cap and activate the adhesive. Figure 10 shows the new PRD vent caps correctly installed.



Figure 10 Correctly installed vent caps.

6. Warranty Information

Replace caps as needed. There is no need to retro-fit any PRD vent caps in the field, unless caps are missing or damaged as stated above.

Standard repair time (SRT) for this procedure on weep hole systems: 0.25 hours; removing water using the syringe on non-weep hole systems: 1 hour.

If you have any questions, contact Agility Fuel Solutions Customer Care at 949-267-7745 or support@agilityfs.com.

Agility Fuel Solutions | 3335 Susan St Suite 100 | Costa Mesa, CA 92626

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.

Proprietary Statement

The information provided within this document is proprietary and confidential. All prior versions, including updates and revisions forwarded separately, are proprietary. The information provided by Agility Fuel Solutions to its customers and clients is solely for the use of those customers and clients. No portion of this manual may be reproduced or distributed without express written consent of Agility. Agility reserves the right to utilize the intellectual property contained within this publication as content for any other publication produced by Agility.

Trademark Notice

Agility® and TUFFSHELL® are registered trademarks of Agility Fuel Solutions. Drop-N-Go™ is a trademark of Agility Fuel Solutions. Trademarks of other manufacturers are the property of their respective companies.

Revision	Description	Author	Approved	Date
--	Initial Release	W. Yoshida	A. Bhakta	4/29/16
A	Added heat gun details	W. Yoshida	A. Robertson	6/9/16
B	New part number and pictures for red caps	W. Yoshida	A. Bhakta	11/21/16
C	Added instructions for water removal; revised company name and address; other minor edits	W. Yoshida	A. Bhakta	3/2/17

Rev	Desc	Author	Approved
D	Added part number for the water extraction kit (syringe), corrected Figure references. Make sure to drain all vent tubes.	W. Yoshida	3/29/17 DocuSigned by: Amit Bhakta 95E3D6AA1D1743 DocuSigned by: Chris Forsberg D07D6C2C16FE4EB... DocuSigned by: Kurt Nelson B4D7F9DAF96943D... DocuSigned by: Adam Robertson 2D4CE025068D46A...