



**Field Service Bulletin
LNG Heat Exchanger Troubleshooting**

**ENP-089
Rev. A: July 26, 2017**

1. Introduction

A properly operating heat exchanger (Figure 1) is mandatory for all LNG systems. The LNG heat exchanger uses engine coolant to warm and vaporize the cryogenic liquid fuel for engine use.

A rare failure in the heat exchanger allows fuel to flow into the coolant stream, causing gas bubbles and increasing pressure in the cooling system. A simple test can be performed on the exchanger to detect gas leakage into the cooling system.

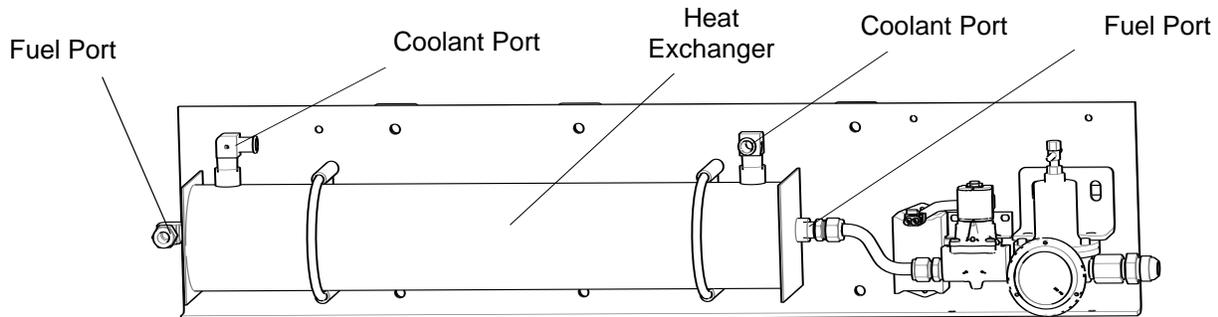


Figure 1. A typical LNG heat exchanger has one coolant and one LNG port at each end of the unit.

2. Affected Units

This procedure applies to all LNG Agility Fuel Systems.

3. Corrective Action

Verify heat exchanger function. If non-functional, replace with a new unit, the heat exchanger is not field-serviceable.

4. Test Procedure

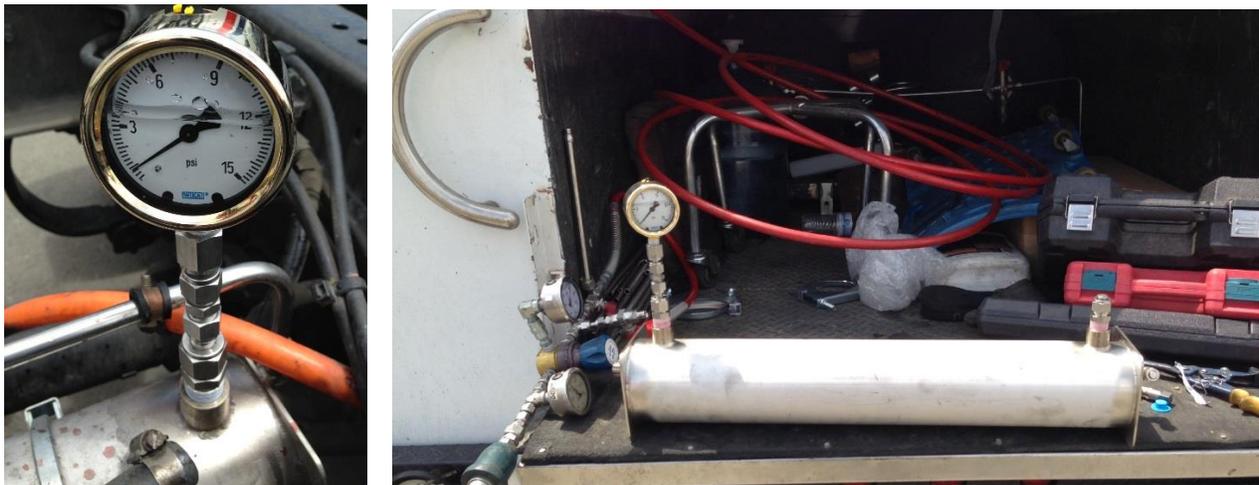


Figure 2. Heat exchanger test setup.

1. Assemble a gauge and fittings as shown in Figure 2, or build a similar test setup to suit the system under test. The gauge is a 15 psi unit.
2. The system must have a tank pressure between 150 to 230 psi before starting the test.
3. It is not necessary to remove the heat exchanger from the vehicle for this test.
4. Defueling is **not** necessary for this operation.
5. It is **not** necessary to depressurize the system.
6. Clamp or pinch off the coolant hoses near the exchanger and remove the connections going to the unit.
7. Install the pressure gauge into one of the coolant ports as shown in Figure 2. Install a plug into the second coolant port.
8. Observe the gauge over a period of 20 minutes to see if there is any pressure.
9. If pressure builds, replace the heat exchanger -- the unit is not serviceable.

5. Warranty Information

1. Standard warranty terms and conditions apply.
2. Standard repair time (SRT) is one hour for LNG heat exchanger remove and replace (if needed).

If you have any questions, contact Agility Fuel Solutions Customer Care: +1 949 267 7745, toll free: +1 855 500 2445 or support@agilityfs.com.

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 Fuel Solutions. Agility Fuel Solutions reserves the right to utilize the intellectual property contained within this publication as content for any other publication produced by Agility Fuel Solutions.

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.

Agility Fuel Solutions

3335 Susan Street Suite 100

Costa Mesa, CA 92626 USA

www.agilityfuelsolutions.com