Field Service Bulletin	FSB.0015 Ver 2.0	February 22, 2022	HEXAGON AGILITY

CNG Marathon Extended Range Regulator Coolant Leak Repair

Affected Vehicles	Compressed natural gas (CNG) vehicles equipped with Hexagon Agility® p/n 10301242 Marathon extended range pressure regulators in the following fuel system types: A. 287-series ProRail® side mount (SM) with integrated fuel management module (FMM) B. 3000-series box FMMs

Introduction

Agility Fuel Solutions LLC, a subsidiary of Hexagon Agility Inc. (Hexagon Agility®), has determined some Marathon extended range pressure regulators may be leaking coolant from the regulator base coolant cover bolts which have loosened.

The Marathon pressure regulator may be readily distinguished from other Hexagon Agility® pressure regulators by its red anodized finish.

This bulletin provides instructions for authorized personnel to repair a Marathon pressure regulator found to be exhibiting coolant leaks on 287-series ProRail® side mount (SM) and/or 3000-series box FMMs.

Warning Statements Used in this Bulletin

Warning Statements Used in this Bulletin

WARNING **WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

NOTICE ***NOTICE* is used to address practices not related to physical injury, such as best practices or tips to help an operation or procedure go smoothly and prevent equipment damage.**

C **CRITICAL CHARACTERISTIC – Product feature directly affects:**
- **Safety of vehicle users, people nearby and maintenance personnel, or**
- **Regulatory compliance.**

Required Tools and Materials

Item	Purpose
safety glasses	eye protection
combination and socket wrenches	remove and install fuel system fittings, fasteners, and components
torque wrench	accurately tighten fuel system fittings, fasteners, and components
Swagelok® Snoop® leak detection fluid	perform leak test
hex bit drive set and ratcheting wrench	tighten regulator coolant plugs
permanent marker	mark compression fittings
torque seal marker	indicate fittings and fasteners are tightened to specifications
shop rags	clean fuel system tubing before and after retrofit
shop vise with padded jaws	securely hold regulator while tightening coolant plugs

1. Vehicle Preparation

⚠WARNING **Set emergency brake.**

⚠WARNING **Place wheel chocks under vehicle tires.**

⚠WARNING **Wear approved personal protective equipment (PPE) including safety glasses.**

2. Remove FMM Covers

1. Remove FMM cover and set aside in a safe location.
   a. *ProRail® side mount FMM only:* proceed to **Section 3**. **FIGURE 1**

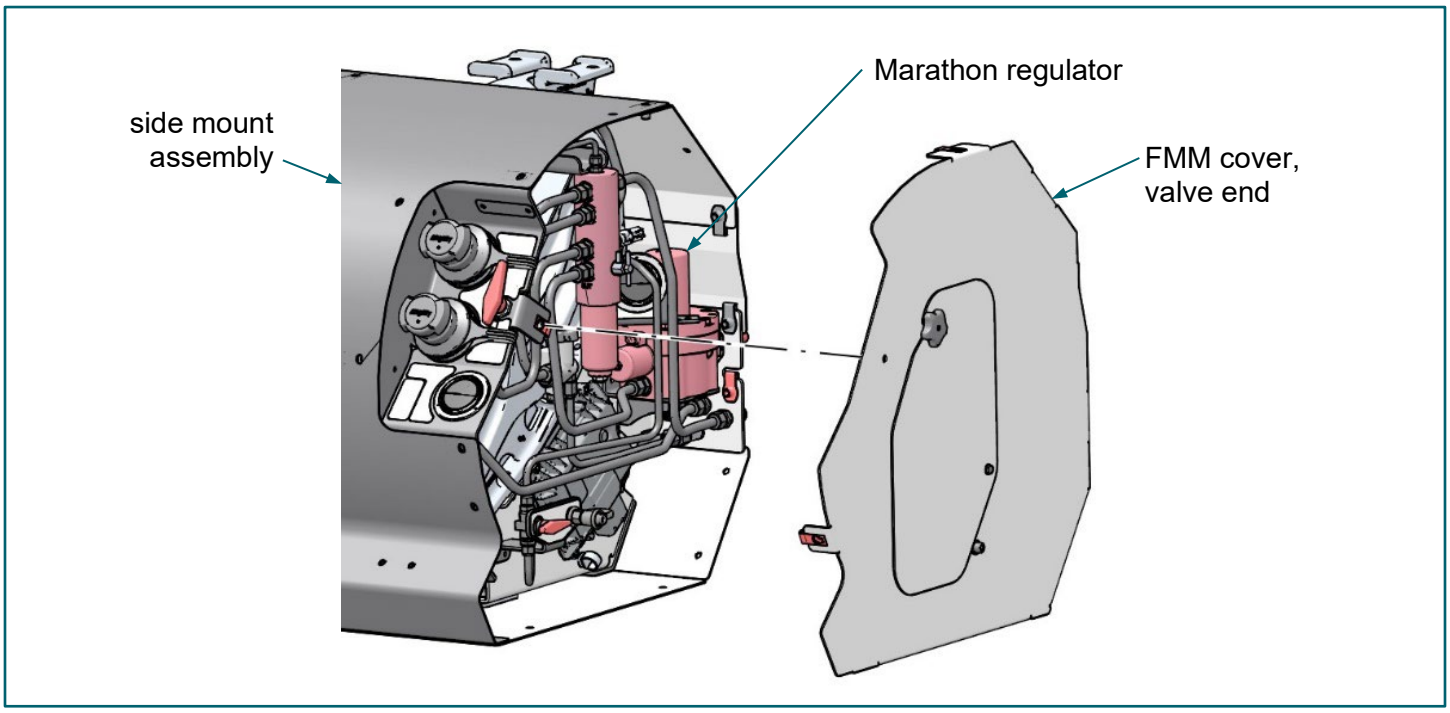


FIGURE 1. Marathon regulator location inside a 287-series ProRail® side mount FMM.

b. *Box FMM only:* proceed to **Section 4**. **FIGURE 2**

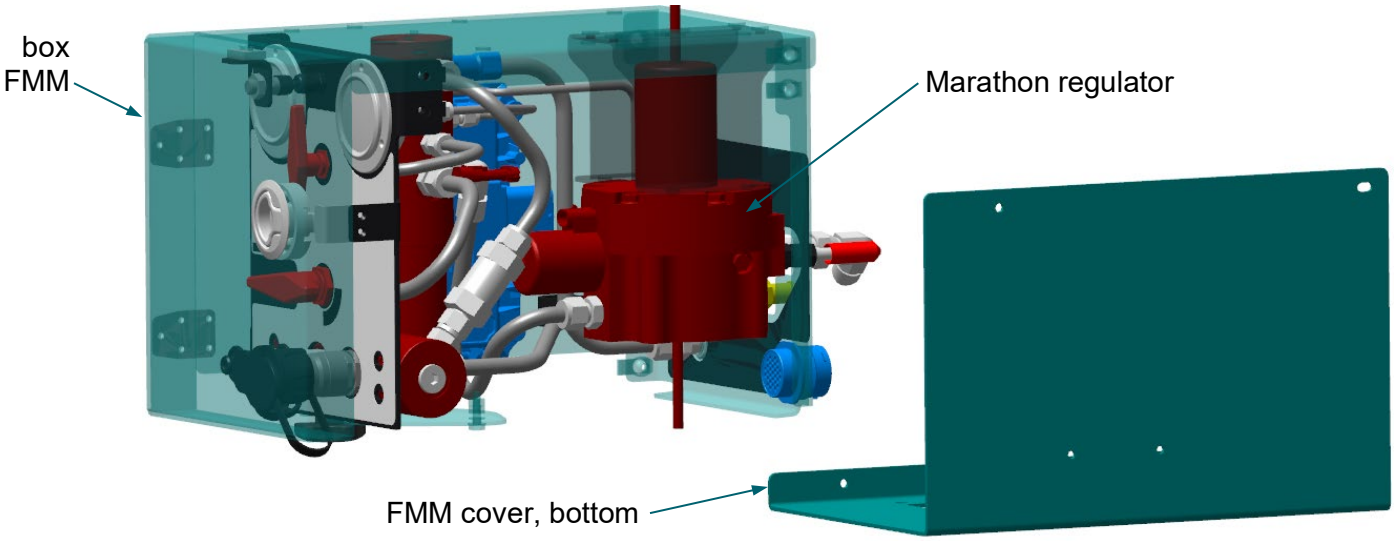


FIGURE 2. Marathon regulator location inside a 3000-series box FMM.

3. Remove Regulator Assembly

ProRail® side mount FMM only:

1. Depressurize FMM.

⚠WARNING **Refer to depressurization section of *ENP-516, Truck and Tractor CNG Fuel System Operation, Maintenance & Inspection Manual.***

2. Remove Marathon regulator assembly from FMM and proceed to **Section 4**.

4. Tighten Regulator Coolant Cover Bolts

1. *ProRail® side mount FMM only:* Secure Marathon regulator assembly upside down in a shop vise equipped with jaw pads.
2. Use an appropriately-sized hex bit and a torque wrench to tighten each of QTY: 4 regulator coolant cover bolts in a crossing pattern. **FIGURE 3**

C **Torque coolant cover bolts to 80 in-lbs (9 Nm).**

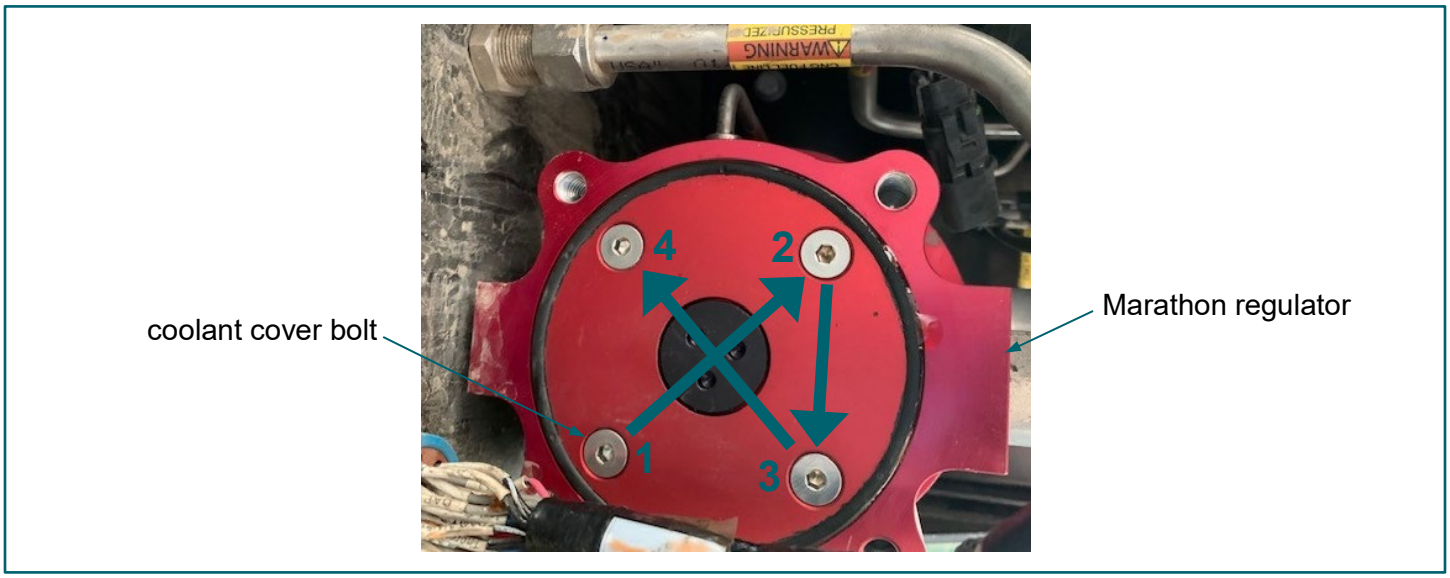


FIGURE 3. Marathon coolant cover bolt tightening sequence.

3. Use a Torque Seal marker to mark each of QTY: 4 regulator coolant cover bolts to indicate the directed repair has been completed.
4. Record FMM serial number for reporting to Hexagon Agility® Customer Care and Technical Support (CCTS).
   FIGURE 4

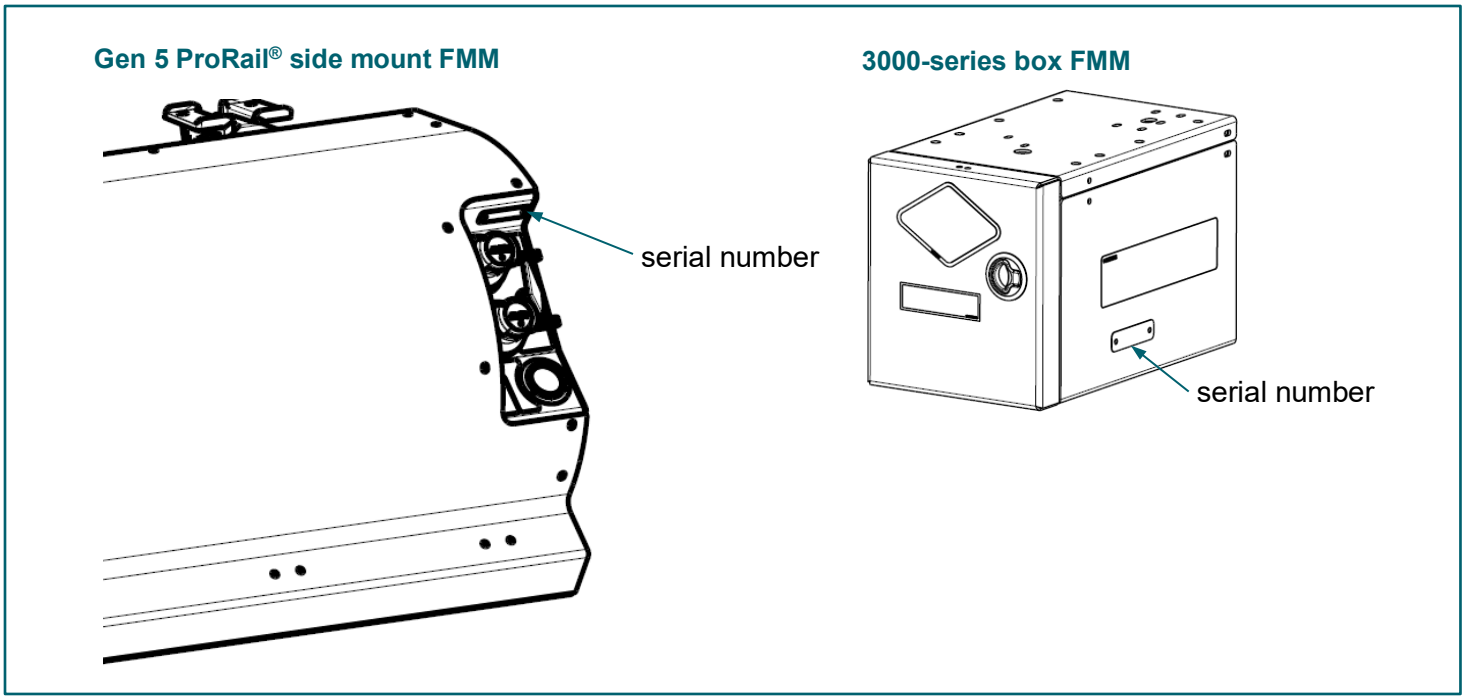


FIGURE 4. FMM serial number locations.

5. a. *Box FMM only:* proceed to **Section 7**.
   b. *ProRail® side mount FMM only:* proceed to **Section 5**.

5. Reinstall Regulator Assembly

ProRail® side mount FMM only: Reinstall Marathon regulator assembly and proceed to **Section 6**.

6. Leak Test Procedure

1. Fuel vehicle until high-pressure fuel gauge reads 500 psi (3.45 MPa). *Refer to ENP-516, Truck and Tractor CNG Fuel System Operation, Maintenance & Inspection Manual, "CNG System Fueling" section.*
2. Listen for hissing as a sign of a system leak.
3. Spray regulator and FMM connections with Swagelok® Snoop® leak detection solution and wait 3 minutes.
4. Inspect regulator and FMM connections for bubbles as an indicator of a leak.
   a. If no leaks are found, proceed to next step in sequence.
   b. If a leak is found, depressurize fuel system. *Refer to ENP-516, Truck and Tractor CNG Fuel System Operation, Maintenance & Inspection Manual, "Depressurizing CNG Systems" section.*

⚠WARNING **NEVER attempt to tighten fittings while system is pressurized.**

   c. Repair leak(s). *Refer to ENP-516, Truck and Tractor CNG Fuel System Operation, Maintenance & Inspection Manual, "Leak Repair" section.*
5. Fuel vehicle until high-pressure fuel gauge reads 1800 psi (12.4 MPa).
6. Repeat Steps 2 through 4 until no leaks are present.
7. Fuel vehicle until high-pressure fuel gauge reads 3600 psi (24.6 MPa).
8. Repeat Steps 2 through 4 until no leaks are present.
9. When the system passes the leak test, use shop rags to clean all Swagelok® Snoop® from fuel system components.

7. Reinstall FMM Cover

1. Reinstall FMM cover.
   a. *ProRail® side mount FMM only:* **FIGURE 5**

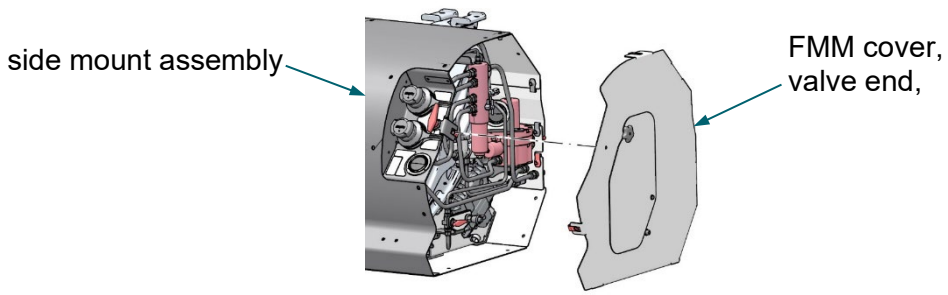


FIGURE 5. 287-series ProRail® side mount FMM cover.

   b. *Box FMM only:* **FIGURE 6**

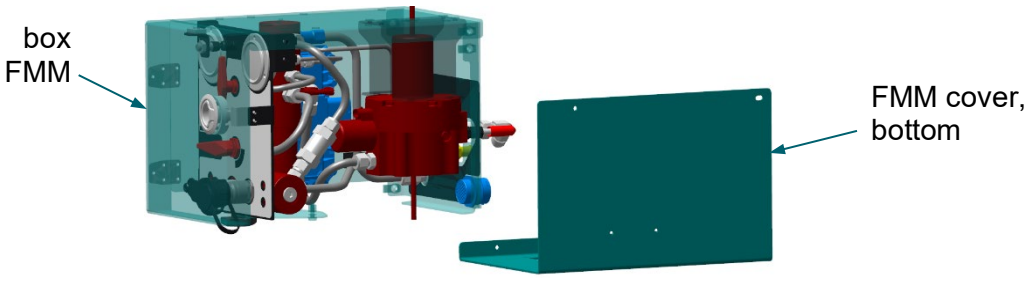


FIGURE 6. 3000-series box FMM cover.

8. Repair Validation and Recording

1. Start engine and run until to operating temperature to verify coolant leak does not return.
   If leaks are found, contact Hexagon Agility® CCTS.
   If no leaks are found, remove wheel chocks from tires and release vehicle into service.
2. Update vehicle maintenance and repair records.

Warranty Information

These procedures are covered under the provisions of the fuel system warranty.

System Type	Operation Number	SRT
287-series ProRail® side mount	FSB.0015SM	2.7 hours
3000-series box FMM	FSB.0015FMM	1.0 hour

Hexagon Agility® Customer Care and Technical Services

Fuel system warranty or non-warranty product support may be obtained by calling or emailing Hexagon Agility® Customer Care and Technical Services (CCTS).

Please provide **your name, phone number, email address, and complete vehicle information: VIN, year, make, model, mileage, unit number vehicle owner,** and **current vehicle location.** A service advisor will contact you to arrange vehicle repair or ship a part.

+1 833-4-HEX-CARE	**Support** support@hexagonagility.com	**Parts Orders** parts@hexagonagility.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 Hexagon Agility® to its customers and clients is solely for the use of those customers and clients. No portion of this publication may be reproduced or distributed without express written consent of Hexagon Agility®. Hexagon Agility® reserves the right to utilize the intellectual property contained within this publication as content for any other publication produced by Hexagon Agility®.

Trademark Notice

Hexagon® is a registered trademark of Hexagon Technology AS. Agility® is a registered trademark of Agility Fuel Solutions LLC. Trademarks of other manufacturers are the property of their respective companies.

Hexagon Agility® 3335 Susan Street, Suite 100 Costa Mesa, CA 92626 USA www.hexagonagility.com