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Coding Information

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**Title:** LT/RH Aftertreatment PDM F2 Fuse Falling Out or Cracking

**Applies To:** LT/RH

## CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

01/10/2024 - Updates made based on feedback received.  
 12/21/2023 - Initial Article Release

## DESCRIPTION

Some vehicles may experience issues with the aftertreatment PDM fuses cracking without a circuit fault, or falling out of the fuse holder. This document will guide the user through the two main failure modes, and the procedure for correcting both.

## SYMPTOM(s)

**Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):**

DTC/Light	Description
SPN 1761 FMI 9	Aftertreatment 1 Diesel Exhaust Fluid Tank Volume: Abnormal Update Rate
SPN 3216 FMI 9	Engine Exhaust 1 NOx 1: Abnormal Update Rate
SPN 3226 FMI 9	Aftertreatment 1 Outlet NOx 1: Abnormal Update Rate
SPN 3516 FMI 9	Aftertreatment 1 Diesel Exhaust Fluid Concentration: Abnormal Update Rate
SPN 5742 FMI 9	Aftertreatment Diesel Particulate Filter Temperature Sensor Module: Abnormal Update Rate
SPN 5743 FMI 9	Aftertreatment 1 SCR Temperature Sensor Module: Abnormal Update Rate
SPN 5835 FMI 9	Aftertreatment 1 Particulate Sensor: Abnormal Update Rate

**Customer Observations or Concerns:**

- Malfunction Indicator Lamp (MIL)
  - Engine Torque Derate
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**SPECIAL TOOL(s) / SOFTWARE**

Tool Description	Tool Number	Comments	Instructions
N/A	N/A		

[Tools Resource Center](#)

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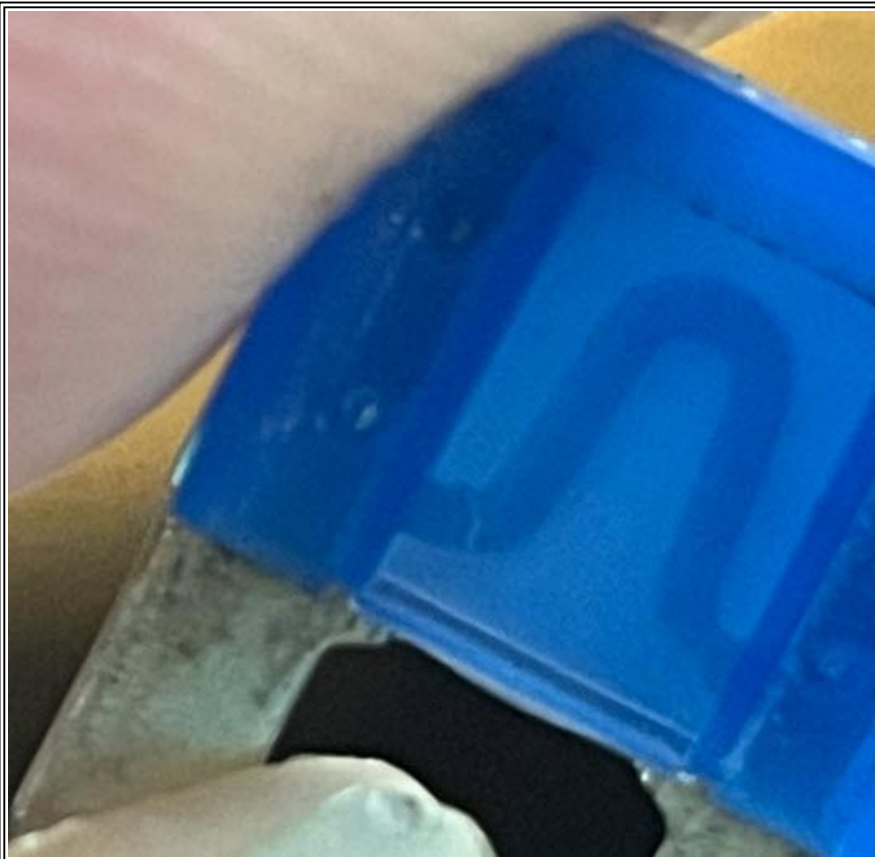
**SERVICE PARTS INFORMATION**

Kit Description	Part Number	Quantity Required	Notes
N/A	N/A		

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**REPAIR STEP(s)****Fuse Cracking without a Circuit Fault:**

- The aftertreatment PDM F2 fuse can crack internally due to fatigue (Figure 1)
- Fatigue can be caused by excess aftertreatment PDM harness movement directly behind the PDM.
  - This excess movement is caused by the PDM harness being secured incorrectly, which does not allow for harness movement with cab suspension travel.
  - Cab movement causes the harness to twist the PDM terminals, which eventually leads to the fuse cracking internally.



**Figure 1: Fuse Cracked without the Typical Signs of a Circuit Fault**

1. Cut any tie straps that secure the aftertreatment PDM harness within 10 inches of the back of the PDM. (Figure 2)
2. Install a new tie strap around the main trunk of the harness, while ensuring there is 8-10 inches of unsecured harness from the back of the PDM. (Figure 3)
  - The section of unsecured harness allows for cab suspension travel, without stressing the the AFT PDM fuses and terminals

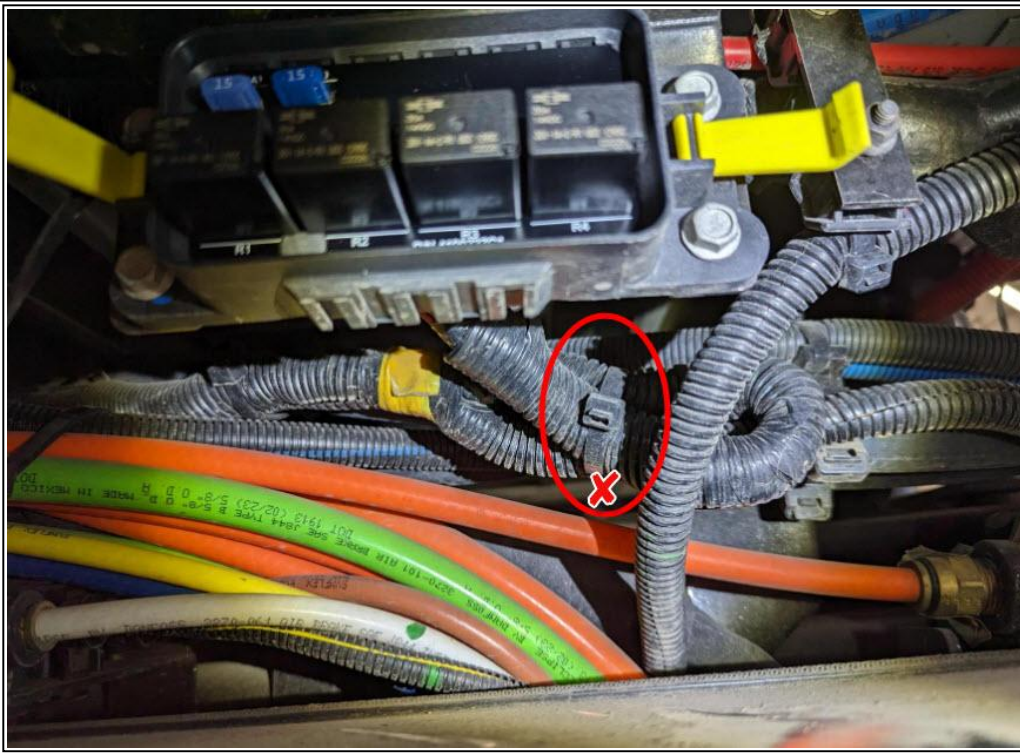


Figure 2: Improper securement of aftertreatment PDM harness

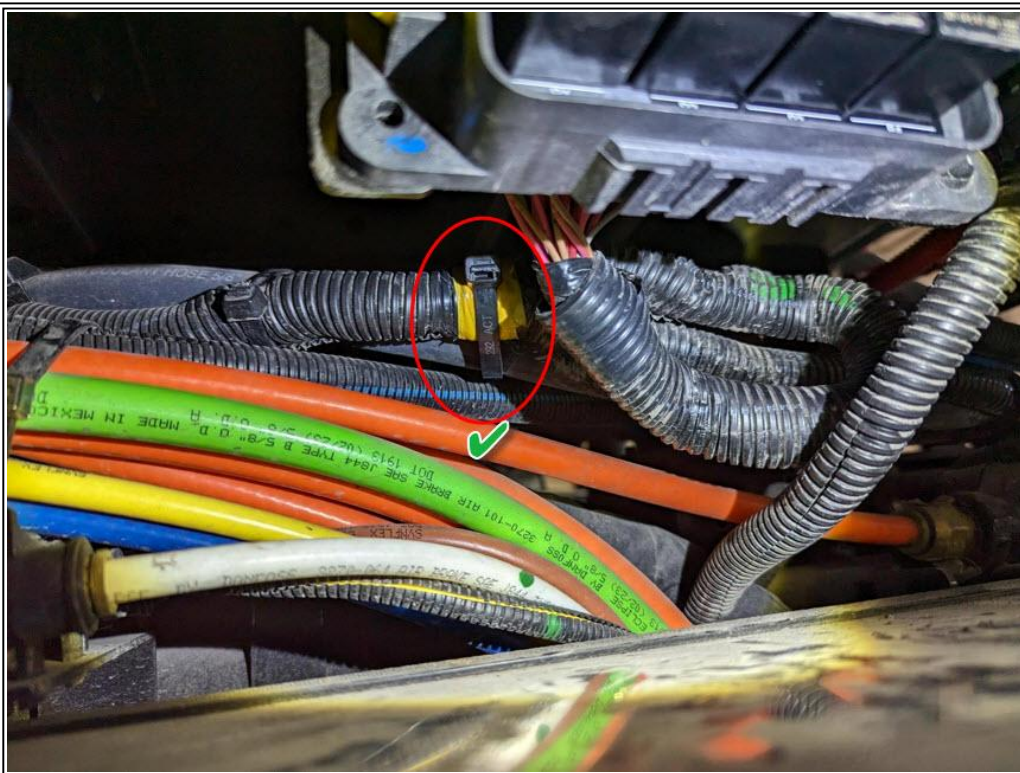


Figure 3: New Harness Securement Location

**REPAIR STEP(s)**

## Fuse Falling Out:

- The fuse falling out is most commonly caused by excess vibrations. (Figure 4)



**Figure 4: F2 Aftertreatment Fuse Loose in PDM Cover**

- 1.) Verify proper harness routing per repair steps for "Fuse Cracking without a circuit fault."
- 2.) Check for any engine performance issues that would cause excess 3rd order engine vibrations
  - 3rd order engine vibrations cause a "tuning fork" effect through the PDM support bracket, which can shake the fuses out of their terminals
- 3.) Make a foam block that fits inside the PDM cover that will prevent the fuse from falling out. (Figure 5)
  - This foam block needs to apply slight downward pressure on the fuses only, avoiding the relays.



Figure 5: Foam Block Installed in PDM Cover

## NOTE:

The foam block will need to be sourced and made locally. A service part is not available at this time.

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## **WARRANTY INFORMATION**

### **Warranty Claim Coding:**

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

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### **Standard Repair Time(s):**

Refer to the [SRT Manual](#) for Repair Times

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## **OTHER RESOURCES**

[Master Service Information Site](#)

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