

Warranty Field Campaign

| Campaign Number: c2532 | Revision: A | Released Date: 18-Aug- 2022 |
|--|-------------|---|
| X12 CM2350 X119B and X12 CM2450 X137B Fuel Injector Supply Line Safety Campaign | | Expiration Date (U.S. and Canada): 01-Feb-2052 |
| | | Expiration Date (International): 01-Feb- 2052 |

Attention

- Worldwide distr./ branches and Div./Reg Offices
- U.S. / Canadian Distr./Branches and Div. Offices
- U.S. / Canadian Dealers (Automotive)

This is to revise and replace Campaign 2532, dated 18-AUG-22. This revision is to:

- 1. Update the Material Disposition, and
- 2. update the Other Claimables, and
- 3. update Attachment B.

If additional information is required, please contact your Cummins Warranty Operations Group Leader.

Description

This Safety Campaign is being issued to address an issue on certain X12 CM2350 X119B and X12 CM2450 X137B units in which the fuel tubes between the fuel rail and the injector for cylinders 4, 5 and 6 may be susceptible to cracking, resulting in a high pressure fuel leak. A high pressure fuel leak in the presence of an ignition source may increase the risk of a fire.

Cummins has reported this issue to the U.S. National Highway Traffic Safety Administration (NHTSA), which has assigned it Recall Number 21E-099.

Note : This field action provides retroactive coverage for repairs made in anticipation of and prior to the release of this publication.

Action

In order to qualify for repair under this field action, an engine:

- 1. will be covered regardless of coverage status, and
- 2. must show as OPEN on QuickServe® Online for this field action.

Note : The ESN list is attached for reference.

After verifying that the engine meets the above requirements, perform the following actions:

- 1. Replace the fuel injector supply lines 4, 5, and 6 with new fuel lines and vibration isolators. Refer to Attachment B for detailed instructions to complete the repair.
- 2. If vibration isolators are already installed on injector supply lines 4, 5, and 6, no further action is needed. File a claim for admin **ONLY** and close the eligibility of the engine for C2532.
- 3. File one claim for the listed parts and required labor associated with this repair.

Material Disposition

Materials removed as a result of this field action **must** be scrapped.

Note : Injector Supply Lines that are removed **must** be cut in half to prevent reuse.

Reimbursements

Parts

Note : Parts listed are OPTIONAL. Claim only the parts required to complete the repair.

The following parts are covered under this field action:

| Part Number | Quantity | Description |
|-------------|----------|--------------------------|
| 631926700 | 1 | KIT, TUBES AND ISOLATORS |
| | | (OPT) |

Note : SRTs to gain access that are required to complete the repair, that are sufficiently explained in the claim narrative, may also be claimed on this action.

Note : All SRTs listed are OPTIONAL. Select **only** the appropriate SRTs required to complete the repair. SRT 11-0GB EGR Crossover Tube - Remove and Install - X12 CM2350 X119B and SRT 11-13K EGR Crossover Tube - Remove and Install - X12 CM2450 X137B are **NOT** allowed to be claimed on this field action.

Labor Using Applicable Access Code and Time

| SRT Code | Description | Time (hrs) |
|----------|---|------------|
| 00-90X | Administrative time | |
| 06-0GX | Injector Supply Lines (High Pressure) - Remove and Install, First - X12 CM2350 X119B | |

X12 CM2350 X119B and X12 CM2450 X137B Fuel Injector Supply Line Safety Campaign

| SRT Code | Description | Time (hrs) |
|----------|---|------------|
| 06-0GZ | Injector Supply Lines (High Pressure) - Remove and Install, Each Additional - X12 CM2350 X119B | |
| 06-0Z5 | Injector Supply Lines (High Pressure) - Remove and Install, First - X12 CM2450 X137B | |
| 06-0Z6 | Injector Supply Lines (High Pressure) - Remove and Install, Each Additional - X12 CM2450 X137B | |

Travel

Travel is covered under this field action. Towing is covered under this field action.

Note : Please schedule the Technicians time to maximize the number of units that can be repaired on a single visit. When filing claims for multiple ESNs, where travel or towing is required, travel or towing can be filed to **ONLY** one (1) ESN.

Other Claimables

Consumables are covered under this field action.

Note : Additional parts, such as o-rings, gaskets and fasteners, that are required to complete the repair, but **not** listed, may be claimed in Other Claimables. Please consolidate all consumables and claim them as one line item in Other Claimables titled "CAMPAIGN SUPPLIES" or other appropriate selections. Please include brief summaries on the details of items claimed. A lack of documentation in the narrative may result in a reduction in claim reimbursement or claim denial.

Claim Instructions

For Cummins Dealers, claims for this Field Campaign **must** be filed via **RAPID**SERVE[™] Web (rsw.cummins.com). For information regarding **RAPID**SERVE[™] Web, please reference the "Warranty" tab in QuickServe® Online. If there are additional questions, please contact your local Cummins Distributor.

| Claim Codes | | |
|---------------|-------------------------------|--|
| Description | Code | |
| Account Code: | 65 | |
| Pay Code: | North America Distributor = X | |

X12 CM2350 X119B and X12 CM2450 X137B Fuel Injector Supply Line Safety Campaign

| Claim Codes | | | |
|------------------|-------------------------------|--------------------------|--|
| Description Code | | | |
| Pay Code: | North America Dealer = D | | |
| Pay Code: | International Distributor = I | | |
| Pay Code: | International Dealer = R | International Dealer = R | |
| Failure Code: | WFLISB | | |

Attachments

Click here to see c2532_esn-list.xlsx

(/service/english/attachments/c2532_esn-list.xlsx) Click here to see c2532_repair_instructions_attachment-b.pdf

(/service/english/attachments/c2532_repair_instructions_attachment-b.pdf)

| Engine Family | Fuel System |
|--------------------|--------------------|
| Design Application | Market Application |
| All | All |
| All | All |

Document History

| Date | Details |
|------|--|
| | Document Created; 10-Feb-2022 |
| | Update the Material Disposition, update the Other Claimables, update Attachment B; 18-Aug-2022 |

Last Modified: 18-Aug-2022

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X12 Injector Fuel Supply Line Campaign Procedure – v2 August 2022

The purpose of this campaign is to replace Injector Supply Lines and add Vibration Isolators on the Fuel Lines for cylinders 4, 5, and 6.

Verification

- Locate Injector Supply Lines on cylinders 4, 5, and 6.
- Check to see if there are Vibration Isolators installed on the Injector Supply Lines. See Figure 1 below
- If there are Vibration Isolators installed on Injector Supply Line 4, 5, and 6 then no further action is needed
- If there are **NO** Vibration Isolators installed on Injector Supply Lines 4, 5, and 6 then please proceed with the campaign instructions below

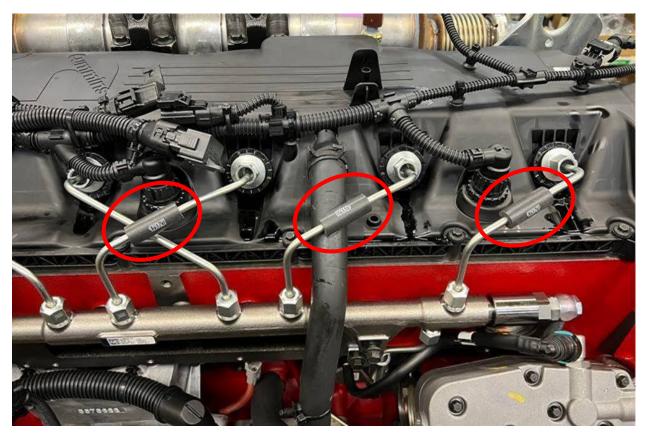


Figure 1: Location and example of what the Injector Supply Line Vibration Isolators look like (Please note that the lines and Vibration Isolators may be painted if they were installed at the factory)

Recommended Cummins® Service Tools

- Contact cleaner, Part Number 3824510, or equivalent
- Fuel System Clean Care Kit, Part Number 4919073, or equivalent

Required Part

| Part Description | Cummins Part Number |
|--|---------------------|
| Kit with 3 Vibration Isolators and Injector Supply Lines 4, 5, and 6 | 6319267 |

Service Instructions

Follow the steps below to remove the Injector Fuel Supply Lines for cylinders 4, 5, and 6 and replace with new Fuel Injector Supply Lines with Vibration Isolators supplied in the parts kit.

Fuel is flammable. Keep all cigarettes, flames, pilot lights, arcing equipment, and switches out of the work area and areas sharing ventilation to reduce the possibility of severe personal injury or death when working on the fuel system.

A WARNING A

Normal engine operation creates highly pressurized fuel in the fuel line which will remain in the fuel line after engine shutdown. Never open the fuel system when the engine is operating. Before servicing the fuel system, always loosen the pump to rail fuel line at the rail to vent the pressure. Keep hands clear of the line when loosening. High-pressure fuel spray can penetrate the skin, resulting in serious personal injury or death.

A WARNING A

When servicing the engine, do not use the starting motor to rotate the engine with a high-pressure fuel system joint open. Rotating the engine can create highly pressurized fuel in the fuel system. High-pressure fuel spray can penetrate the skin, resulting in serious personal injury or death.

1. Before starting the removal and installation of the Injector Supply Lines, loosen the pump to rail line at the rail to vent the fuel pressure. Keep your hand clear of the line when loosening the fuel rail nut. See Figure 2

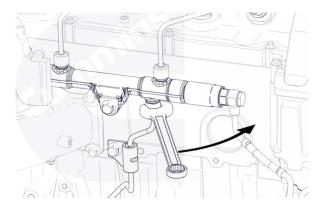


Figure 2: Location for relief of fuel pressure in the system

2. Tighten the fuel rail nut back to 31 Nm (23 ft-lbs)

A WARNING A

Batteries can emit explosive gases. To reduce the possibility of personal injury, always ventilate the compartment before servicing the batteries. To reduce the possibility of arcing, remove the negative (-) battery cable first and attach the negative (-) battery cable last.

A WARNING A

Fuel is flammable. Keep all cigarettes, flames, pilot lights, arcing equipment, and switches out of the work area and areas sharing ventilation to reduce the possibility of sever personal injury or death when working on the fuel system.

- 3. Disconnect the batteries. See equipment manufacturer service information
- 4. Clean the fittings and area around the connection points for Injector Supply Lines 4, 5, and 6 using electrical contact cleaner
- 5. Remove Injector Supply Lines 4, 5, and 6
- 6. Cover the openings with clean care caps
- 7. Break the capscrews for the fuel rail loose and then hand tighten them back up just enough so the fuel rail does not move. DO NOT fully torque the fuel rail capscrews back down.
- 8. Install a Vibration Isolator on each of the Injector Fuel Supply Lines 4, 5, and 6
 - a. Make sure the Vibration Isolators are installed firmly on the straight section on the upper half of the Injector Fuel Supply Lines.
 - b. Make sure there is a gap between the Vibration Isolator on Fuel Injector Supply Line #5 and the Crankcase Breather Tube. See figure 3 below
 - If there is contact between the Vibration Isolator and the Crankcase Breather tube, then you either need to try to position the Crankcase Breather Tube better or you can slide the Vibration Isolator up the fuel line farther. The Vibration Isolator must <u>NOT</u> be positioned past the bend in the fuel line. See Figure 4 below to see where the Vibration Isolators can be installed.
 - ii. Some configurations may have other interferences as well, see figure 5, and the Vibration Isolator must not come in contact with any other component.

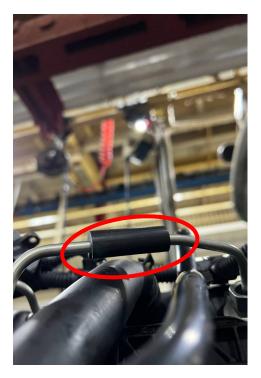


Figure 3: Example of the gap that should be present between the Vibration Isolator on Fuel Injector Supply Line #5 and the Crankcase Breather Tube



Figure 4: Visual reference for where the Fuel Injector Supply Line the Vibration Isolators can be installed. The Vibration Isolators <u>MUST</u> be installed between the bends of the fuel line or between the red lines in the example above.



Figure 5: Some configurations may have a Compressor Air Inlet Tube going above line #5. Make sure the Vibration Isolator is not coming into contact with this tube or any other component.

- 9. Using clean engine oil, lubricate the three Injector Fuel Line grommets in the rocker cover before fitting the Injector Fuel Lines
- 10. Install the Fuel Injector Supply Lines one at a time following the steps below
 - a. Hand tighten the Injector Fuel Line Nut at the Injector. Make sure the lines are centered within the nut
 - b. Hand tighten fuel line nut at the rail. Make sure the line is centered within the nut
 - c. Torque the injector end of the Injector Fuel Line to 31 Nm (23 ft-lb)
 - d. Torque the Fuel Rail end of the Injector Fuel Line to 31 Nm (23 ft-lb)
- 11. Repeat steps a d for the other two Fuel Injector Supply Lines
- 12. Torque the capscrews for the rail to 46 Nm (36 ft-lb)
- 13. Connect the batteries. See equipment manufacturer service information
- 14. It is **not** necessary to vent air from the high-pressure fuel system before starting the engine. Cranking the engine will prime the fuel system.
- 15. Operate the engine. Check for leaks
- 16. Destroy the 3 Fuel Injector Supply Lines that were removed from the engine